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Weather Laws.—No. 7.

REVOLVING STORMS.

It would take us too far beyond the purposes of these papers to enter into a criticism of the various hypotheses that have been proposed for accounting for tempests, cyclones, hurricanes, tornadoes, waterspouts, and whirlwinds. The little that is known about them may be stated in a very brief space:

1. It is now known that in all storms attended by high wind, there is a rotary motion of a mass of air about a vertical axis.

2. That this center of rotation, called the vortex, is of variable diameter, varying from a conical point at the earth's surface, to an area of many miles in diameter.

3. That about this vortex or center of rotation, the air whirls with great velocity, always turning one way in the same polar hemisphere.

4. That this rotation is in opposite courses in opposite polar hemispheres.

5. That in both hemispheres these whirls rotate about a vertical axis in the same direction they would if they were friction rollers pressed against the equator and the equator was a revolving disk turning upon the earth's axis from west to east.

This may be better remembered by some by my saying that in the northern hemisphere these air whirls rotate *against* the course of the hands of a watch laid on its back, while in the southern hemisphere they rotate *with* the hands of the watch.

6. In both hemispheres these air whirls take the general course of the great aerial currents in which they occur, except that they sheer always a little more polarwards than the course of the current in which they are mere eddies.

[It will, I trust, be understood that it is the motion of translation that is here referred to, by which the whole revolving mass takes the path described. Those unaccustomed to scientific terms may understand this better if we compare a revolving storm to a revolving wagon wheel. The hollow box is the vortex or center of low pressure, and the whole wheel made to turn against the course of the hands of a watch laid on its back is the air whirl.

When the wheel is in high revolution shift the axis of rotation in a line slightly north of west to represent the course of storms from the equator to the Tropic of Cancer. At the Tropic bring it by an oblique course extending through five degrees of latitude to turn toward the northeast at or near latitude 28°, and then send it to the northeast, in the course of the return trade winds, but sheering it more to the north than the course of that current. If, now, the wagon wheel is kept rotating in the same course while the hub is pushed along such a track, we have a representation of the course of a revolving storm. Make the hollow in the hub very large and we have the "center of low barometer" in a "cyclone;" reduce it to an area barely appreciable as a five or ten minutes' calm as the whirl passes our station, and we have a "hurricane;" reduce it still more until it no longer becomes appreciable as a calm when it is sweeping by our station, and it then becomes a tornado on ordinary land, a sand storm of frightful aspect on the desert, and a water-spout at sea. In this last phase the hollow of the hub has become funnel shaped, and is outlined in dust, or cloud, or spray, or corn-fodder, according to the portable materials traversed].

7. These air whirls sometimes abort and never become anything more than trivial whirlwinds, and this is especially the case if the air is quite dry.

8. In other cases they augment in size, becoming at a certain stage of their development destructive to life and property.

9. They are not so destructive at the point of origin, (or in their infancy), nor at the point of dissolution, (old age), as in a certain middle of their existence, (or manhood), during which the combined horizontal motion and upward motion of the air produces the greatest lifting resultant.

10. Whatever the point of origin of a revolving storm it pursues the general course of the great air currents in which it floats, being driven polewards by the centrifugal impetus until it floats out of the air stream on the pole side of the current.

11. If you stand with your back to the wind when you have reason to suspect it is a part of an air-whirl, the vortex or whirl center will lie

slightly in front of your left hand.

12. If, when you thus stand with your back to the southeast, there is just in front of your left hand a black cloud which appears to be moving in a line with your zenith, and the wind, without actually veering, is gusty, rocking from east of southeast to south of southeast but with a steady resultant of wind at right angles to the observed path of the cloud, put your house in order for you are in the track of the storm center.

To be very dangerous the wind will steadily increase in fury from the southeast, the cloud will cover your zenith from the general course southwest; the barometer will steadily fall and the temperature will steadily rise, until the cloud touches the zenith or nearly so. A momentary calm denotes the passage of the "hollow of the hub," and then a cold and still more fearful wind strikes you from the northwest. When the "hollow of the hub" is reduced to a mere point at the earth's surface, then you have the funnel shaped cloud, and there is no appreciable interval of calm, and the buoyancy of yourself and the things about you, in the uprushing air, will be the most appreciable feature of the storm.

13. These air-whirls are not attended by electrical phenomena unless they have traversed a body of water or humid soils; thus on the Sahara they deluge the earth with sand though but little electricity is observed.

14. They are the most violent in those latitudes where there is the greatest change in temperatures and in the course of the winds, hence they are also most violent in those regions where there is found those reversible winds known as *monsoons*. These monsoons and semi-monsoons occur near the tropics at the junction of the land masses and the great oceans.

15. These storms are less frequent and less violent upon the plains now than previous to settlement. [I shall not occupy time or space to prove this until it is controverted by some abler authority than Prof. Tice, of St. Louis.]

16. These storms tend to follow valleys, provided always that these valleys lie in the general course southwest to northeast.

17. Settlements also follow the valleys, to obtain timber and water.

18. Railroads and lightning-rods, telegraphs and newspapers also tend to follow the people up or down the valleys.

19. But migration and commerce also move in lines more or less parallel to the normal path of cyclones.

20. The alleged augmentation in cyclonic phenomena has no other foundation than that storms in the tenantless valleys "wasted their strength upon the desert air," with no houses by to destroy, few lives to be taken, and no newspaper reporter by to dish up the affair in horrible head-lines.

21. Since the air-whirls occur without cloud, without thunder and lightning, and without rainfall or hail, these things are derivatives of the storm and not its cause any more than dust and sand cause the dust and sand storms upon the desert.

22. The air moves about the vortex at great velocity and with an upward movement, conveying up to cool altitudes moist air, which is then condensed, as rain, hail, snow, or cloud, and in this condensation the capacity of the air mass to hold electricity is changed, and that force leaps from cloud to cloud and from cloud to earth.

23. The formation of hail takes place in the upward movement of water globules, and the frozen globule is borne upward until its gravity overcomes the pressure of the upward current.

From No. 15 to No. 20 inclusive, these postulates are my own, put in here to meet the demand of those timid souls who are apprehensive that railroads, and telegraphs, and lightning rods are to be the agencies through which "electricity" is to shatter and destroy the earth.

It is among the curious things of science that electricians do not take a particle of stock in the electrical theory of storms as now maintained by Tice. Tice claims that there was no wind at Marshfield in the storm of April 18th. There were very high winds all about Marshfield and they blew in the circular orbit usual on such occasions. If there was electricity at the vortex it was the result of the uprushing air and not the cause of it.

The hypothesis which makes electricity to be the cause of cyclones, utterly fails to account for the following facts:

1. That cyclones are more abundant in low latitudes than high.
2. That in middle latitudes they are more abundant in the warm half of the year than in the cool half of the year.
3. Why they revolve about a vertical axis.

4. Why they revolve the same way they would if driven by the centrifugal force of the earth, and hence in opposite directions in opposite sides of the equator.

5. Why the storm center moves from east to west in the tropics, sheering polewards until the zone of calms is reached, and then moves directly toward the pole of that hemisphere until the zone of the return trades is reached, when it doubles on its tropical path and returns eastward.

6. Why there is no electrical display in the cyclones of the Sahara.

7. Why they occur along any coast in their greatest frequency where the temperatures of sea and land are being relatively reversed.

8. Why if the thing known as a cyclone is "a gob of electricity struggling to get away and go-somewhere," it don't, as in other instances, break away and be there in less time than we can think.

9. If the difficulties are great in accounting for cyclones by movements of air, because the velocities measured do not appear adequate to the result, they are insurmountable when electricity is made the moving force, because of the extreme slowness of the movement both about the vortex and along the line of progress.

10. If tin roofs are hurled into the air by electricity on the passage of a Marshfield cyclone, so would toe nails, blacksmith kits, anvils, railway rails, etc.

From the kegs of nails in a hardware store there would rise an up-rush of nails. The loose, iron bars would stand on end like "quills of the fretful porcupine." Steel implements in the hardware store would be magnetized. Things in a hole in the ground, as water in wells or cisterns, buckets in wells, iron pipes, pumps, things in cellars, would go through the same dance experienced on the surface.

Men at work in mines traversed by a cyclone, would bounce their heads against the roof of the mine while the bits of coal, coal dust, etc., with picks, spades, shovels, dinner pails, blasting powder, etc., would also join in the merry round.

Economical Use of Fertilizers—Composting Manurial Substances, Etc., Etc.

EDITOR FARMER: In a late number of the FARMER you published a paper from this pen on "Composting Fertilizing Substances," and although the article was more lengthy than it should have been for a journal like the FARMER, which is obviously designed to serve equally all producing interests, it was by no means exhaustive, for volumes of pertinent matter may be written on this prolific subject without exhausting it.

Composting fertilizing substances has, for a long time, been a popular theme for amateur farmers, and journalists who, a large majority of both these classes are vastly more *au fait* with the pen than with plow or hoe, and much has been recommended by both that was an entire waste of the precious space in the columns of agricultural journals; aye, the wordy, erroneous teachings have often misguided the inexperienced, who were honestly and earnestly seeking knowledge, and led them into expensive, if not fatal error, resulting in discouraging and driving from the farm, men who would have honored and elevated the noble calling, had they only enjoyed enough practical intelligence to enable them to distinguish theoretical, untried teachings from established practical recommendations.

In 1853 the writer had a class of 35 pupils who were, in addition to receiving a thorough academical course of instruction, daily educated in every branch of high farm practice, in which they personally participated, and as they were collected from all parts of the union, also from Canada, and from Brazil, it was deemed advisable to provide for their use the leading agricultural and horticultural journals, published under a great variety of geographical and producing influences. The number taken of these journals was at one time extended to 16, weekly, semi-monthly and monthly periodicals. I found so large a proportion of both the editorial and the contributed matter of many of said journals, so speculative and so wanting in the elements of sound practice, that it well deserved to be called "book farming," and I was obliged to read the ridiculous and erroneous, that I might call the attention of my class to the faulty, as well as the sound and useful.

On the same principle however, that the publication of failures and losses in farm practice is often quite as profitable to readers as that of successes, I found a great advantage in carefully reading the chimerical matter to my class, and in pointing out to it wherein such matter was fallacious and unorthodox, which, when

compared with what was practically established, I had no difficulty in indelibly impressing on the minds of my pupils the sound and useful, who were often greatly amused, as well as edified, by the criticism of some of the elegant, rhetorical effusions, in which there were scarcely a sound idea. Prominent among these papers, I well remember ridiculous recommendations about manipulating *compost heaps*.

One pathetically described the "philosopher's stone" which he had found, which consisted, as claimed, in an amazing economy of labor. He allowed the manure to accumulate to a great depth in the stable yard, when he pierced it with a crowbar to the bottom in numerous places, and dropped a few kernels of corn in each hole, and turned in a herd of starved swine unjeweled, which scented the buried corn and vigorously burrowed in the filthy mass in pursuit of it, which, when found, by the laborious task, only served as an appetizer.

The theoretical essayist eulogized the marvelous economy of swine labor, as compared with manual labor, in manipulating, (or hog-pulating) composts.

Of course, this innovation in labor demanded approval, or condemnation from me to my class, and the lapse of a quarter century, nor any other cause has produced any change in the views I then entertained of the fallacy of this claimed economical use of hog labor.

The more forcibly to impress my views in the premises on the minds of my class, I stated what, as I have said has not changed, and enlarged upon the subject as follows:

Certain classes of domesticated animals are adapted to, and may be made profitable in labor, while in the management of others quitude and rapid judicious feeding is most profitable. *e.g.* Equines of both sexes are best developed, most useful and most profitable when they are allowed a good range in proper pastures in which there is shelter from storms and sun, always accessible, with a sufficiency of concentrated nutrition to promote early maturity throughout oldtime, and when they have attained an age that they are fit for labor, they are the better, and will be longer lived and more profitable if required to perform a proper degree of it *every day*.

If not required to work unreasonably, nor too large a proportion of the 24 hours, they require no other rest than the night. Of course I enlarged on the subject, and explained to my class what food, treatment, shoeing included, they must have to ensure a capacity for constant labor for a quarter of a century, which I claimed should be the average life of a properly treated horse.

I claimed that the same was true with regard to the treatment which will be most profitable with male bovines that are reared for working oxen—and that bovines of either sex reared for the shambles should have similar care and treatment to that recommended for the young equines, but after they are sufficiently matured to bear rapid fattening, they should be so confined that they can take but little exercise. Those reared for milk, I claimed should have liberal feed, and the same free range and protection as that claimed, for growing animals of both genders, or genera already considered, but as soon as they come into profit as milch cows, they should never be required to make any more muscular exertion than they will make without exertion. No condition in the management of the cow is more important than quietude—and gentle treatment is no less profitable.

As it will but slightly lengthen this paper, I will add what was then said, and is still sound and useful with regard to the treatment of another genus of domesticated animals, the ovine, which, I have observed, is of late receiving more attention in portions of Kansas than formerly. Although, contrary to the natural habits of wool producing animals, British sheep farmers have, by long continued uniform practice in the management of heavy mutton sheep, by keeping them on small, huddled enclosures, so habituated them that the animals are not only healthy, but they mature early and develop to enormous proportions, and were, under such artificial treatment, very profitable, until Yankee enterprise in this, as in other branches of alimentary export, placed American mutton on the British stalls of excellent quality, and at a lower price than it can be made on British turnips and imported oil cake.

Notwithstanding the acknowledged success in sheep husbandry under the habitude described, it does not change the conceded fact that sheep are most healthy and most profitable when kept in small flocks and on broad, airy and dry ranges. While they can live on scanty pastures

over which they are compelled to make long journeys daily for a subsistence, and are under such circumstances generally in an excellent sanitary condition, heavy fleeces and heavy carcasses are not obtained by such management.

The sheep pasture is preferable when short and of recent growth, but it should not be so scanty that the normal proportion of time required for rest and rumination is necessarily devoted to roaming and pasturing, if it is, it will detract from the development of both wool and carcass materially, and of course, from the ultimate profit.

Unlike either of the three genera mentioned, the genus *Sus* is exclusively reared and kept for the flesh and lard, and for sundry purposes.

The hog develops best while growing on pasture, but it should be so luxuriant that a sufficiency of green herbage can be obtained with little exercise, or exertion, though a certain amount of it is a necessity for the development of muscle sufficient to carry the huge carcass that good feeding will develop at the age of less than a year.

But of all the domesticated animals the hog is least adapted to labor, hence the absurdity of compelling them to turn compost heaps. I found a necessity every year for a certain amount of well decomposed compost for garden vegetables and for field root crops, which are great feeders and early maturers, hence must have a liberal supply of assimilable food, as the plants cannot, like less ravenous feeders, and slower growers, wait for the slow process of nature to resolve their food into an available condition, but must have a full supply of it already prepared by composting for use from germination to maturity.

While manual labor for turning compost heaps is infinitely cheaper than hog labor, I found that it was unnecessarily expensive, hence, for a period of more than 30 years that I devoted to agriculture, I so arranged my compost heaps that they could be mainly manipulated by the use of a tram and plow, and an implement which supplemented it, also drawn by a team (oxen or horses) which was simply a large, strong rake with oblique wooden teeth, used as a pulveriser. The same principle that I adopted more than a quarter century since, is now the distinguishing one in the renowned Thomas' smoothing harrow, which on account of the slant in the teeth, in a great degree prevents clogging, and specially adapts it to cultivating corn, without any regard to the young plants, as the sloping teeth will not uproot the corn.

A good proportion of fresh manure from the horse stable I found an essential ingredient in the compost heap, as its tendency to rapid fermentation is just what is needed to hasten the decay of substances of feeble fermenting power. The horse manure should form the lower stratum of the compost heap, as it is there protected against the cooling influence of air, and the gaseous emanations and heat rising from it will act favorably on the cooler substances overlaying it.

But I am again warned that I am monopolizing with one subject, desultory tirade, space due to other subjects of perhaps greater interest.

J. WILLIAMSON.
Brooklyn, N. Y.

Fighting Chinch Bugs.

I was invited, yesterday, to see a sure method of exterminating chinch bugs, on the farm of J. F. Outton, on Fawn creek. When the bugs came into the cornfield from the wheat, they plowed three deep trenches about four feet apart, and started a horse with a log in these trenches. By having three the last one would catch what would get through the first. This was kept up with vigilance. If it had been started as soon as the bugs began to move, they could have all been taken, but about fifty rows in one place had been covered before anything was done. To save these they took a caldron kettle, a load of wood, and two barrels of water. By having a teakettle to set on the water to bring to boil each pailfull, they could keep at work, pouring with a pint cup the water on the stalks covered. The scalding kills effectually, so that in some places the ground would be red with dead chinch bugs. This is giving them a warm reception.

A co-operation of all farmers at the present time would do much toward exterminating the crop in any county and possibly in the state. I speak of this now, as all our corn crop is in jeopardy from them.

D. W. KINGSLY.
Independence, Kansas, June 16th.

An intelligent and successful poultry breeder states that experiments have satisfied him that the chickens from hens fed on oats are stronger and more hardy than from those fed on corn.

Farm Stock.

Management of South-Downs.

The *Agriculturist*, published at Louisville, Ky., gives Cassius M. Clay's management of South-down sheep:

"I have long been a breeder of Short-horns, and would say that the rules of form apply almost the same to South-down sheep—body long, deep and round, straight on the back, with legs as straight as may be, and well under the legs, the head short and firm, wide between the eyes, ears small and thin, eyes prominent and gentle, neck short, straight, or slightly arched; wool thick, slightly curled at times, compact, well down toward the knee, and over the belly, and oily, color brown or yellowish gray on face and legs. A sheep farm should be clear of burrs and weed seed. For this reason I always get the highest market price for my wool.

I keep grass all the year round for my sheep. Stacks of blue grass or timothy hay, or better yet, red clover under cover, are very good when the weather is bad. When the ground is covered with snow, the sheep will paw it with their feet, and eat, while cattle will starve. At such times I give each sheep rather under a gill of shelled Indian corn, strewed broadcast on the grass, night and morning. This is more necessary about the time the ewes are dropping their lambs. Ordinarily the sheep will not enter cover of a barn, preferring a hillside, and the protection of evergreens and other trees. Here they are undisturbed, and will not lose their lambs unless it is so cold that the lambs freeze before once getting dry. No doubt as labor gets cheaper and sheep more valuable, houses will be prepared with stores for lambing. At present, without fire, there seems to be little or no advantage in sheds. The ewe selects a site sheltered from winds by forest trees and shrub, and if a lamb freezes there, it will freeze in the stable. They have the advantage of quiet and sun. However, when lambing, the ewes are visited several times a day by the shepherd, and if the lamb is chilled and has not suckled, it is raised upon its feet and allowed to suck. If it is too cold it is carried to the fire, and some warm milk put into its mouth with a spoon; a sucking bottle is also used when practicable, especially when the mother refuses to own the lamb. As soon as the lamb is warmed, and has drunk the cow's milk, and can stand, it is returned to the ewe and set down. If it sucks her, all is well; if not, the only resort is hand-raising. I would not advise any attempt to catch the mother, and force sucking.

"A South-down well kept is always ready for the market after a few months. South-down rams are now much used for other breeds, and the lambs sent in the summer and fall to Boston, New York and Philadelphia, meet a great demand at fair rates. South-down carcasses, dressed in England, are for sale in most European cities. The time will come when, as mutans, they will have the same prominence here. In the meantime the public talk is in that direction, and such lambs, early matured, are more sought after. But much depends upon the method of dressing. The sheep should be bled freely, and the entrails taken out before the body is cold, otherwise there will be an infusion of the secretions into the circulation, and that odious "wool taste," as it is falsely called, which so much disgusts many persons that they never eat mutton. If the above rule is observed, the carcass may be kept wrapped in wool for weeks in a cold place, and it will be as sweet as a wild deer. Lambs are good, but a South-down sheep improves until it is three years old, when it is "red mutton," as Daniel Webster, a good epicure, used to say—that is, the gravy which flows from the roasted mutton is red when fully done. Such a dish is fit food for prince or people."

Poultry.

Poultry on the Farm.

This is a class of stock that is very much neglected on many farms throughout the country. But I believe fowls will bring profit to the farm. At this season of the year when most of the other products of the farm has been disposed of, poultry is about the only source of income that the farmer's wife has. And this is of no small account, as the eggs from thirty hens will furnish the family with all the store supplies needed, and this will prove to be no insignificant item in times like the present. I saw the other day forty dozen eggs brought to the store by one farmer who said they were from thirty-two hens that had averaged two dozen eggs per day for nearly two months past. What better property was on that farm? This may be an exceptional success, but any person may reach it. On too many farms the fowls are always neglected, just as if they were not worthy of the farmer's attention. But should he conduct this branch with the same care in the keeping and intelligence in the selection of breeds, as in the choice of his cows and pigs, he could then see how much difference he would find in the returns they would give. I shall not recommend any particular breed of poultry for the general farmer to keep, for much must depend on circumstances. Any of the improved breeds will do well, but in making the selection, reference must be had to the place where and the purpose for which they are kept. For small places where fowls must be confined a great share of the time, the small breeds like the Leghorns would prove much more desirable than Cochins, Cuckoo or Brahma. The larger breeds must have a full range of the fields in order to do well, for in wandering about they find much

matter that is so necessary to promote health. The main trouble in this branch of husbandry is, in the slipshod way in which it is managed especially in winter when fowls are allowed to roost in trees, or any other place they may choose during cold weather, and often their feet and combs freeze. In many cases all the feed they get is what they pick up, and it takes all of this to sustain life so that they can lay but few eggs if any. The winter is the time when hens pay the best; and then they must have bones, crushed shell, or other similar aids to digestion as well as abundant food and warm places to stay, or they can not be expected to yield any return.—S. C., in *The Husbandman*.

Gapes in Chickens.

The editor of the *Lancaster Farmer* says: In a recent conversation with an experienced chicken-raiser, he informed us that he had been very successful in conquering that precarious disease in his young fowls by the application of air-slacked lime. As soon as a manifestation of gapes in his fowls appear, he confines his chickens in a box, one at a time, sufficiently large to contain the bird, and places a coarse piece of cotton or linen cloth over the top. Upon this he places the pulverized lime, and taps the screen sufficiently to cause the lime to fall through. This lime dust the fowl inhales and is made to sneeze, and in a short time the cause of the gapes is thrown out in the form of a slimy mass or masses of worms, which had accumulated in the windpipe and smaller air vessels. This remedy he considers superior to any he ever tried, and he seldom fails to effect a perfect cure. He has absolved all those mechanical means by which it is attempted to dislodge the entozoa with instruments made of whalebone, hog's bristles, horse hair or fine wire, alleging that worms are quite as certain to push the gape deeper further down the throat of the fowls as to draw them up.

Arrest of Chicken Cholera.

When the affection has broken out in a poultry yard, it may be quickly checked if the birds can be separated and put into separate coops for a few days, or if they can be divided up into small groups, so that the disease existing in one or a few will not have an opportunity of effecting the entire flock. The coops should be clean, so that there should be no risk from already existing poison in scattering dung, and the moment a chicken is noticed ailing, it should be at once removed from any in the same coop; or better, they should be removed to new ground. The disease runs such a rapid course that in a few days all the infected birds will have perished and the remainder can be again put together with safety.

Before they are returned to the old building or yard, this must be thoroughly purified and disinfected. All manure is to be cleaned away, the building washed with hot (boiling) water, and then wet over with half-gallon 1 oz. sulphuric acid to every water containing 1 oz. sulphuric acid to every half-gallon. The yard should be wet over with the same, as this speedily kills all the germs with which it may come in contact. The result will be dependent on the thoroughness with which every object, and even the most secluded corners, are treated with this agent.

Useful Hints.

A correspondent in *Poultry Yard* makes the following useful suggestions to those employed in the care of poultry.

"Have you ever recommended tomatoes as food for fowls? I know not for a certainty that this fruit will make fowls lay, or get fat, but I know that they are relished, and I think they contribute something for health. A few tomato plants set in one corner of the yard, protected with lath until the fruit begins to ripen, and then thrown open to the chickens, will give them healthy, cheap food, and what is almost as necessary, exercise. The melon rinds and seeds, and the occasional head of cabbage, will be enjoyed. It is an excellent plan to plow up the yard a couple of times in the course of the summer. It brings worms and bugs of various kinds to the surface and makes a good scratching place. If sown with oats and corn the young plants will be eaten. Any butcher will sell a large basket full of bones and spoiled meat for a very small sum, and often he will be glad to give them away. If you have an outside cooking apparatus, throw all this into a chaldron, cook and feed; if not, cut off the best pieces of meat, put them in an old pot with a few pieces of charcoal, and beg a place for it on the kitchen stove. The charcoal will prevent any offensive odor. Chop fine any pieces that are too bad to go to the house, and every bit will be eaten. Throw the bones in one corner of the yard and they will produce worms and maggots in great numbers. In some parts of France these worms and maggots are bred on purpose for chicken food.

Apiary.

Raising Queens.

Select the colonies from which you wish to breed the coming season. Give them extra care now, so as to make them the strongest in the yard. If you cannot do this by feeding and spreading the brood, give them brood and bees from other colonies. We want them to swarm in advance of the others. We do not believe that forced queens are worth one-third as much as those raised under the impulse of the swarming fever.

In building up the breeding stock, we give clean, light comb, and if possible, some frames that are not entirely filled out, so as to give

them ample room in which to build queen cells. They will build more cells than where the comb is dark and hard. It is not best to give too much room as it has a tendency to retard the swarming fever. The day after they cast a swarm, examine the combs carefully. You will find queen cells in all stages of construction. Mark all the cells that are capped. We do this by sticking a small wooden pin close to the cell. In a couple of days look again and mark this time with pegs notched across the top. Queen cells require careful handling until the young queen is almost ready to hatch. Usually if the weather is pleasant, the bees swarm the same day or the day after capping the first cells; but if the weather is bad, they will not come off for a day or two, and frequently will tear down all of the cells, and not swarm at all. By close watching, you will know when they are about ready to come. If you find the cells capped, you need not wait, but divide them. Take one frame containing honey, brood, bees, and the queen; hang in an empty hive; fill up with frames; set in place of the old hive, moving the old hive to another stand. All the bees in the field, and a majority of the old bees in the old colony, will come back, making a good colony. In seven or eight days after the cells are capped, cut out those that were capped first, and give to nuclei, prepared beforehand. Queen cells, when first capped, have the ends covered with wax. But a few hours before they are ready to hatch, the bees will clean off this wax, leaving only the hard shell of the cocoon, which the young queen cuts off from the inside. By watching closely, you can tell within a few hours of when the young queen will hatch.—*Indiana Farmer*.

Fertile Workers.

Bees should never be allowed to go any length of time without a queen, or without eggs or brood from which to raise one in case their queen gets lost while on her bridal trip. Colonies that have been queenless for any length of time are very apt to contain fertile workers. The evidence that these pests are present, will be found in the promiscuous manner in which the eggs are scattered around in the comb, sometimes one, but oftener three or four in each cell. The bees will cap the brood over, but the cappings will be convex as other drone brood is. They will even build queen cells over the brood, but the eggs will produce only drones. There is no way of distinguishing these fertile workers from any of the others, unless you should see them in the act of laying, and should you destroy one or two there is likely to be a half dozen others left in the hive. A colony containing fertile workers will neither accept a queen if given them nor raise one for themselves if brood is given them for that purpose. It is generally better to double up a colony in this condition with one containing a fertile queen. If the frames be taken some distance from the hive and all the bees be shaken off on the ground, the most of them will go back to the old stand, leaving the fertile workers on the ground, when if a frame of brood is given them they will raise a queen. A better plan is to crowd the bees on a few frames as possible in one side of the hive and close up with a board hang two or three frames of brood and bees from another colony, and a queen if you have one. They will soon discover the better condition of things on the other side, and quickly unite with them.

Horticulture.

American Grapes.

The grape vine is to America what the woodbine is to England. Our arbors, piazzas, fences, and such places, are covered with grape vines, just as there are with the woodbine. And the fact is that there is to a great extent but one kind of grape which is thus so largely planted, and this is the Concord. There are plenty of varieties of grapes more luscious than this, and some better suited to particular localities; but among all the varieties that have been thoroughly tested, the Concord is without doubt the most profitable for market.

It will grow and produce abundant crops in situations and upon soils where some of the better flavored and more delicate varieties utterly fail. Although its fruit is not classed as the best in quality, still it seems to suit the masses; or, at least, they prefer an abundance, if it is not quite so delicate in flavor, to a small supply of something that is really superb. Another thing in its favor, causing its extensive planting, is its earliness, having but the Hartford Prolific, and a variety somewhat similar, the Telegraph, with perhaps another one, that can beat it by a few days. The Concord grape was raised by Mr. E. W. Bull, of Concord, Mass. It is a really fine grape, and has steadily grown in favor ever since its introduction, and probably there are more vines of it being planted at the present time than of any other variety. It is very hardy, a vigorous grower, and very productive; and its beautiful appearance makes it one of the most attractive and saleable market grapes, and for this purpose there is perhaps no other variety that equals it. An equally popular grape for wine making is the Clinton. For this purpose it is to the masses what the Concord is for the table.

Thinning Fruit.

Whenever we tell a friend he should begin his fruit, he talks about the curculio, the codling-moth, the birds and the boys, and "guess there will be thinning enough before the season gets through." This is true in its way. Whenever these troubles exist to any great extent, it

is not much use to grow fruit at all. But there are some who do not leave all their gathering to insects and vermin—some who dispute the right of those pests to interfere at all, and wage war, successful war, against them; but even these do not half appreciate the value of thinning their fruit.

The evil of overbearing is particularly apparent in dwarf pears and grapes. As a general thing there is rarely a grape vine that would be benefited by having half its bunches cut away, and some of the free-bearing dwarf pears might have from one-third to one-half. The grapes may be cut away as soon as they can be seen; but the pear should be left until somewhat grown, as they often fall after they are pretty well advanced. It not only helps the size of the fruit left, but is a gain to the future health of the tree.—*Germantown Telegraph*.

HOW TO THIN.

Thin out fruit where it is too thickly set. Only good large fruit is worth shipping. Pick off the smallest and poorest; try to move the main weight from the tops and ends of the branches, and distribute the burthen where the tree is best able to bear it. Peaches seldom grow thin enough, and quickly respond to the orchardist's care. When apples and pears grow in clusters care should be taken not to loosen the whole bunch. Sometimes a sharp knife or pointed scissors may be found necessary. Plums appear to need severe thinning some seasons, or the shape, color and flavor suffer much.

Miscellaneous.

Celery.

No vegetable is becoming more popular than celery, the market demand for which is continually on the increase, and the announcement that it is antidote for nervous diseases has increased the germination to no small extent. It is slow in germinating, and those who are intending to raise large quantities have no doubt before this sown the seed, but there are many who only raise a little for their own use, and who can buy plants cheaper than they can raise them. Land that was heavily manured in the spring and a naturally rich soil is best adapted to this plant. A few years ago it was thought necessary to dig trenches in which to plant it; now, however, this is abandoned, but it requires very deep tillage, and it is best to draw two furrows, the same as for sugar beets or mangolds, and set them in the bottom of the furrow. The land best adapted to it is a moist soil, as it is a salt-water plant.

The time to set it out is from the middle to the last of July. The rows should be from four to five feet apart, and the plants separated ten inches in the row. After the first of September the soil should be drawn up to the plants, to keep them compact as possible and prevent the branches from spreading. The more and oftener they are banded up the better, so as not to cover the center shoot or bud; if this is covered the plant will be smothered.

There are a number of different varieties in cultivation, but they differ less in celery than in any other vegetable. The excellence of this vegetable depends more upon culture than upon variety. About the last of October a trench is generally dug eighteen inches deep and twelve inches wide, in some dry place where water will not stand; the plant is then lifted with as much dirt around as the roots as possible, set in upright, also as close as possible, that it may keep crisp, and it will continue to grow some. The row, when properly packed, should be covered with boards, over which a layer of straw or leaves should be laid to keep out the frost, and its preservation for winter use is secured.—*Cultivator*.

The Cattle Drive.

A special telegram from Henrietta, Texas, indicates the coming of 30,000 cattle, now crossing over the Comanche reservation, and says: For years a number of Texas cattle men have kept their herds across Red river on the Comanche reservation, thus getting good range and avoiding payment of tax. The United States government sent troops down from Fort Sill, a few days ago, and moved all the herders off, some coming over into Texas, and some going into the Cherokee nation, where they are allowed to graze their cattle by paying a yearly tax of twelve and one-half cents a head. The Stock association some months ago made a combination among its members to ship its cattle over such roads as the committee appointed for the purpose should indicate. The committee failed to make suitable terms with the Texas roads, but got satisfactory rates from Caldwell, Kansas.

The government issued orders prohibiting the driving of Texas cattle across the Kiowa and Comanche reservations, and for a time the cattle men have balked. On the 19th the war department at Washington issued an order countermanding the former order, and removing all obstructions to the drive. Hence all the cow-boys in the combination and many outside of it, are now cutting out their beef cattle, and will immediately start some thirty thousand head on the trail. The drive from Red river is about two hundred miles, with grass and water abundant. Twenty-five days will be consumed on the drive.

The following is the list of cow-men on the trail so far as reported at these headquarters, but there are others en route not reported: Stevens & Worsham, Curtis Bros., Capt. J. Kard & Bro., Slaughter & Wilson, Willett & Irvine, Odour Bros., Budy Atkinson, and Laster Bros. We have had fine rains and the cattle are doing well.

Speaking of the cattle drive the Omaha

Herald of a late date says: The drive of cattle from Texas will be heavier this year than ever before, and has been estimated at 300,000, of which Nebraska will get a large percentage. Many of the stockmen of western Nebraska are now making preparations to add largely to their herds of Texas cattle. Ogallala is the natural terminus of the Texas cattle trail, and will be the objective point this year. Of the cattle coming to that immediate vicinity, the *Sidney Telegraph* mentions the following: Pennsylvania Stock Company, 3,000 head; Jones Bros., 2,300 head; John Dawson, Texas, 3,000 head; Andrews Bros., Texas, 2,500 head; J. W. Gamel, Running Water, Neb., 5,000 head; D. R. Fant, Texas and Nebraska, 6,000 head. Millett, Mabry, and many other well known stockmen, will also bring cattle up on the trail for disposal in that vicinity. Not only Cheyenne county, but nearly all of Sioux county, is now being used for grazing purposes, and our cattle men are even converting portions of Dakota into stock ranges.—*American Stockman*.

The first suggestion I desire to make is in the form of a question: Why should we retain in the nomenclature or in the machinery of the agricultural fair the form or the substance of the thing called a "sweepstakes"? If there is any one fault more than another which the farming community have found, and justly found with the fair as it now stands, it is that it has become too horsey. In some cases the honest agriculturists have revolted against the rule of the jockeys and the sidewalk farmers who have usurped control of the institution; and in almost every case their principal grievance has been the perversion of the money and the machinery of the concern to the uses of racing and betting. Yet this term "sweepstakes," so persistently retained in the premium lists even of those societies who have relegated the horse to his proper place, savors stronger of the turf than any other.

Let me illustrate the absurdity of its use. A bull three years old or over takes a first premium on his own merits and in his special class. He takes another when exhibited with a specified number of his calves. He takes a third as a member of a breeding herd, consisting of himself and a number of cows. Fourthly and lastly, he takes one as a sweepstakes! Now, why in the name of sense do you want to go on piling up one premium on top of another in this manner? In my opinion, the simple reason is that it is a relic of horse-racing usages, which has become saddled upon the fair because the managers did not take the trouble to consider its absurdity. Besides this it is absurd for another reason. What sense or what justice is there in pitting a Short-horn bull against a Jersey, or a Devon, or an Ayrshire? Each has his special points. Every well-informed farmer knows that the Short-horn is best adapted to the rich, succulent pasturage of alluvial or heavy clay lands, while the Devon is a better animal for a comparatively thin and arid upland. Specialization is the mark of high civilization. On the other hand, to lead into one common arena the massive and lordly Short-horn, the clean limbed, exquisite little Devon, the tawny, unhandsome Jersey, and perhaps others, and then after a cursory glance of two minutes, with a show of hands or a count of noses, award the ribbon to the Short-horn over all—what is this but the most arrant wholesaling and lumping of things?—S. Powers, in *Ohio Farmer*.

Salt for Sheep.

It is said that in Spain, whenever sheep are kept in the neighborhood of rock salt hills or sea salt, and have access to it, they thrive better than in other situations, and in France the same thing is found to exist in the neighborhood of the sea coast and the salt works of the north, sheep give more and better wool, and the mutton is more highly esteemed than that from other localities. Where it is given to them when at pasture, the amount should be from half an ounce to an ounce to each daily; and it is a well-known fact that sheep never stray from an inclosure in which salt and water are provided for them.—N. Y. *Herald*.

Celery Culture.

A cultivator of this delicious vegetable gives his mode of planting and cultivating, in the *Indiana Farmer*. Every farm-house should have a liberal supply of celery for the fall and winter. Celery is very wholesome and appetizing: "If I wish to set out straight rows, which are the easiest, I prepare my ground as for cabbage, with a smooth surface, and then stretch my line and set my plants six inches apart, close to the left side of line. I use an iron pointed dibbler, about ten inches in length, to make holes with; set in my plant and then use it again to press dirt close or tight about the root, full length of same. If the root be six inches long, all the better. I plant my rows six feet apart. When this is done the plants need no farther attention for six weeks, except to hoe out the weeds, then cultivate and keep clear until the first week of September."

—Progress forbids keeping young stock on such short rations, and in such cold quarters as to take all the strength of their food to keep up the fires within, thus precluding all possibility of adding a pound of flesh as a covering to their bones during the trying rigors of the winter season. Progress favors keeping one good cow instead of two poor ones, and declares that "A poor cow will eat her head off" more than once every year. Progress finds her swine rapidly in warm snuggeries, thus saving time in feeding and grain in the long run.

Patrons of Husbandry.

NATIONAL GRANGES.—Master: J. J. Woodman, of Michigan; Secretary: Wm. M. Ireland, Washington, D. C.; Treasurer: F. M. McDowell, Wayne, N. Y. EXECUTIVE COMMITTEE.—Henry James, of Indiana; D. Wyatt Allen, of South Carolina; W. G. Wayne, of New York. KANSAS STATE GRANGE.—Master: Wm. Sims, Topeka, Shawnee county; Secretary: F. B. Maxson, Emporia, Lyon county; Treasurer: W. P. Poppeno, Emporia, Lyon county. EXECUTIVE COMMITTEE.—W. H. Jones, Holton, Jackson county; Levi Dumbauld, Hartford, Lyon county; J. S. Payne, Cadmus, Linn county. COUNTY DEPUTIES.—J. T. Stevens, Lawrence, Douglas county; T. B. Tyers, Beaty, Marshall county; E. E. Powell, Augusta, Butler county; C. F. Morse, Milo, Lincoln county; A. J. Zope, Wichita, Sedgewick county; A. P. Reardon, Jefferson Co., Post Office, Dimond, Leavenworth county; S. W. Day, Ottawa, Franklin county; G. A. Hovey, Belleville, Republic county; J. E. Barrett, Greenleaf, Washington county; W. W. Cone, Topeka, Shawnee county; J. McComas, Holton, Jackson county; Charles Dabrow, Clay Centre, Clay county; Frank B. Smith, Rush Centre, Rush county; G. M. Summerville, McPherson, McPherson county; J. S. Payne, Cadmus, Linn county; Charles Wyeta, Minneapolis, Ottawa county; F. M. Wierman, Mildred, Morris county; John Andrews, Huron, Atchison county; George F. Jackson, Fredonia, Wilson county; D. C. Spurgeon, Leroy, Coffey county; James W. Williams, Pombody, Marion county; R. T. Ewalt, Great Bend, Barton county; C. S. Worley, Parkra, Greenwood county; James McCormick, Barr Oak, Jewell county; J. M. Earnest, Garnett, Anderson county; L. P. Clark, Kirwin, Phillips county; George Fell, Darred, Rawlens county; A. Huff, Salt City, Sumner county; James Faulner, Iola, Allen county; W. J. Ellis, Miami county; George Amy, Glendale, Bourbon county; W. D. Covington, Smith county; P. O. Kirlin, J. H. Chandler, Rosse, Woodson county; I. S. Fleck, Dunker Hill, Russell county; J. K. Miller, Sterling, Rice county; W. D. Hippine, Severance, Doniphan county; Arthur Sharp, Crawford county; P. B. Maxson, Emporia, Lyon county; A. M. Switzer, Hutchinson, Reno county; S. N. Wood, Cottonwood Falls, Chase county; G. S. Kneeland, Keene, Wabasha county.

TO OFFICERS OF SUBORDINATE GRANGES. For the use of Subordinate Granges we have a set of receipt and order books which will prevent accounts getting mixed up. They are for sale, Receipts or Dues, 2nd, Secretary's Receipts, and 3d, Orders on Treasurer. The set will be sent to any address, postage paid for \$1.00. We solicit from Patrons, communications regarding the Order, Meetings, Feasts, Installations and a description of all subjects of general or special interest to Patrons.

Pass It Round.

Let every agricultural journal in the country publish the following speech made in the National house of representatives, while the report of the Committee of Agriculture was under consideration, and every grange in the country have it read at their meetings. Perhaps the indignation of farmers may be reached if they have lost the sense of shame.

Mr. Gillette (Iowa). I wish to address this body for a moment with reference to the system by which we do, I would say fail to do, things in this congress. I desire for one moment to call the attention of the house to the rules under which we are trying to manage the affairs of the people of this country.

The greatest interest in the United States is the agricultural interest, and under our rules that industry is consigned to the care of the Committee on Agriculture. This house has nothing whatever to do with the selection of that or any committee. One member, representing no larger constituency than any of the rest of us, coming from a city district which takes no interest in agriculture, and having himself no experience or practical knowledge of it, has supreme control over its make-up. No other member has a word to say with reference to who should constitute that committee. I do not wish to find fault with our speaker nor with any member of this house; far from it. I do not wish to assail the chairman of the Committee on Agriculture or any member of that committee; but I do wish to find fault with the rules of the house, with a system by which the members of this house, representing the great agricultural districts of the west and south and hampered and tied and crowded out in all these debates before this body. And I wish to show how that is done.

Of the fifteen members of that committee, eight, a clean majority, are lawyers; one other is a judge; one is a president of one national bank and director of another, though he has had some experience upon a farm; one is a clergyman by education and practice, though latterly he has presided over an agricultural college; and just four are practical farmers. Seven members come from the Atlantic seaboard states, New York having two, while the great west, that mighty domain where nearly all the people are farmers, that great garden which feeds the east as well as the west, and then sends its vast surplus to Europe, had extremely little representation upon this committee, and only one farmer. Missouri, Nebraska, and Kansas are the only states west of the Mississippi river that are represented in a territory comprising more than half our country with a thousand varieties of soil and climate and productions. The magnificent states upon our western seaboard are without a chair in this committee, while the Atlantic seaboard occupies seven, and it is known that almost any of these western states and territories has greater agricultural wealth, undeveloped than that of all the Atlantic states combined.

Texas, an agricultural state large enough for an empire, Iowa, Minnesota, Colorado, California, and each of the territories call respectively for a system of agriculture peculiar to themselves and for all possible co-operation of the government in developing their boundless resources, but are all without representation in this committee of lawyers, which is very naturally presided over by a lawyer from the suburbs of New York City, whose does not claim if I understand it, any practical knowledge of agriculture.

"I say this committee does not represent the agricultural interest of the people of this country and has no conception of their needs, as is proved by this bill. I was educated upon a farm and went through a course of study in the state agricultural college of New York, and am a farmer. I do not say that I ought to be on this committee. But I do claim that

when I get up here representing the farmers of Iowa, a state capable of feeding the whole country, and asked to put upon this bill a little amendment in their interest, I should not be crowded out by the objection of a lawyer who comes from New York and has no practical interest in agriculture in this country.

I went to that gentleman, the chairman, and begged him to allow me to present my amendment and let it come to a vote. I went to another member of the committee and begged him to urge the chairman to let the amendment come before the house. And four different times I arose on this floor to urge that gentleman to withdraw his objection that the house might vote upon my amendment, which I believe is as important as all the rest of the bills put together. Yet four different times he put his veto upon me, sat down upon me, and got the chair to rule that my amendment should not be entertained and that I should not be allowed to say a word upon it.

Mr. Chairman, I want the farmers of Iowa and of the whole country to understand the black infamy of these rules under which this house is controlled by New York lawyers and capitalists, men who take \$100,000,000 a year out of our treasury to pay as usury to the rich, who yesterday appropriated over \$8,000,000 for what is called the river and harbor steal and today refuse to the great agricultural interests even a quarter of a million. I want the farmers of this great nation to rise up like men and swear by the Great Eternal that the despotism of this house shall be overthrown, and every member they send here shall have much to say about this government as if he came from New York or Philadelphia. There was never a code devised better calculated to overthrow free government than the rules of this house, which convert it into a political battle for those representatives who come in the interest of the farmers and producers and to crush out monopolies and all forms of abuse and injustice.

Farmers and Politics.

The agricultural journals all over the country are falling into line on the duty of farmers to give more attention and assume the lead in shaping the government of the country, in making the laws, expending the taxes and making appropriations for agricultural purposes. Under the above head the Southern Enterprise, published recently the following very common-sense article.

What have farmers to do with politics? The trouble is, reader, that they do not manifest sufficient interest in political affairs (we do not mean mere party contests) to inform themselves as to the merits of questions of most vital importance to themselves as producers, and to the commonwealth, the government of which they mainly support. Because of this indifference, they are constantly used by designing men to further their personal ambitious schemes. What class of citizens can possibly have a deeper interest in good government than the owners of the soil and the producers of wealth?

The politics of the present day have degenerated into a mere person contest for office, in which certain presumptuous individuals assume to claim as a right, their own elevation at the hands of the people who have acquired the habit of tamely surrendering their high sovereign right to choose their servants, and of allowing ambitious office seekers, as it were, to force themselves upon them. How rarely do the people make a voluntary selection of their representatives, whether for the state or national assembly, or for the gubernatorial chair? Too often the choice is limited to the selection from the number of those who have the presumption to claim the right to serve the people and not from those who are best fitted by reason of character and other qualifications to execute the will and promote the best interest of the people whose servants they are.

Who are responsible for this state of affairs, the voters or the candidates? We say most emphatically, the voters who fail to exercise the royal prerogative of selecting—not their rulers—but their servants, according to the theory of our government, which was instituted by the people, for the people, and not for the benefit of those whom they see fit to compliment with official position.

The farmers of the south are not interested in the promotion of personal ambition of individuals, nor in the success of any particular party organization, unless the individuals are the opponents of the principle advocated by the party, represents the true interests of the productive industries of the country, state or county. If it were convenient for the whole people to meet en masse and enact laws for their own government, they would be competent to do so, but, this being impracticable, they select representatives who are theoretically the exponents of their wishes. But how are these wishes to be known by the representatives unless they are expressed. When a farmer wishes to employ a laborer to do a certain work, he makes diligent enquiry for one who is qualified to perform the service desired, and before employing him explains what he wants done. The laborer accepts the proposition with the tacit or explicit understanding that he is to execute the will of his employer. Suppose, however, the farmer sends the laborer to the field without any intimation as to what he wished done, would he have a right to complain if his wishes, never expressed, were not executed?

We think not. Neither have farmers the right to complain of representatives who fail to carry out their wishes never made known. Assemble in primary meeting from time to time, freely discuss measures of public policy, express your wishes and select as the exponent of those wishes to

whom you propose to delegate authority to represent you in the government, the best citizen who can be induced to condescend to become your servant. If such a one has served you faithfully in the past, don't throw him aside because some one over the creek or in the upper or lower end of the county claims the right to serve you.

This is a year of elections, which are necessary evils in our form of government.

On the wisdom exercised by the voters of Georgia in the election of various grades of officers will depend, to a large extent, the prosperity of the state for the next two years.

It is to the interest of all citizens that the productive industries, upon which all others depend for existence, should be fostered, protected and developed. The citizens of Florida wish to know, the inherent mines of wealth, that capital may come to develop them.

They wish to know and publish to the world the extent and availability of her water powers, that capitalists may be induced to stud the banks of our streams with factories. In a word, they wish such legislation, state and national, as will encourage and develop our material resources, thus increasing the wealth and prosperity of the people.

If the agricultural people of the country will only take the trouble to inform themselves in regard to their best interests (their interests are identical with those of the whole people), and select officials who will use their influence to promote these interests, we will have a practical good government and a prosperous people. We need in office practical, progressive men, thoroughly identified with the productive industries of the country. States, like individuals, are respected and influential in proportion to their wealth and prosperity.

Let us make a short exhortation to young farmers, whose whose experience is to come, and who desire to be successful in their pursuit. First, remember that agriculture is founded upon the unchanging laws of nature, that knowledge is as important in this as in any other pursuit; that success does not depend upon luck or chance, but upon doing the right thing at the right time. Secondly, to learn how to do the right thing at the right time, requires the closest observation and intelligent practice. You may easily ascertain what it has cost to raise a bushel of wheat, corn, or other grain, by keeping a proper record of the labor, seed, interest on the land, and value of the crop. You may know what it costs to produce a pound of pork, beef, mutton, milk, or wool, by keeping a strict account of the food and labor that enters into each of them. This is no more difficult than for a manufacturer of cloth to determine the exact cost of a yard. Yet it may seem strange to say, that not one of all our agricultural colleges, with their experimental farms and facilities for doing it, have reported the cost of growing an animal from birth to market age, so as to determine the cost of a pound of production. We trust that in this their graduates will practice a better system than they have been taught.

The Potato.

The potato has a curious history. It is a native of the elevated valleys of the Andes in Peru and Chili, and is found as far north as Mexico. It was taken to Spain soon after the discovery of the American continent, and was cultivated in gardens as a botanical curiosity. The tubers being small and not edible in its wild state, it attracted no attention. In 1586 Sir Walter Raleigh introduced it into England, and is credited with bringing it from Virginia, but of this there is no evidence. Its cultivation in the cool moistest summers of Ireland soon developed large tubers, which were found to consist chiefly of starch. A successful experiment was made in the use of the tuber as food, but this was met and combated by a number of learned men, and several works were written and published to prove its poisonous character. It belongs to the great Nightshade family (Solanaceae) all of which are poisonous. This indictment was true, but they had not yet learned that a poisonous plant may bear a fruit or a tuber not only harmless, but very nutritious. This prejudice prevented the use of the potato till within the last forty years. The truth is, both these vegetables, being of the Nightshade family, are poisonous in stem, leaf, and flower, but this property does not extend to the tuber of the one, nor the fruit of the other. While on this subject it is proper to say that solanine—the poisonous principle of this family, is sometimes developed in the potato, even to a dangerous extent. If the tubers while growing, are uncovered so as to expose them to direct sunshine they will assume a green appearance and become poisonous from the presence of solanine. The same effect, in a minor degree, is produced in the sprouting of potatoes. If these are used in cooking they should be sliced and placed in cold water an hour or two before being cooked. Otherwise sprouted potatoes are unwholesome food.—Indiana Farmer.

—The oat meal industry is becoming a very important feature of Iowa trade, and the demand for the product of the new mills recently erected there is very large. Some of the mills have a capacity of 200,000 bushels. The farmers are increasing the acreage of oats sown, as the crop is in every respect a more sure and remunerative one than wheat.

—As a general rule, it is safe to calculate that after one season's glut of any kind of fruit there will be a fair demand for this fruit the following few years.

Around the World.

A fame that is world wide and acquired in the short space of a few years, must have true

merit for its support. Dr. Pierce's Family Medicines have gained such fame and the foreign orders for his golden medical discovery—the greatest blood purifier of the age, for his pleasant purgative pellets (little sugar coated pills), his favorite prescription—woman's best friend—and other remedies, become so great, that a branch of the world's dispensary has been established in London, England, for their manufacture. From this depot they are shipped to every part of Europe, and to the East Indies, China, Japan and other countries. Their sale in both North and South America is perfectly enormous and increases yearly. World's Dispensary Medical Association, Proprietors, Buffalo, N. Y., and Great Russell Street Buildings, London, Eng. Royal Centre, Cass Co., Ind., Feb. 28th, 1879.

Dr. R. V. Pierce, Dear Sir, I take pleasure in writing my testimony with others in regard to your valuable medicine. For a long time I have suffered from disease of the lungs and until I used your discovery found nothing that did me any good. Thanks to all, I am relieved and recommend it to all. Yours truly, MARY KENNEL.

Advertisements.

Steers for Sale.

55 head of yearling steers for sale by T. L. MIX, two miles south west of Neosho Falls, Woodson County, Kansas.

SIXTH AVE. STEAM FEED MILL.

In connection with our Grain, Flour, Feed and Hay business we have now in operation a Steam Mill and are prepared to do custom work, or to exchange our chop, meal, etc. for corn. A portion of your patronage is solicited. Satisfaction guaranteed. EPHSON & BECK, No. 115, 6th Ave., East.

Champion Hay Ricker, Loader and Gatherer.



The rake takes the hay perfectly clean from the swath and delivers it on the Rack. It is then elevated and deposited in the centre of rick, in nice loose shape for the stacker. It can be moved from one rick to another without taking it down. With this Ricker and two rakes one man and five boys and five horses can rake and rick (or load) 25 to 30 acres of hay in 12 hours. Parties who wish to buy machines must give their orders by the first day of July 1890, to be sure of getting it filed. Great inducements offered to parties wishing to handle in state or counties. Address S. B. GILLIL, No. 2, Salisbury, Mo. Agent for Kansas and Nebraska.

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WHOLESALE AND RETAIL GROCER. 227 Kansas Avenue, Topeka. The largest Grocery House in the State.

Goods Shipped to any Point.

We buy for Cash; buy in large quantities; own the block we occupy, and have no rents to pay, which enable us to sell goods VERY CHEAP. Farmers and Merchants in country and towns west of Topeka are invited to send for circulars and price list.

BARNES' FOOT POWER MACHINERY.

FIFTEEN different machines with which Builders, Contractors, Trimmers, Wagon Makers, and Jobbers in Miscellaneous work can compete as to quality and price. Patented with steam power manufacturing; also a number of tinners' supplies, saw blades, designs for Wall Brackets and Builders' scroll work.

Machines Sent on Trial.

Say where you read this and send for catalogue and prices. W. E. JOHN BARNES, Rockford, Winnebago Co., Ill.

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HUNT'S REMEDY cures Bright's Disease, Retention or Nonretention of Urine, Dropsy in the Back, Loins, or Side.

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HUNT'S REMEDY cures Intemperance, Nervous Diseases, General Debility, Female Weakness and Excesses.

HUNT'S REMEDY

HUNT'S REMEDY cures Biliousness, Headache, Jaundice, Sour Stomach, Dyspepsia, Constipation and Piles.

HUNT'S REMEDY

ACTS AT ONCE on the Kidneys, Liver, and Galleries, restoring them to a healthy action, and CURES when all other medicines fail. Hum-dreals have been saved who have been given up to die by friends and physicians.

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NO ONE

can enjoy life without health. By all means keep healthy. An ailment that prevails to great extent is liver complaint. Miserable are its victims! Headache, indigestion, biliousness, sour stomach, constipation, dyspepsia, pain in the side, palpitation of the heart and other miseries are its attendants. Impure blood can be made pure, and other eruptions removed, the skin assuming a clear and healthy appearance all by taking Simmons' Liver Regulator.

My sufferings have been great. I have spent thousands of dollars, and traveled through many states seeking health in vain. I never expected to regain my perfect health, but I thank God that Simmons' Liver Regulator has restored me to health and happiness. I felt impelled to write to you and have done my duty to suffering man and woman. My eldest daughter has taken it, and no headache since. C. HOLT, Chester, S. C.

SIMMONS' LIVER REGULATOR

Attention, Owners of Horses!

The Zinc Collar Pad

This is the only permanent and reliable pad for sore necks, horses or mules that has ever been produced, and has been greatly improved since Jan. 1, 1880. The new pad, of proper sizes, with iron hoops in top, can be buckled close at the top if desired. Being of smooth metal, they do not wear the mane, and always dispense, when needed, their medicinal value. There are over a million and a half of them in use. Pads made of other material can only temporarily have any curative properties whatever, and soon become worthless by abrasion in cleansing them. The Zinc Pads are sold by leading Saddletry Houses throughout the country, and by many makers generally. Ask your harness maker for them. Manufactured by ZINC COLLAR PAD CO., Buchanan, Mich.

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I have in my herd the sow that took first money and sweepstakes, and the sow and four under six months that took first premium at Kansas City Exposition in 1878, and the sow that littered that took first premium and sweepstakes over 11 and litter that took first premium and sweepstakes at the meeting of the Lyon County Agricultural Society in 1879. These pigs are all of my own breeding, and are competent for record. I send out nothing but first-class stock warranted, and shipped as ordered on receipt of money. J. V. RANDOLPH, Emporia, Kan.

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A Treatise on Sorgo and Improbos Canes, and the Minnesota Early Amber Sorgo Cane. The EDITHAN FOGG 1889 is now ready, and will be sent free on application. We can furnish PURE CANE SEED of the best variety.

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Attention, Owners of Horses!

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This is the only permanent and reliable pad for sore necks, horses or mules that has ever been produced, and has been greatly improved since Jan. 1, 1880. The new pad, of proper sizes, with iron hoops in top, can be buckled close at the top if desired. Being of smooth metal, they do not wear the mane, and always dispense, when needed, their medicinal value. There are over a million and a half of them in use. Pads made of other material can only temporarily have any curative properties whatever, and soon become worthless by abrasion in cleansing them. The Zinc Pads are sold by leading Saddletry Houses throughout the country, and by many makers generally. Ask your harness maker for them. Manufactured by ZINC COLLAR PAD CO., Buchanan, Mich.

THE KANSAS FARMER.

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

TERMS: CASH IN ADVANCE. One Copy, Weekly, for one year, 1.50 One Copy, Weekly, for six months, 1.00 One Copy, Weekly, for three months, .50

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

TO SUBSCRIBERS.

Subscribers should very carefully notice the label stamped upon the margin of their papers. All those marked 27 expire with the next issue. The paper is at 27 ways discontinued at the expiration of the time paid for, and to avoid missing a number renewals should be made at once.

A PREMIUM OFFER.

The Farmer For 75 Cents.

The KANSAS FARMER will be furnished from the first of July till the end of the year 1880, to single subscribers for 75 cents, and every old subscriber forwarding a new name with the money will have his own subscription extended one month. Now, friends, let us see if the list of subscribers to the "Old Reliable" cannot be doubled by January 1st, 1881, so that we can start a boom for clubs with the New Year. Every farmer and grange patron should feel it a religious duty to assist the publications, which are enlisted in their cause, and fighting the gigantic usurpations and monopolies which are springing up on every hand. Postage stamps are convenient for small remittances.

Cultivation.

This word is associated in the minds of farmers almost wholly with the plowing, harrowing and hoeing of the soil of the field and garden, but this is only a restricted form. The term has a broader meaning, and farmers should be taught to consider it in that more extended sense. It is important to well till the soil to keep down and eradicate noxious weeds which rob the crop, impoverish the farm and the farmer, and give everything an unsightly appearance about the premises. A well tilled and neatly kept farm is not only more valuable but it brings more income to the owner, than the rough, slovenly cultivated, weedy farm, while the quality of soil of each may be equal. The tillage which the farmer is expected to promote, if he desires to keep abreast of the age, does not stop with his fields and fence rows. It should show even more conspicuously immediately about the family homestead, which should be beautified and adorned, not by expensive outlays of money and foreign ornaments (let the rich city amateurs indulge in this species of luxury) but by freeing it of those unsightly and filthy surroundings which too often mark the farm mansion as the abode of coarse tastes and uncultivated minds. We often find the house surrounded by a rough unsightly fence, like a prison wall, enclosing a few feet of yard, a muddy walk to the stable, and rough muddy lane leading to the public road; the stock yards, sheds, stables and pig pen, all of the roughest material, and huddled up beside, or in front of the family abode, forming a more conspicuous figure in the landscape than the home of the family.

All this shows a want of cultivation and a coarse indifference to the beautiful; a lack of those refinements which make life most enjoyable. The stable and stock yards should be at the rear, the mansion surrounded by green sward ornamented and shaded by choice trees. But these things are neglected for more important work. This is a mistake. There is no more important work than home improvement, which involves comfort and happiness, and the culture and intelligence of the family and whole neighborhood.

A contemporary alluding to the subject of home adornment of the farm very appropriately remarks:

"The family living in such a homestead as first above described, can have little idea of taste or refinement; with a homestead surrounded with the attractions of a well-arranged lawn, with ornamental trees, etc., at once suggests and stimulates refinement and culture. Therefore, as the comfort and mental culture of our families are of higher importance than the mere matter of money-making on the farm—are, indeed, or should be, the ultimate purpose of all our efforts 'to get on in the world'—so the improvements we have suggested should be the very first to claim our attention, as they tend directly to the accomplishment of this grand purpose."

Now there is nothing tends so much to perpetuate this slovenly habit and neglect of decency, as isolation of farmers. To look well to the eyes of the world is the strongest incentive to urge the human family to dress better and "fix up." If the habit of meeting of neighbors and associating together is cultivated, the taste of our country population will be improved and a higher plain of intelligence will be reached. More money, the great desire of the farmer, will be made from the same or less amount of manual labor, the family, especially its youthful, fiery members, would be better contented, and the boys induced to stay on the farm.

More social intercourse is the crying want of American farm life, and the institution of the Patrons of Husbandry has opened a way for the achievement of this important object, and if the order never accomplish anything more it will abundantly repay all it costs, by advancing this one public good alone. Naturally man is a thorough animal in all his instincts,

habits and desires, and if he is brought up alone without the advantages of intercourse with his fellowmen, he grows up a wild animal, cautious, timid, scary, strong but uncouth, savage as well as sympathetic and generous; when brought into contact with society he is too often converted into a misanthrope, from his inability to understand, or cope with men of less natural parts, but who have the advantages of that culture acquired by intercourse with society.

Herein lies the great bane to the interests of agriculture, the lack of social cultivation and intercourse among the rural population, and with it intellectual activity. To educate the whole farming class in this direction is more important to their welfare, than a knowledge of agricultural chemistry, the classification of plants, etc., for with tastes improved and intellects quickened by the former, the latter is sure to be speedily added. An educated hermit is of the least possible use to the world, and to educate farmers without the employment of a social system which will bring them out into the world is like placing a candle under a bushel in place of on a candlestick. Society shorn as its extravagances and abuses is the candlestick of the world, and there is no species of cultivation so much needed by the rural population as this.

The Rum Question.

The question of prohibition is agitating the people of Kansas, and will enter largely into the next election. We are convinced that a large majority of the people of Kansas are fully persuaded in their own minds that a temperance sentiment or a temperance-loving people should not think it necessary to the existence of civil and religious liberty to license or sell the privilege to deal in ardent spirits.

The drinking of spirituous and malt liquors is a fashion which is kept up by licensing the sale of grog. It is not fashionable for the female portion of society to go in and out of those places, as the male members do, and hence we find but few drunkards among the women, while they are counted by thousands among their brothers. The female members of a family certainly inherit the same appetites as their brothers, but fashion prevents them from indulging it, while the fickle goddess makes it respectable for the brothers to do so by the institution of rum shops, latterly styled "saloons," a softened term, to suit the fastidious ears of a better educated society, as "irregularity" has been substituted for official stealing.

The use of intoxicating drink is the cause of more crime, poverty and expense to the public in criminal prosecutions, jails and other prisons, than any other medium. Drunkenness is generally admitted to be a nuisance, and the main cause of drunkenness is the establishing of public drinking houses by the state or municipality selling special privileges for the purpose.

But it is a waste of time to argue against the use of spirituous liquors. Their evil effects are admitted on all sides. It is a foolish plea to allege that the state cannot abolish liquor drinking, and that it has no right to meddle with men's bill of fare. It cannot fully prevent the commission of any of the many crimes and bad habits which afflict society, but because it cannot absolutely cure them is no argument that it should patronize them as it does rum drinking. Let it quit selling privileges for such a trade and make it a penal offense for the man who dares to sell it, and a punishable crime for a man to be found drunk, and the evil of drunkenness will begin to mend at once. It will doubtless cling to the race which has so long indulged in it with more or less tenacity, but if the business is placed under the ban of law, tipping will lose its respectability. Temptation and the school of drunkards will be removed out of the way of tens of thousands who fall victims because it is placed continually before them in every public house. Society banished it from private parties and families because it made beasts of husbands and sons, and the reason is as strong for abolishing it from all public places. Railroad companies banished liquor from all their stations because it was their interest to do so, and the public interest demands that it be banished from among the recognized branches of trade for the good of the public.

There is a weak point in the proposed amendment, which provides for the manufacture and sale of spirituous liquors for mechanical and medicinal purposes. At the door of the medical fraternity lies the crime of a large per cent. of the drunkenness which afflicts the land. Their liquor prescriptions may possibly have cured a few and afforded temporary relief to others, but where one has been benefited by alcoholic prescriptions, ten thousand have been finally laid in drunkards' graves. Far better the few had died than the thousands had been led away to future drunkards' graves. No doctor should be allowed to prescribe spirituous liquors as a beverage in case of chronic diseases, or the use of alcohol in his practice, except as a tincture or an outward application to the skin! There is a grave doubt as to its remedial effect, while there is no doubt of the great evils which have resulted from its use as prescriptions for the cure of disease.

The rum holes of the towns are man-traps for country boys and men, and thousands of these honest fellows fall victims who would never know the evils of intemperance if it were not for these pitfalls of the villages which the state or corporation permits for the consideration of a few dollars. If the prohibitory amendment is adopted and rigidly enforced, as it will be, it will be the means of adding millions to the material wealth of the state, the lessening of

taxes, and improving the health of the citizens. Converting corn into alcohol is changing bread to poison, a process that cannot enrich the human family. The village grog-shop is a constant snare to country boys and the farmers' hired men, and they should strike the evil a death blow.

Be Ready For The Nominations.

Farmers, have your candidates ready to place in nomination when the primary meetings are called and the delegates are chosen for the county conventions? or are you allowing the machine politicians to fix things to their liking? Your movements will determine the complexion of the next legislature of Kansas. You can if you will have a house and senate, too, largely composed of farmers, representative men of your class, who possess judgment and integrity, and know what the people want, and the legislation which the best interest of the state requires. If you allow the machine men to choose for you they know what their interest requires and will place such candidates on the ticket as will be sure to carry out their wishes in the halls of legislation. There will be a great deal of noise, sound and fury signifying nothing. There will be a large preponderance of lawyers, no end of talk, but little done looking to the permanent welfare of the state.

We urge upon farmers of both parties again to attend the primary meetings. Here is the vantage ground. The delegates to the convention once elected they can nominate whom they please, and if they are mainly appointed by the machine men and office hunting class they will nominate such delegates as suits the purpose of this class, and the legislature will be a place for jobs and jobbery.

Short-Horn Sales.

The Kentucky summer series of sales will be found advertised in the FARMER, which will begin at Mt. Sterling, Ky., July 23th, with the sale of Mr. T. C. Anderson's herd of eighty-five animals. We have received the catalogue of Mr. Anderson, and a private letter accompanying the same, in which Mr. A. assures us that every animal to be placed on sale is a regular breeder, not a barren one among them, and all fully up to their pedigrees. The catalogue shows one of the finest herds as to pedigree in the country, with a number of roans, which color possesses more of merit than of fashion, while the deep reds are charged with being more the favorites of fashion than distinguished by qualities which constitute intrinsic merit. It is to be hoped that farmers who propose purchasing breeding animals at these sales, will employ agents who are thorough judges of first-class stock, if they are doubtful of their own judgment, or cannot attend in person, to purchase for them, and instruct their agents to disregard color and buy on the merits of the animal.

It is time this "true to feather" and "true to color" craze was checked, in common parlance, set down on. A farmer wants to breed for beef and profit at the butcher's, and he wants an animal that will give him stamina, style, and quality of flesh. Beeves are all of one color when skinned, but there is a great difference in the quality of the meat. Buy for quality without regard to color, and the breeders will be able to furnish uniformly better animals. Breeders say they have to regretfully resign many a fine roan bull calf to the butchers while they retain mediocre reds because silly buyers purchase color before quality. Binish fashion from the stork-yard, and confine the fickle goddess to the apartments of the modiste. Business principles should govern the selection and breeding of stock and not the color tints of the artist.

Fine Berries.

Mr. E. A. Coleman, of Douglas county appears to be the boss berry raiser of this section of country. From 7 acres planted in raspberries he has picked this season 6000 quarts, which have brought him the handsome price of 15 cents per quart, and he estimates he will pick 2000 quarts more as this year's crop. Of Kittinging black berries Mr. C. has about an acre in vines which he expects to yield him 50 bushels. The black berries are just coming in, and are very fine, judged by a sample left at the FARMER office, with a basket of early harvest apples and Mammoth Cluster raspberries. There is ready sale at home for all the berries that can be produced at fancy prices, and the home market is never nearly supplied, but thousands of quarts of berries are shipped into this city from abroad weekly, and sold at fabulous prices. Small fruit raising within reach of all populous towns is one of the best business farmers can engage in.

Mr. J. L. Templin, of Hutchinson, Reno Co., is a candidate for County Superintendent. Mr. Templin is a valued correspondent of the FARMER, all readers of which are familiar with him through our pages. He is a representative of the agricultural class and in every way competent to fill the office of superintendent. We trust that the farmers of Reno county will make his cause their own, and see to it that he is nominated and elected. The present campaign appears to be a temperance and anti-temperance contest. Mr. Templin represents the former, and we hope that rum will be assigned a low seat, the position society assigns to its millions of ruined victims.

Our subscribers are requested to examine the slip attached to their paper and not allow their subscriptions to expire without renewing. Every subscriber to the FARMER could easily obtain the name of one or more neighbors to add to our subscription list. From the first of July

till the first of January, 1881, we will furnish the FARMER to single subscribers for 75 cents, and every old subscriber furnishing us with a new name and enclosing that amount in postage stamps, will have his subscription extended one month.

The beautiful white fruit that we see nowadays is dried or evaporated by patent fruit dryers, and the best of this evaporated fruit sells at 20 to 25 cents per pound. Farmers wives and daughters should procure a dryer and save the green fruit which goes to waste. Among the best low priced good dryers, Zimmerman's dryer is recommended. The address of the manufacturers is Zimmerman Fruit Dryer Co., Cincinnati, Ohio. See their ad. in FARMER.

We have had several inquiries within the last few months about the Screw Pulverizer. For satisfactory information concerning this new implement of the farm, see advertisement in the present issue of the FARMER.

Not Guilty.

ED. FARMER: Hold on there, Mr. Editor, you're too fast, I'm not the literary "sponger" you take me to be. If I should, "through the kindness of a neighbor," come into possession of anything else but a newspaper, would it follow, *par se*, that it was "loaned?" If a neighbor, removing from the state, should present me with a year's subscription to a newspaper, is there anything wrong in my accepting it? No, sir, Mr. Editor, I resent the accusation. It is severe, unjust, and without the slightest foundation in fact. I am friendly towards all editors, and especially to those of my favorite papers, and patronize and pay for as many as the majority of your readers.

Of course I shall renew when the year runs out, for I am already too much attached to the FARMER to do without it. So I think you might consider yourself lucky to secure, "through the kindness of a neighbor," a new subscriber to take the place of one removed.

I have but one fault to find with the FARMER, and that is I miss getting some of them, (and some of my neighbors complain of the same thing). It was by the merest accident that I saw the number containing my letter and your severe comments. To say the least, I think it rather a coal reception for a new patron.

N. U. KUMER.

N. U. Kumer being justified we didn't mean him, but seized the opportunity to talk over him on general principles. The real spongers read but never tell, and our preaching was all for their sins. N. U. Kumer will accept our thanks for his partiality for the FARMER, and our apology for using him to punish a certain class of old sinners.

We regret the failure of the FARMER to reach subscribers referred to by our correspondent, but Uncle Sam's postal force will have to bear the blame. We mail the paper regularly, and pay postage for its safe delivery, and always regret as much as our subscribers when it fails to reach them.

Breeding Stock—How To Attend Fairs.

I do not see anything in the FARMER concerning the Shawnee County Agricultural Society, but I presume it is still alive and will have another fair this fall.

The importance of a good fair can hardly be overestimated, for it is not only a place where we take a day or two from the weary rounds of farm life but a place that we can make out a day of profit as well as a day of pleasure.

Here we have a chance to compare farm produce, fruits of the orchard, vineyard, etc., and all the improvements, and last of all but not least by any means the live-stock which is the chief source of profit in this western country. Some ask me if it pays to fix up my stock to take to the fairs? I have always taken enough premiums to pay me, but that should not be the real object of the fair. It should be not only a place of recreation but a place to gain knowledge. Now as for me I always first look to see who has the best cattle, look at the points of excellence in each individual, then I get acquainted with the cattle men, converse about cattle matters and learn a great deal in regard to the breeding and management of cattle. It is so with all kinds of live-stock. Then I look at the agricultural implements and the fruits and vegetables, you will always find persons that are willing and eager to answer all questions concerning what there is on exhibition. There I am a great friend to poultry, there is nothing on the farm that I make more clear money out of than my Light Brahma and Black Spanish chickens. Chickens are a thing that is too much neglected on the farm. When there is a good fair I want to stay on the ground during the whole fair. Then I can take my time to look at the different things and converse, take notes, etc., until I get tired, then I go to my bunk and rest up which is very essential to enjoyment. I saw an illustration between talent and capital this evening. Surely what good is capital without the knowledge of how to use it? and here it can be obtained, not through books but by observation, which is not only theory but it is practicable.

I saw in the FARMER a statement of an actual experiment of fattening hogs, showing the clear gain of feeding corn over hauling it away to market.

Selecting and mating are the important points in breeding fine stock. Here is where most of the failures in the live-stock business arise. Here is where you have to look to the ancestors as well as the immediate descendants of those you are mating. Some say it is all in the feed. Now this is pure ignorance or the want of thought. Compare the large and

smooth short-horn, and the small Jersey, the black polled cattle, and the long horned, light framed Texas. See the large Norman horse and the Shetland pony or the breeds of hogs, the large Chester White or the small Suffolk, and who can say it is feed that makes this change both in color and size.

In my last article it should have been the Second Duke of Richmond, instead of the Sixth. M. WALTSMIRE.

Preparations for the Shawnee County Agricultural Fair are progressing. The premium list will be issued in a few days. The fair will be held October 5th, 6th, 7th and 8th. The premiums are liberal and a fine display is anticipated by the society.

Experience in Wheat Raising in 1879.

In my last communication I stated as my opinion that there would be no wheat harvested in Pawnee county. With the general outlook then it seemed almost impossible, but the rain on the 19th and 22d of May helped what little there was left, and there will be a small amount although I do not know of more than half a dozen pieces that will be cut in the large town of Pleasant Valley, which lies south of the river from Larned, this, too, always having been the banner wheat township of Pawnee county, and most of these fields seem hardly worth the expense of cutting, and you would probably have thought so had you seen me trying to gather up a stray head here and another there. What there was was a good, round, plump berry, and we felt that we must save it so tweekers in hand we went forth to do battle against the mighty few. (Our machine was McCormick's binder with binder left off and box in its stead). After running over about fifteen acres, and getting what heads we calculated would thrash about sixty bushels, we found that the straw grew shorter and shorter and the heads few and far between, we gave up the contest and came to the conclusion that the McCormick binder would cut and save anything and everything except grain that heads out underground. So you see, Mr. Editor, that my experience in wheat raising this season, has been a failure—sixty bushels from sixty acres' sowing.

My friend, McCarty, of Larned post office, suggested to me soon after the rain of May 19th, that I had better have waited till after the rain before I wrote my last communication, and that I had better go home and write another, but considering his former suggestions to wait for rain, I thought it best to do so, and was rewarded far waiting by two fine showers on Thursday and the other Friday night, which wet the ground to the depth of one inch, which, however, revived the drooping corn and the sunburnt millet somewhat. Yet with all the four copious rains we must expect only a light crop unless we have sufficient rains to wet the ground thoroughly. F. F. DOWNS.

Ray, Pawnee Co., Kansas.

Post Office Addresses.

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

—Many farmers stop feeding their working horses about this time, and let them hunt for themselves in the pasture field. This is a short sighted policy, because a working horse wants more solid food than grass affords. Chop feed or oats should be given three times a day if a full day's work is expected.

Cabbage, containing as it does a large per cent. of phosphoric acid, makes one of the most valuable kinds of food for young pigs, calves, and chickens. All young animals require a bountiful supply of phosphatic food to make bone. Clover is next in value to cabbage.

—Two hundred and twenty-five acres were devoted to the cultivation of strawberries in South Carolina this year, yielding 4000 quarts per acre, and aggregating 900,000 quarts, which at 12 cents per quart would give an income of a trifle over \$108,000.

A Word of Good.

One of the most popular medicines now before the American public, is hop bitters. You see it everywhere. People take it with good effect. It builds them up. It is not as pleasant to the taste as some other bitters as it is not a whisky drink. It is more like the old fashioned beneset tea that has done a world of good. If you don't feel just right try hop bitters.—Nunda News.

For the Fourth.

A large assortment of Children's Lace Bonnets and Ladies' Ruches just received at Mrs. E. C. Metcalf's and will be sold at a bargain, also great reduction in her fine stock of Millinery goods.

Farmers Get Fooled

when they buy butter powders and colored salts and big bottles of cheap coloring stuff, if they expect to get as good a butter color, as the perfected butter color made by Wells, Richardson & Co., Burlington, Vt. This color will imitate the excellence of this, the original color, but have wholly failed. Farmers should use only the "perfected" Sold by druggists and merchants generally.

Thousands Benefitted.

Is clipped from the Gazette, Tonkers, N. Y., the following: "Thousands of human beings that have for years been suffering from diseases of kidneys and liver, are now being made well and happy by the use of Warner's safe kidney and liver cure. It is the only medicine in existence that will effectually cure Bright's disease. While Warner's safe diabetes cure is the only sure remedy for diabetes.

Communications.

Dishonest Breeding.

Let some of the FARMER family may not clearly understand the little difference between Mr. Waltire and myself, the discussion of which this article is a continuation, I will state it here in a few words as I can.

Some time since, in an article published in the FARMER, Mr. Waltire stated, in substance, that in obedience to a groundless prejudice of the people, Short-horn breeders were passing superior roans and were using inferior dark-red bulls in their herds.

Mr. Waltire has neglected his Sunday-school. Any little Sunday-school boy or girl is able to tell him that he has no right to pass a superior roan bull, and breed from an inferior dark-red because somebody asks him to.

This is growing too long. I have something more to say on this question of color, and will send it to the FARMER in a few days.

Mr. Waltire advises that I "had better breed for real merit" without regard to color. Sound advice! It is unfortunate that he does not practice what he preaches.

A. A. STEWART.

Our correspondent's criticism does not exactly meet the case. If the demand is for red goods and light goods are neglected, not wanted by customers and will not be accepted, notwithstanding the light goods are the better quality, the dealer is compelled to stock up with goods that his customers demand or shut up shop.

Wheat Prospect.—Grape Rot.

Since our last letter to the FARMER we have had fine rains—real ground-soakers—and that too without storm or wind, and not in a dash to wash the grain fields, as is frequently the case with the summer showers.

"My Back Aches So, and I feel miserably," said a hard working man. The doctor questioned him and found that he had been habitually constive for years, that now his kidneys were disordered and his whole system deranged.

Better Times. The Democrat, New Orleans, La., says: "Suffering among such as have been troubled with diseases of kidneys and liver, has been perceptibly better since the introduction among us of Warner's safe kidney and liver cure."

Humbugged Again. I saw so much said about the merits of hop bitters, and my wife who was always doctoring, and never well, teased me so urgently to get her some, I concluded to be humbugged again; and I am glad I did, for in less than two months use of the bitters my wife was cured and she has remained so for eighteen months since.

It Saved My Life. There is one medicine in this world that has true merit. I shall never cease to praise it, for it saved my life. That medicine is Marsh's Golden Balsam for the Throat and Lungs.

oped some of every variety I have, covering one bunch on a spear and leaving the rest naked. I found at gathering time that while those enveloped were perfect, those even on the same spear left exposed, were entirely destroyed.

J. W. WILLIAMS. Cope, Jackson Co., Kan., June 14.

High Coloring.

I always like to speak well of the place where I live, and give it the merit that is due to the country. I don't like to hear those whiners that are never satisfied with any place they go to.

There is a reason for so much misrepresentation and for the good of those floating home-seekers we should try to remedy it. There is too much high coloring in the letters of farmers. It may help the country some in settling, but it is not a fair way to use our neighbors.

For the speedy cure of Seminal Weakness, Loss of Manhood, and all disorders brought on by indiscretion or excess. Any Druggist has the ingredients. Address DAVIDSON & CO., 78 Nassau St., N. Y.

Public Benefactors.

Harvey, Jenner Guthrie, and other discoverers of great facts in medical science, have been properly called the world's benefactors. Whoever succeeds in lessening the pain and dangers of the human family deserves no less a title.

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

Eight and nine per cent. interest on farm loans in Shawnee county. Ten per cent. on city property. All good bonds bought at sight. For ready money and low interest, call on A. PRESCOTT & CO.

ANNOUNCEMENTS.

I am a candidate for the office of Probate Judge subject to the decision of the Republican primary election. D. A. HARVEY.

I am a candidate for re-election to the office of Probate Judge, subject to the Republican primary election. G. W. CAREY.

PRESCRIPTION FREE

For the speedy cure of Seminal Weakness, Loss of Manhood, and all disorders brought on by indiscretion or excess. Any Druggist has the ingredients. Address DAVIDSON & CO., 78 Nassau St., N. Y.

Markets.

TOPEKA MARKETS.

Table with columns for Produce and Grocers retail price list. Includes items like LETTUCE, ASPARAGUS, RADISHES, NEW CABBAGE, etc.

Table with columns for Retail Grain. Includes items like WHEAT, CORN, OATS, RYE, BARLEY, FLOUR, etc.

Table with columns for Butchers' Retail. Includes items like BEEF, PORK, MUTTON, etc.

Table with columns for Hide and Tallow. Includes items like HIDES, Green, Green, calf, etc.

Table with columns for Poultry and Game. Includes items like CHICKENS, TURKEYS, DUCKS, etc.

Table with columns for Chicago Wool Market. Includes items like Tub washed bright, do 46c per lb, do dingy and coarse, etc.

St. Louis Wool Market.

Table with columns for St. Louis Wool Market. Includes items like Tub-choice clean 42 to 44c, No. 2, 38 to 40, low and dingy, etc.

Markets by Telegraph, June 29.

New York Money Market.

Table with columns for New York Money Market. Includes items like MONEY—2 to 3 per cent., GOVERNMENT BONDS, etc.

St. Louis Produce Market.

Table with columns for St. Louis Produce Market. Includes items like FLOUR—Unchanged, WHEAT—Cash sharply declined, etc.

Kansas City Live Stock Market.

Table with columns for Kansas City Live Stock Market. Includes items like CATTLE—Receipts 1,363; shipments, 1,181; best sales at \$4.15, etc.

Chicago Live Stock Market.

Table with columns for Chicago Live Stock Market. Includes items like HOGS—Receipts 23,000; shipments, 6,000; market opened weak, etc.

Kansas City Produce Market.

WHEAT—Sales yesterday were for cash and June, 74c for No. 3, and 80c bid for No. 2; lower grades in light demand.

St. Louis Live Stock Market.

HOGS—Fairly active and lower; Yorkers and Balts-mores, \$4.15 to 4.20; packing \$4.20 to 4.30 heavy shipping, \$4.30 to 4.35; receipts, 1,100; shipments, 2,700.

Liverpool Market.

BREADSTUFFS—Market unchanged. FLOUR—10s to 12s. WHEAT—Winter, 9s 9d to 9s 10d spring 8s 6d to 8d 4d.

Chicago Produce Market.

FLOUR—Dull and nominal. WHEAT—Steady and in fair demand; No. 2 red, 88c; No. 2 spring, 88c; No. 3 spring, 86c; No. 4 spring, 84c; No. 5 spring, 82c; No. 6 spring, 80c; No. 7 spring, 78c; No. 8 spring, 76c; No. 9 spring, 74c; No. 10 spring, 72c; No. 11 spring, 70c; No. 12 spring, 68c; No. 13 spring, 66c; No. 14 spring, 64c; No. 15 spring, 62c; No. 16 spring, 60c; No. 17 spring, 58c; No. 18 spring, 56c; No. 19 spring, 54c; No. 20 spring, 52c; No. 21 spring, 50c; No. 22 spring, 48c; No. 23 spring, 46c; No. 24 spring, 44c; No. 25 spring, 42c; No. 26 spring, 40c; No. 27 spring, 38c; No. 28 spring, 36c; No. 29 spring, 34c; No. 30 spring, 32c; No. 31 spring, 30c; No. 32 spring, 28c; No. 33 spring, 26c; No. 34 spring, 24c; No. 35 spring, 22c; No. 36 spring, 20c; No. 37 spring, 18c; No. 38 spring, 16c; No. 39 spring, 14c; No. 40 spring, 12c; No. 41 spring, 10c; No. 42 spring, 8c; No. 43 spring, 6c; No. 44 spring, 4c; No. 45 spring, 2c; No. 46 spring, 0c; No. 47 spring, 0c; No. 48 spring, 0c; No. 49 spring, 0c; No. 50 spring, 0c.

Chicago Live Stock Market.

HOGS—Receipts, 23,000; shipments, 6,000; market opened weak, closed firm and steady; mixed packing \$4.15 to 4.20.

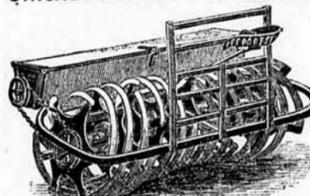
Denver Market.

HAY—Upland, 24 to 25; second bottom, 21 to 22; bottom hay, 19 to 20. FLOUR—Colorado, 3.40 to 3.45; Graham, 3.00 to 3.25. WHEAT—2.00 to 2.20 per cwt. CORN—1.35 to 1.40 per cwt. OATS—1.30 to 1.40 per cwt. BARLEY—1.75 to 1.85 per cwt.

New Advertisements.

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

CHICAGO SCREW PULVERIZER.



Does Pulverization pay?

EL PASO, Ill., Nov. 25, 1879.—Have been using the Screw Pulverizer three seasons. This year have used it wholly—have not used a plow at all. Planted eighty-five acres to corn, prepared and cultivated wholly with this machine, and nothing else. Produced over sixty bushels per acre. Matured ten days earlier, and averaged more than twenty bushels per acre more than adjoining fields, plowed and cultivated in the ordinary way. The less cost and more corn per acre would more than pay for machine complete on 45 acres.

Send for Pamphlets, free, with Letters from over Sixty Men using the Machine, and Cuts showing these Knives in Cultivator Frames for Corn or Cotton.

Address the Manufacturers, CHICAGO CRAPER & DITCHER CO., 24 Metropolitan Block, Chicago.

SHORT HORNS.

Kentucky Summer Series of Sales:

- On Wednesday, July 28th, at Mt. Sterling, Ky., T. CORWIN ANDERSON, of Side View, will sell ninety (90) head of Pure Bates and other high class Short Horns topped out with choice Duchess and Oxford Sires. Sale will begin promptly on arrival of noon train.
- On Thursday, July 29th, at Stock Place, near Winchester, Ky., VAN METER & HAMILTON will sell a very attractive draft of seventy (70) head from their very large herd of Short Horns; consisting of females safe in calf, or cows with young calves, a few choice young Bulls, and all of desirable age.
- On Friday, July 30th, at Winchester, Ky., B. A. & J. T. TRACY will sell their entire herd (60 head) of carefully and finely bred Short Horns, consisting of Rose of Sharon, Young Marys and Phyllisses topped with high bred Rose of Sharon and straight bred Duke bulls, also some high class Rose of Sharon bulls.
- On Saturday, July 31st, at Cloverland, near Lexington, Ky., WM. T. HEARNE will sell his entire herd (50 head) of Short Horns, consisting of Frantics, Finessees, Craggies, Fennel Duchesses, Lady Bickerstaff's Hilpas, Kirklevingtons, and Young Marys. Twenty head of pure Bates, the rest are of choice families, by Bates Sires. Some are prize winners, and many of the young things are of great value.
- On Monday, August 2d, at Lexington, Ky., WM. WARFIELD & CHAS. A. FARRA (both of Lexington) will sell sixty (60) head of well bred Short Horns, representing those choice families which they have bred so skillfully for a great many years.
- On Tuesday, August 3d, at Lexington, Ky., WALTER HANDY, of Wilmore and C. S. SPILMAN, of Bryantsville, will sell seventy (70) head of choice Short Horns of the Foggathorpe, Mazurka, Mason Victoria, Young Marys, Phyllisses and Aurora families. Many of the young things are of rare individual merit, and will be in fine flesh and condition.
- On Wednesday, August 4th, at Stony Point, Ky., J. ED SUDDUTH, of Stony Point, and R. BRENT HUTCHCRAFT, of Paris, will sell their entire herd (50 head) of Short Horns, consisting of Rose of Sharon, Young Marys, Jessamines, Galattas, Ianthes, Desdemonas, and other good families.
- On Thursday, August 5th, at Paris, Ky., WM. T. SYDNER, of Mt. Sterling, and ROBT E. POGUE, of Helena, will sell sixty (60) Short Horns, 35 High Class Phyllisses, 20 extra Renick Rose of Sharon topped Cambrias, and Harriets, bred to Rose of Sharon Bulls, and a few others including the grand breeding sire Valeria Duke \$25,000.
- N. B.—Catalogues of each herd on application to the owners of the respective sale herds. Visiting breeders will have the opportunity to visit almost every prominent herd in Kentucky, both of Cattle and Horses.

Printing Press for Sale.

A Country Campbell Printing Press

Size of Bed 31x46 inches, just thoroughly overhauled and put in complete order, will be sold cheap for cash. The press is furnished with springs and steam fixtures and will do good work as a new press. Apply at the office of the

KANSAS FARMER, Topeka, Kansas.

AGENTS WANTED.

A Library in One Volume. A Book for the American Farmer and Stock Grower, Menning's Illustrated Stock Doctor. A live stock encyclopedia, including horses, cattle, sheep, swine and poultry, with all the facts concerning the various breeds, of their characteristics, breaking, training, sheltering, buying, selling, profitable use and general care. 400 illustrations and two charts illustrating the ages of horses and cattle. Send for circulars, terms, &c., to THOMAS PROTHERO, Emporia, Kansas.



CHAMPION HAY GATHERER.

Saves expense of Winnowing and Shocking. This Rake gathers the hay perfectly clean from the swath from 400 to 700 pounds at a time and carries it to the stack. The Rake is then backed from under the hay. Will adjust itself to uneven ground. Has been thoroughly tested. Saves from 50 to 75 per cent over the common way. Price \$25. Parties wishing to buy Rakes or the right to manufacture them can get terms by addressing S. B. GILLILAND, Salisbury, Mo.



KANSAS Staats-Anzeiger.

The Largest German Paper in the State. Devoted to the Interests of the State of Kansas. If you want to reach or communicate with the German speaking people of the state, advertise in or subscribe to the STAATS-ANZEIGER. PHIL SCHMITZ, Publisher, 209 Kansas Avenue, Topeka.

FRUIT DRYER & BAKER

OVER 11,000 IN USE THE BEST IN THE MARKET MADE ENTIRELY OF GALVANIZED IRON AGENTS WANTED ZIMMERMAN FRUIT DRYER CO. Cincinnati, O.

Golden Belt Route KANSAS CITY TO DENVER

via Kansas Division Union Pacific Ry. (Formerly Kansas Pacific Railway). Only Line running its Entire Train to Denver and Arriving Many Hours in Advance of All Other Lines from Kansas City or Leavenworth. Denver is 114 miles nearer Kansas City by this line than by any other. The Denver East Express with Pullman Day Coaches and Sleepers runs through To Denver in 32 Hours.

The Kansas Express Train Leaves Kansas City at 11 every Evening and runs to Ellis, 302 miles West. The First-Class Coaches of this train are seated with the Celebrated Horton Reclining Chairs. All Persons en-route to Mining Points in Colorado should go via the Kansas Division of the Union Pacific Railway. All persons going to the West should pass through this fertile Golden Belt by daylight, thus affording an excellent view of that magnificent section of the Union, the First Wheat Producing State, and fourth in rank in the production of corn. This state possesses superior advantages to agriculturists. Thousands of acres yet to be opened to actual settlement under the Homestead Act, and the Union Pacific has \$2,500,000 fine farms for sale in Kansas. Thos. L. Kimball, General Pass and Ticket Agent, Kansas City, Mo.; John Muir, Freight Agent, Kansas City, Mo.; S. J. Gilmore, Land Comm'r, Kansas City, Mo.; S. T. Smith, Gen'l Supt., Kansas City, Mo.; D. E. CORNELI, Gen. Agt., Passenger Dept., Kansas City, Mo.

Literary and Domestic

A Common Story.

By the Author of "JOHN HALIFAX, GENTLEMAN."

My old love whom I loved not, Is this your friendly hand? Your voice with a tremble in it, None else could understand! My old love whom I loved not! After so many years, Parting in silence and in pain, To meet with smiles, not tears.

Hints for the Household.

When I was a "schoolmarm" boarding around, I used to collect recipes for various eatables, and see various kinds of housekeeping, and in the last sixteen years of my life I have used many of those recipes, collected or invented, to suit circumstances, or the state of the larder, and I will try in these hints to give you the benefit of some of my experience.

At this time of year most housekeepers want a good way to keep eggs. I will tell you my way, and I have kept them good for six months. I use an egg box which any carpenter, and a good many men and boys who are not carpenters, can make. My box is 27 1/2 inches long, 12 1/2 inches wide on the outside, and 3 1/2 inches deep with a tightly shutting lid.

For a breakfast dish, if I had cold potatoes, I sliced them thin, put them in the spider with a little milk, salt and pepper to taste; stirring them often, and when warmed through and the milk nearly gone added a little butter and mashed them well; then broke an egg to a person, or, if there were several persons, only one egg to two persons, over the potatoes, then as soon as the whites were "set" I stirred the whole lightly with a spoon till the egg was thoroughly incorporated with the mass.

Bread-Making in Spain.

The bread in the south of Spain is delicious; it is as white as snow, close as cake, and yet very light. The flour is most admirable, for the wheat is good and pure, and the bread well kneaded. The way they make bread is as follows: From large, long panniers filled with wheat, they take out a handful at a time, sorting it most carefully and expeditiously, and throwing every defective grain into another basket.

duty by the shout of "arra mola," from some one within hearing.

When ground, the wheat is sifted through three sieves, the last of these being so fine that only the pure flour can pass through it; this is of a pale, apricot color. The bread is made in the evening. It is mixed with sufficient water with a little salt in it, to make into dough; a very small quantity of leaven or yeast in one batch of household bread as in Spain, would last a week for the six or eight donkey loads of bread they send every day from their ovens.

Keep Your Mouths Shut.

The peculiar arrangement of the narrowed and branched and delicately furnished nasal passages are specially suited to strain the air and warm it before it enters the lungs. The foul air and sickening effluvia which one meets in a day's traveling through the crowded city are breathed with greater impunity through the nose than through the mouth. Raw air, inhaled through the mouth, induces hoarseness, coughs, etc.

Mr. Pittman gives an epitome of the experience of George Catlin in his travels among the Indians, of whom he visited 150 tribes. Everywhere he found the Indian women careful to press together the lips of their children after leaving the breast, and before being suspended in their narrow cradles in the open air, and he found it a very rare thing to hear of a death during childhood among any of the tribes, before strong drinks and new diseases were introduced among them by the whites.

In the closing paragraphs he advises that mothers at home, and teachers in seminaries, should make nightly rounds as long as necessary, and put a stop to the unnatural, dangerous and disgusting habit of sleeping with the mouth open.

Rice Dishes of Italy.

The rice dishes of Italy are popular and delicious, so unlike our own well known ones that we urge a trial of their excellence upon our readers. Chief among them rank the risotto of Milan and the cream and rice of chicken. The risotto is made by par-boiling well washed rice in boiling water for five minutes, draining and drying it on a cloth, frying it light brown with a little chopped onion and butter, and then stewing it until tender in enough highly seasoned broth to well cover it; it has to be watched closely, and the sauce-pan shaken as the rice absorbs the broth, so that it will not burn; when the rice is done it is put into a buttered mould with shreds of cold chicken, ham or tongue, well shaken down, dusted with grated cheese, and browned in the oven. Slices of mushroom or a little tomato sauce,

are used as variations from the chicken or tongue.

The cream of rice is made by boiling the breast of a fowl and a cup of rice in chicken broth until soft enough to rub through a fine sieve; the paste thus formed is used to thicken boiling milk, seasoned with salt, pepper, and nutmeg, to the consistency of thick cream; it is one of the most delicious and nutritious of all soups.

Mizotto is prepared with sausages in the north of Italy is a very appetizing dish; the sausages are twisted, without breaking the skin, in inch pieces, and fried brown; the rice is washed, boiled for five minutes in boiling water, drained and dried, and then browned in the sausage fat with a chopped onion; last of all, these ingredients are stewed in highly seasoned broth until the rice is tender and has absorbed all the broth, enough being used to well cover it when it is set to stew.—The Housekeeper.

A Short Study for Boys.

The life of Charles O'Connor, the eminent lawyer, shows what diligence and perseverance will accomplish.

When eight years old he was an office boy and a newspaper carrier. His father published a weekly newspaper, and Charles, besides attending in the office, delivered the journal to subscribers in New York, Brooklyn and Jersey City. He used a skiff to cross the rivers, and frequently would be out all Saturday night serving his route. It is said that he never missed a subscriber.

When seventeen years old he entered a lawyer's office as an errand boy. He borrowed law books, took them home and read them by the light of a candle far into the night. Several lawyers noticing the boy's industry, aided him in his studies.

When he was twenty-four years old he was admitted to the bar, and even then it was said that young O'Connor's legal opinion was worth more than that of many other lawyers.

But success comes slowly to a young lawyer, and it was not until his thirtieth year that clients recognized the legal learning and skill of young O'Connor. He was very poor, but industry and ability were his capital. He worked hard at the smallest case, never slighting any trust, and in time secured the reputation of a man who would do his best for those employing him. To this conscientiousness and industry he owed his success.

Recipes.

SOUR CREAM CAKE.—One cup sugar, 1 cup sour cream, 3 eggs, 2 1/2 cups flour, 1 teaspoonful of soda; flavor with cinnamon.

SOUR CREAM BISCUITS.—Thoroughly dissolve two teaspoonfuls of soda and a little salt in a pint of sour cream, and mix in flour until you have a dough that is as soft as can possibly be handled, and cut into biscuits; bake quickly in a hot oven.

BRAMBLEBUSH. Parsely, eaten with vinegar, will remove the superfluous of eating onions.

The finest paste for all purposes is made as follows: To a teaspoonful of flour add gradually half a pint of cold water, and mix quite smooth; add a pinch of powdered alum (some add a small pinch of powdered resin) and boil for a few minutes, stirring constantly. The addition of a little brown sugar and a few grains of corrosive sublimate will, it is said by practical chemists, preserve it for years.

RASPBERRY PUFF.—Proceed precisely the same as for puff tarts. When you have cut the desired number roll them out thin, about six inches in diameter. Now place a teaspoonful of raspberry preserves on it, a little from the center, spread it on the preserve, and then bring the back part over to the preserve. Keeping it back a little from the front edge, for if it laps over the bottom edge is prevented from raising. It is best to allow the top edge to lie back from the front edge at least one-fourth of an inch. This folding forms a half circle. This being done wash them with water, or egg and water, and dust them with powdered sugar. Also cut a few deep but short cuts across the top—over where the preserve lays—when baked the preserve shows through.

DEEP FRUIT PIES.—Fruit pies in deep dishes, such as made by the English and French, are preferable to ordinary fruit pie, because you obtain more juice and fruit. The best method of making these is as follows: Take a deep, oval pie dish, china, not tin, line the edge with paste, also about half its depth inside. Now place a small cup, an egg cup is best, and one that will stand a little above the edge of the dish, next fill your dish with fruit, then add a little water if your fruit has not too much juice. Some fruits, such as currants and raspberries, have enough juice. Also add sugar to taste, now cover this with a crust of short paste, wash it with water or white of an egg, and dust with powdered sugar. Make a few fancy cuts on it before baking, and after it is washed and sugared do not cut too deep. These cuts give it a rich looking appearance. The cup in the center collects the juice, and if the whole of the pie is not eaten at one meal what is left can be supplied with juice by simply lifting the cup and allowing the juice to escape. The edge of this pie, to be artistic, should be pinched up with the finger and thumb, then notched with a knife. If you use fruit which gives too much juice, you can prevent the boiling over by mixing a little flour with the sugar, about one teaspoonful of flour to twelve of sugar.—Housekeeper.

It pays well to pass coal ashes through a fine sieve—a flour sieve for instance. This sifted ashes when perfectly dry, as it should be kept, is one of the best substances with which to mix

London purple, Paris green, or hellebore, for the destruction of potato beetles, fruit slugs, currant and goose-berry worms and the like. Being lighter than plaster or flour, it does not fall so quickly, but settles upon every part of the plant—the stem, the under part of the leaf as well as the upper part. It may be said also that it adheres to leaves for a longer time and is not so readily washed off by rains.

Don't Take It.

It is not generally known that a coin with a hole punched through it is not money, and therefore not a legal tender. The government will not receive it, and it is worth only what it will bring as bullion. A hole is an innocent looking thing in a coin, but experts manage to get five to thirteen cents' worth of silver by making a hole in a silver dollar. The penalty for mutilating the coin of the country is a fine of not more than \$2,000, and imprisonment for not more than two years. People are in the habit of taking punched coins, though the banks, the post office and the government refuse them as they would counterfeit.

The cosmopolitan quality of the magazines of the present day is a curious and noteworthy fact. In Scribner for July, for instance, we notice a paper on the "Norwegian poet and dramatist, Bjornstjerne Bjornson," by his former countryman, Hjalmar Hjorth Boyesen; an article descriptive of an excursion to "The Heart of the California Alps," by John Muir; "To Coney Island," by William H. Bishop; Russia is treated in Eugene Schuyler's "Peter the Great;" the scene of the "Grand-issimes" is laid in Louisiana; General McClellan gives an account of his trip to Sicily; George Parsons Lathrop, in "The Sorcery of Madjoo," writes of the curse of China—opium eating; the negro element is touched on in Miss Hopkins's amusing little sketch; George M. Grant does full justice to "Canada," Ernest Ingersoll writes interestingly of Denver, Colorado, and Charles F. Thwing gives us an account of the experience of the "Japanese and Chinese Students in America," while Mrs. Laura Winthrop Johnson travels all over Europe in "La Sonnambula."

Perhaps one of the most useful men was Benjamin Franklin, to whom we owe the introduction of many of our commonest but most valuable household and industrial conveniences, many scientific discoveries and a vast amount of practical sense and wisdom bound up in small packages and known as proverbs, which are only inferior in the aggregate value to the proverbs of Solomon himself.

As an agricultural nation, we should never forget, as we use plaster or dilute upon its value as a fertilizer, that it was to Franklin's observation and ready application of valuable things to practical purposes, that we owe the introduction of plaster for this use. He observed the effect of this mineral upon the grass at the gypsum quarries, near Paris, and on returning home he tried it with remarkable effect, and thus brought it into use as the first. This truly scientific observer was the first to discover that lightning was simply an electrical discharge, and his discoveries led to the use of lightning rods as means of safety from the lightning stroke. We owe the introduction of it was his sagacity we owe the introduction of broom corn, and it is but just that now and then our indebtedness to such men should be recalled lest their services may be forgotten and our gratitude fail to be bestowed as it deserves to be.—Rural New-Yorker.

Young folks will have companions of some kind. Their best companions are good books and papers. Will partners supply these or have them seek companions that may do them great injury?

If you want to be miserable, think about yourself, about what you want, what you like, what respect people ought to pay you, what people think of you, and then to you nothing will be pure. You will spoil everything you touch, you will make sin and misery for yourself out of everything which God sends you; you will be as wretched as you choose on earth, or in heaven either.

It is our pride that makes so much trouble, not our necessities.

Clean hands in matter of money among the young certainly ought to be the indispensable condition of gentlemanliness. A man who borrows and does not pay, and does not care whether he pays or not, is no gentleman, no matter how witty, or gay, or fine he may be. To speak in good plain English, the man who dresses himself at another's expense, not knowing how to pay, nor caring whether he pays, is a genteel scoundrel! And yet such things are done by good-natured folks, by kind-hearted people, by persons who never probe them morally to ascertain what their tendency is, and what they lead to.—Racine Agriculturist.

One great fault in verberna growing, both in the house and garden, is the practice of watering too freely. The place in its native habitat grows on dry hills, and keeping the plant soaked with water always produces disease. Verbernas in growth should frequently have the leading shoots pinched out, especially those of tall habit; as thus the plant breaks freely and fine shaped plants are obtained.

A very considerable branch of trade on the continent of Europe exists in "everlasting flowers" and "immortelles," an acre of which plants will yield two or three tons weight of tuffs of flowers, realizing from \$3 to \$4 per hundred weight.

President Hayes.

The validity of Mr. Hayes' title may always be questioned, and his administration criticised

but the payment of one dollar gives a valid title to one bottle of Dr. Pierce's Golden Medical Discovery, and its administration can never be criticised in cases of coughs, colds, ineffectual consumption, and general debility, for leading physicians of all schools endorse the discovery and prescribe it in their practice. Sold by druggists.

Keep your bowels and kidneys in healthy state by the use of kidney wort.

Advertisements.

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

- 62 Golden Chromo, Crystal, Rose, Danish, Navy, etc. Name in gold and Jet locs. Winslow & Co., Meriden, Ct.
\$777 A YEAR and expenses to agents. Outfit Free. Address P. O. VICKERY, Augusta, Maine.
59 Gold, crystal, lace, perfumed & chromo cards, name in gold & Jet locs Clinton Bros. Clintonville Ct.
\$777 A Month and expenses guaranteed to Agent Outfit free. Shaw & Co., Augusta, Maine.
50 Pin-a-4, Chromo, Lily, Lace, Marble, etc., Cards, in case, 10c. GLOBE CARD CO., Northford, Ct.
50 Perfumed cards, best assortment ever offered, 10c. Agts Outfit, 10c. COST CARD CO., Northford, Ct.
50 Chromo, Glass, Sewal, Wealth and Lace cards, 10c. Try us. CHROMO CARD CO., Northford, Ct.
18 Elite, Gold Bow, Bevel Edge cards 25c. or 20 Chinese Chromos, 10c. J. B. HURD, Newbury, N.Y.
50 ILLUSTRATED AUTOGRAPH ALBUM, gilt covers, 48 pages, 47 select quotations, 15c. Cards, etc. in colors, and 47 select quotations, 15c. Davids & Co., Northford, Ct.
50 Chromo, Tortoise Shell, Crystal, Motto, Floral cards, 10c; outfit 10c. Hall Bros., Northford, Ct.
50 Gold Chromo, Tortoise Shell, Marble and Bow CARDS, 10c. SEAWY BIOS., Northford, Ct.

AGENTS WANTED for the richly illustrated and complete history of the great tour of GRANT AND THE WORLD. It describes Royal Palaces, Rare Curiosities, Wealth and wonders of the Indies, China, Japan, etc. A million people want it. This is the best chance of a year's life to make money. Beware of cheap "catch-penny" imitations. Send for circulars and extra terms to agents. Address NATIONAL PUBLISHING CO., St. Louis, Mo.

AGENTS WANTED for the richly illustrated and complete history of the great tour of GRANT AND THE WORLD. It describes Royal Palaces, Rare Curiosities, Wealth and wonders of the Indies, China, Japan, etc. A million people want it. This is the best chance of a year's life to make money. Beware of cheap "catch-penny" imitations. Send for circulars and extra terms to agents. Address NATIONAL PUBLISHING CO., St. Louis, Mo.

SALESMEN WANTED \$125 A Month and Expenses. FREE J. S. BIRCH & CO., 38 Bay St., N.Y.

Pianos--Organs. CHEAPEST HOUSE IN AMERICA. 1st-class instruments, all new, for cash or installments; warranted 6 years. Illustrated catalogues free. Agents wanted. T. LEEDS WATERS, Agt., 28 West 14th St., New York.

MASON AND HAGLIN ORGANS. BEST CABINET OR PARLOR ORGANS IN THE WORLD; winners of highest prizes at every business fair for thirteen years. Price \$75.00, \$85.00, \$100.00 and up. Also for easy payments \$10.00 a month, or \$6.38 a quarter and upward. Catalogues free. Write to HAGLIN ORGANS CO., 154 Tremont St., Boston; 46 East 14th St., (Union Square), New York; 149 Walnut Avenue, Chicago.

14-MONTH BOXED ORGANS. stool, book and music, boxed and shipped, only \$88.00. New Pianos \$100 to \$1,600. Before you buy an instrument be sure to see his Mid-summer offer illustrated, free. Agents, Daniel F. Bentley, Washington, N. C.

ELGIN WATCHES. All styles, Gold, Silver and Nickel. Examined and warranted by the Elgin Watch Co., Elgin, Ill. Write for catalogue. THE IOWA WATCH CO., PITTSBURGH, PA. GREAT WESTERN GUN WORKS, Pittsburg, Pa.

VICTOR STANDARD SCALES, ALSO VICTOR SELF-GOVERNING WIND MILLS. Every SCALE and every MILL warranted equal to any in the market. Buy the BEST. It is always the cheapest. For prices, address MOLLINE, MOLLINE SCALE CO., ILLINOIS.

HOW TO BE YOUR OWN LAWYER. For Business Men, Farmers, Merchants, etc. Property Owners, Tenants, etc. Selling Real Estate. Low price. One agent sold 100 in one town, another 100 in 30 days, another 100 in 10 days, another 100 in a few hours. Every body wants it. Saves ten times its cost. No other like it. Agents wanted. Send for circulars and terms. W. W. ZIEGLER & CO., 4 N. Sixth St., St. Louis, Mo.

D. C. BRYANT, M. D., Surgeon and Oculist. Having had several years experience in an extensive private practice, and having spent the past year in the large hospitals of New York and London, making diseases of the eye and surgical diseases a special study, am prepared to treat such cases, as may come under my care, according to the BEST and most approved methods. Cross Eyes straightened. Cataracts removed. Near and Far Sight, and Astigmatism corrected with proper glasses, etc., etc. Office 205 Kansas Avenue, over Douglas' Jewelry Store. Residence, 378 Harrison street. Office hours, 9 to 12 A. M., 2 to 4 P. M.

UNITED STATES MAIL STEAMERS. Sail every Saturday. NEW YORK TO GLASGOW. CABINS, \$50 to \$60. STERERAGE, \$25. These Steamers do not carry cattle, sheep or pigs. And every Saturday. NEW YORK TO LONDON DIRECT. All Steamer routes in Main Deck. Passenger accommodations are unsurpassed. Drafts at lowest rates payable from any Railroad Station in Europe or America. For books of information, plans, etc., apply to HENDERSON BROTHERS, 26 Washington St., Chicago, or to ROWLEY BROTHERS, or A. F. BERRY, Toledo, O.

THE STRAY LIST.

HOW TO POST A STRAY.

BY AN ACT of the Legislature, approved Feb 27, 1866, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and appraisal, to forward by mail, notice containing a complete description of said strays, the day on which they were taken up, their appraised value, and the name and residence of the taker up, to the several townships, together with the sum of fifty cents for each animal contained in said notice.

Land! Land! Land!

HOMES FOR THE PEOPLE

350,000 ACRES
Bourbon, Crawford & Cherokee CO'S, KANSAS.
Still owned and offered for sale by the MISSOURI RIVER, FORT SCOTT AND GULF RAILROAD COMPANY

KANSAS

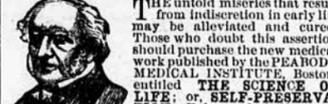
The ATCHISON, TOPEKA and SANTA FE R. R. CO. have now for sale

TWO MILLION ACRES

Choice Farms and Grazing Lands, especially adapted to Wheat Growing, Stock Raising, and Dairying. Located in the Cottonwood Valley and also in Southwest Kansas.

LANDS

KNOW THYSELF.



THE untold miseries that result from indigestion in early life may be alleviated and cured. Those who doubt this assertion should purchase the new medical work published by the PEABODY MEDICAL INSTITUTE, Boston, entitled THE SCIENCE OF LIFE, OR SELF-PRESERVATION.

HEAL THYSELF.

VALUABLE TRUTHS. If you are suffering from indigestion, poor health, or languid spirits, you will cure you. If you are a minister, teacher, or professional man, you will find it profitable, without delay, to read this book.

H. D. CLARK, Dealer in

LEATHER AND SHOE FINDINGS,

Hides, Sheep Pelts, Furs and Tallow, And Manufacturer and Dealer in

SADDLES, HARNESS,

Whips, Fly Nets, Horse Collars, &c.

135 KANSAS AVENUE, TOPEKA, KANSAS.

TERMS, STRICTLY CASH.

NICHOLS, SHEPARD & CO. Battle Creek, Mich.

"VIBRATOR"



THE STANDARD of excellence throughout the Grain-Raising World. PORTABLE TRACTION, and STEAM-DRIVEN STEEL-ENGINE. THE VIBRATOR for nearly superior work in all kinds of Grain, and especially known as the only successful Thresher in the West.

SORGO Machinery:

Give your orders early. Do not wait until the season for making is here.

The Early Amber

Which has been planned in great quantities the demand for machinery will be immense, and it stands those in hand who wish to make a success at molasses and sugar making to procure their MACHINERY before the rush comes on.

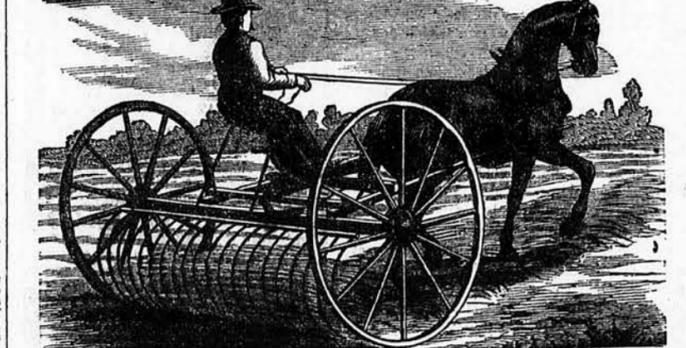
THE VICTOR CANE MILL AND COOK EVAPORATOR,

Which is the acknowledged STANDARD SORGO MACHINERY. It is built with great strength, and covers patents that places it far ahead of anything in this line.

Golden Medical Discovery

There is a Golden Medical Discovery cures all Humors, from the worst Scrofula to a common Itch, Pimple, or Eruption, Erysipelas, Salt-rheum, Fever Sores, Scaly or Rough Skin, in short, all diseases caused by bad blood, are conquered by this powerful, purifying, and invigorating medicine.

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



Patented Aug. 1867, Jan. 1870, June 1870, and Nov. 1870. 60,000 now in use. Twenty Steel Teeth. No common rakes will do the work better, nor other horse machinery needed to operate it.

CATTLE TABLE ROOTS. TURNIPS.

Bloomdale Swede or Ruta Baga, Yellow Aberdeen, Pomeranian Globe, Red and White Elat Turnips. Our stocks of the above are SUPER EXCELLENT. In localities where TURNIPS SEEDS are not sold by merchants we invite CATTLE BREEDERS, SHEEP BREEDERS, DAIRYMEN, HORSEMEN, GARDENERS, to apply for RETAIL PRICE AND DESCRIPTIVE LIST. Address postal card to D. LANDRETH & SONS, Philadelphia.

ADVERTISERS

Can learn the exact cost of any proposed line of Advertising in American Papers by addressing Geo. P. Rowell & Co's Newspaper Adv'g Bureau, 10 Spruce St., N. Y.

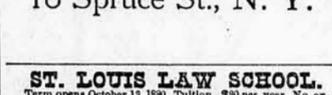
ST. LOUIS LAW SCHOOL.

Term opens October 12, 1880. Tuition, \$30 per mo. No extra. For circular address HENRY HITCHCOCK, Dean.

FREE TO MOTHERS.

A pamphlet by giving advice on the feeding and rearing of infants and children. Address P. O. Box 227, Racine, Wis.

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



Makes a perfect bed. No mattress or pillows required. Better than a hammock, as it fits the body as pleasantly, and lies straight. Folded or opened instantly. Self-fastening. It is just the thing for hotels, offices, cottages, camp-meetings, sportsmen, etc.

SUGAR CANE MACHINERY.

Our list of Sugar Machinery comprises the largest line of Cane Mills, Evaporators, etc., made by any establishment in the world, and includes: VERTICAL CANE MILLS, HORIZONTAL CANE MILLS, SUGAR EVAPORATORS, STEAM SUGAR MACHINERY and all apparatus for Syrup or Sugar making. Circulars and prices, &c., sent on application.

BLYMVER MANUFACTURING CO., CINCINNATI, O.

A. PRESCOTT & CO., TOPEKA, KANSAS.

Have on hand

\$100,000 TO LOAN

In Shawnee and adjoining Counties on good Farm security

At 8 and 9 per cent. For Annum.

GRAPE WINES.

Largest stock in America. Prices extraordinarily low. Also Trees, Small Fruits, Strawberries, &c. Price and Descriptive List Free. T. S. HUBBARD, Fredonia, N. Y.

WARNER'S SAFE



KIDNEY & LIVER CURE

(Formerly Dr. Craig's Kidney Cure) A vegetable preparation and the only safe remedy in the world for Bright's Disease, Diabetes, and ALL Kidney, Liver, and Bladder troubles. It is the highest order in proof of these statements.

DAY'S Kidney PAD

THE most prevalent and fatal disease that afflicts mankind is NEURALGIA OF THE KIDNEYS. Internal medicine never did nor ever can cure NEURALGIA OF THE KIDNEYS. DAY'S KIDNEY PAD AT ONCE, and is the only remedy for all affections of the Kidneys, Bladder and Urinary Organs, and every treatment that will cure NEURALGIA OF THE KIDNEYS, NEURALGIA OF THE BLADDER, and that distressing complaint, "BACKACHE." It will usually save many times its cost in medicines and plasters, which at best give but temporary relief. Sold by Druggists best kept on receipt of price, \$2. Our book, "How a Life was Saved," giving a history of this new discovery and a full report of most remarkable cures, sent free for 10 cents.

AGENTS WANTED to Sell the NEW BOOK, FARMING FOR PROFIT

TELLS HOW TO Cultivate all the Farm Crops in the Best Manner; Breed, Feed and Care Cattle, Horses, Swine, Farm Business; Make Happy Homes, and How to Make Money on the Farm. Farmer should have a copy. 800 Pages. 140 Illustrations. Send for circulars to J. C. McCURDY & CO., St. Louis, Mo.

The Sheep's Life and Shepherd's Friend.

New and very Important Discovery. Oodorizer, Disinfectant, Antiseptic, Insecticide, and valuable Therapeutic Agent. Little's soluble Phenyle is a sure cure for Scab, Mange and foot rot, kills lice, ticks, and improves the growth and quality of wool; cheaper and better than anything of the kind in use at present, as one trial will prove, costing less than three cents to dip a sheep, mixes readily with water and is used as a dip in cold water at all seasons of the year, has all the advantages of carbolic and arsenic without their poisonous effects. Send a 3 cent stamp for prospectus and testimonials to JAMES HOLLINGSWORTH, 210 La Salle St., Chicago, Ill.

WOOL-GROWERS

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

FARMERS,
MONEY TO LOAN AT 8 PER CT.
No Commissions.

No Charge for Drawing or Recording Mortgage.
 Interest Annually, Address
A. D. FISHER,
 Manager,
Topeka, Kas.

Farm Letters.

STRAWN, Coffee Co., June 19th.—It was expected, up to May 26th, that our wheat crop would be medium or light here, but it has resulted otherwise. On the evenings of May 26th and 28th, we were favored with excellent showers, wetting the ground thoroughly, so that wheat then light revived and has made a fair crop. The best half of our wheat here will yield 18 to 30 bushels to the acre; the other half, with a few exceptions, will yield 10 to 18 bushels per acre. The chinch bugs claimed a portion, and in consequence a few pieces were light. Wheat cutting began here about the 5th and closed the 18th inst. The farmers are now busy stacking, and in a few days nearly all will be in the stack.

The corn crop, considering we have received no rain for some time, looks remarkably well. The best half on river and creek bottoms, stands three to five feet high, and on upland two to three feet high. Some are done cultivating already, and many others will have to make more speed to finish or the corn will soon be too big to cultivate. Should we get seasonable rains for the next six weeks, we will harvest a good crop of corn this year.

The stock interest seems to be flourishing. Cattle are doing well; plenty of grass and extensive range, with plenty of water, satisfies them.

The sheep business is increasing of late in this county. Several new flocks have been added during the year, numbering 200 to 500 each, and I am informed it is a very profitable business considering the amount invested.

Judging from the many new houses I see building as I travel over the county, and new farms being improved, I think our county is getting a fair proportion of the immigration that is settling in Kansas. Our towns are improving in population and wealth fast. Burlington, our county seat, is making rapid advances in that direction this year. She has now in progress several new and commodious buildings.

SAMUEL HODGES.

Mr. CARMEL, Crawford Co., June 14.—Every week brings forth something new and good, and I would not be doing justice if I should not say that the FARMER is a very welcome visitor. It comes like a bee laden with delicious sweet, full of good things that everybody could read, from a pettifogger to a president, and learn something good from it. Let us notice what we have in the last issue, June 9th, and see: Artificial Rain, by C. W. Johnson, in which he shows good logic; then How to Do Our Work, by L. J. Temple; Meteorology, by a namesake of Ind. Then comes a long list of letters from brother farmers from different parts of the state, telling us about the recent fine rains and their gladdened prospects, all of which is of very great interest to us Kansas and our friends abroad. Having hailed from Illinois, I like to read letters in the papers from that section.

Now about our crops and prospects: Harvest is upon us with as splendid a prospect for a full crop as we have had for years. No doubt the average wheat crop of the county will be twenty bushels to the acre. Oats short but doing very well. Flax will make a fair crop. Corn can't be beaten anywhere. It is from a foot to three feet high. Castor beans doing well. Potatoes, both early and late, look fine, and none of those Cal. "to timeats" to eat them as fast as they grow. The high winds have taken off a few of the apples, but a big crop is left. No dust, as there has been so much said about "out west." Peaches, grapes, and in fact every kind of fruit is laden. Surely Kansas will redeem herself this year on fruit.

We have had several nice rains lately—heavy ones, too, that sent everything up a booming. We continue to have those high, southwest winds, but they do not get under the soil and lift it, as we read so much about this spring. The chinch bugs are rather scarce and may not do much damage. Several of my neighbors have the self-binding harvester, but do not succeed well with them yet; it may not be the fault of the machine. I fear their wheat will get over-ripe and shell badly if not cut soon, as one week of our harvest is passed already.

Success to the FARMER.

E. B. COOKE.

ILLINOIS TOWNSHIP, Rush Co., (220 miles southwest of Topeka,) June 21.—Having seen no reports from this part of the "Great American Desert," I thought I would let you and the many readers of the good old FARMER know how we live here, our present and future prospects, etc.

We have had three very good showers since the 12th of May, being the first since last November. It came too late to save the wheat, which was an entire failure. Ground that was sown to wheat is almost all planted in corn and millet, all of which looks tolerably well, but are needing rain. The soil has become so thoroughly dried out that it will take an immense

amount of rain to wet it down. As it is, the rains wet down but two or three inches, which soon dries out again.

There is a pest which has put in an appearance in the form of a worm, from one-half to one inch in length. It weaves a web around the young plant, and in a very short time destroys it. They have entirely ruined a large per cent. of gardens in and about La Crosse, and killed and damaged a great many fields of corn. The question here is what are they and where did they come from? So you see our misfortunes do not come singly.

A great many families in this county are seeing hard times, and will see harder times still before another harvest. Corn bread is king as well as the staff of life and it is getting scarce with a great many. There have been quite a number of young men and old who have gone east and west in hopes of finding work. But few have gone to remain away permanently. They still have faith in our country and will try it another year, but should our corn fail us, the most of us will be compelled to go on a visit to our wife's people or some other seaport.

I cannot tell you the price of wheat, corn, oats, potatoes, etc., as there is none here. This portion of the county has been settled but a little more than two years. Government land is all taken up. Good claims can be bought here very cheap. This is a very beautiful country with splendid soil, and reasonably well watered. We are situated on the divide between the Smoky and Arkansas rivers.

There has been quite a good deal of young timber planted out this spring, but as far as I can learn, it has all succumbed to the dry weather.

I see in the FARMER a great many theories in regard to causes of drouths, but how about the old and reliable theory that the mountain snows give us our summer rains? as we all know there was an immense amount of snow fell on the mountain ranges last winter, but where now is the rain? echo answers—where?

E. L. RUSH.

—In nearly all soils ashes are beneficial. Their action is manifold; they supply to plants inorganic elements, which they require; they neutralize acids; they act chemically as solvents upon other salts in the soil. They are more beneficial on sandy and gravelly soils than on clay. For plants that contain a large amount of potash and phosphoric acid, as carrots, turnips, potatoes and cabbage, ashes are an essential manure.

—An acre contains 4800 square yards. A square mile contains 640 acres. A mile is 5280 feet or 1760 yards in length. A fathom is six feet. A league is three miles. A day's journey (old style) is 33 1-8 miles. A cubit is two feet. A large cubic ten feet. A hand is four inches. A palm is three inches. A span is 10 7-8 inches. A pace is three feet. A barrel of flour weighs 196 pounds. A barrel of pork 200 pounds.

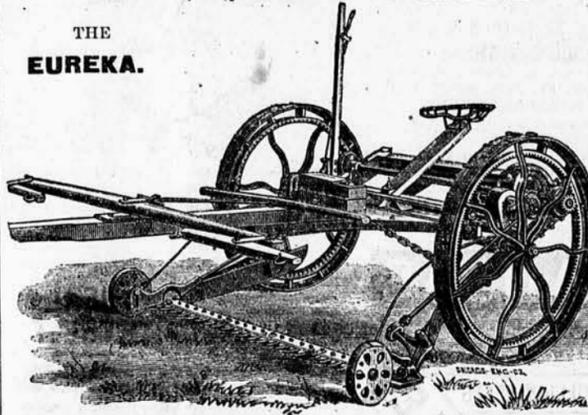
—The "City of Chester" of the Inman line, which cleared on May 29th from New York to Liverpool, had the largest single shipment of cheese this season, amounting to 21,500 boxes. Consignments to Europe of fresh meat and livestock, continue to be very large.

—Radishes may be grown in a very few days by the following method: Soak the seed in water for twenty-four hours, then put in a bag, and expose it to the sun, and they will commence to germinate the same day.

KIDNEY WORT
The Only Remedy
 THAT ACTS AT THE SAME TIME ON
THE LIVER,
THE BOWELS,
and the KIDNEYS.
This combined action gives it wonderful power to cure all diseases.
Why Are We Sick?
Because we allow these great organs to become clogged or torpid, and poisonous humors are therefore forced into the blood that should be expelled naturally.
KIDNEY WORT WILL CURE
 BILIOUSNESS, PILES, CONSTIPATION,
 KIDNEY COMPLAINTS, URINARY
 DISEASES, FEMALE WEAK-
 NESSES, AND NERVOUS
 DISORDERS.
By causing free action of these organs and restoring their power to throw off disease.
 Why Suffer Bilious pains and aches?
 Why tormented with Piles, Constipation?
 Why frightened over disordered Kidneys?
 Why endure nervous or sick headaches?
 Why have sleepless nights?
 Use **KIDNEY WORT** and rejoice in health. It is a dry, vegetable compound and one package will make six quarts of medicine.
 Get it of your Druggist, he will order it for you. Price, \$1.00.
WELLS, BIGGANDY & CO., Proprietors,
 (Wells and post paid.) **Washington, Va.**

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

General Agents for the sale of the EUREKA MOWER and BAKER GRAIN DRILL. Wholesale Dealers in all kinds of GARDEN and FIELD SEEDS. Catalogues by mail on application. Prompt attention to small orders as well as large ones. Descriptive Pamphlets and prices of Mower and Drill furnished both Dealer and Farmer in answer to inquiries. Eastern Manufacturers wishing to reship machines at KANSAS CITY, will please address us at 1194 UNION AVENUE.



THE
EUREKA.



THE
EUREKA
 is the only
 CENTER
 DRAFT
 MOWER
 made in the
 United States.
 Cuts six feet
 with as little
 draft as any
 foot machine.
 It will save
 Team, Time
 and Money.
 The Baker
 is the only Grain Drill that applies SPRING PRESSURE on the Hoss, thus enabling the farmer to sow grain any depth desired. Regular Screw Feed—round steam bent wood frame or frame made of gas pipe. Address

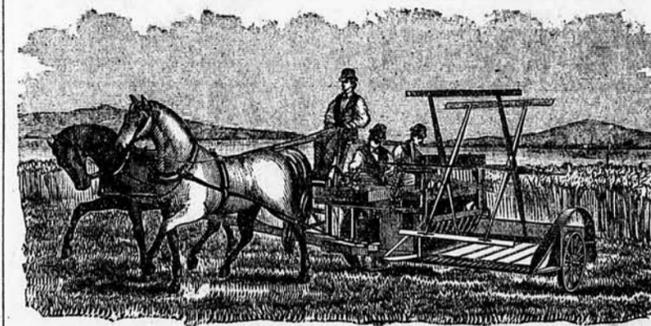
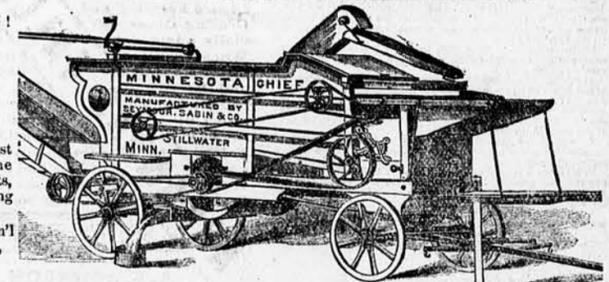
Moseley Bell & Co.
Kansas City, Mo.

ALL HAIL TO THE THRESHER OF THE DAY!
Minnesota Chief Separator.

Manufactured by
SEYMOUR, SABIN & CO.,
 STILLWATER, MINN.

The Most Perfect Threshing, Best Cleansing, Lightest Running, Most Durable and Economical Machine in the market. Also manufacturers of a New Improved Pitts, the Improved Woodbury and the New Elward Equalizing Horse Powers.

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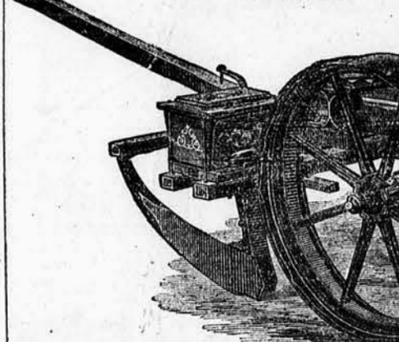
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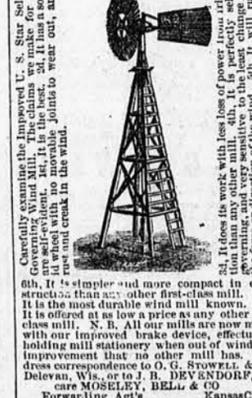
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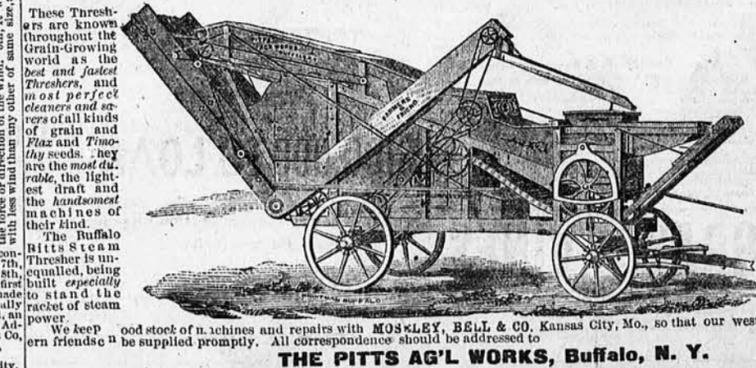
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