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Agricultural Matters.

ROTATION OF CROPS.

An address read before the Farmers' Institute at Gardner, Kansas, December 3 and 4, 1888, by C. M. T. Hulet.

History shows that agricultural progress, in any given locality, usually includes three stages: first, what might be called the pioneer stage, when the forests are newly cleared, or the prairie freshly broken up, the virgin soil abounds with fertility, and responds almost spontaneously to the slightest effort of the husbandman, and with the rudest implements, sufficing to secure to him a bountiful harvest. The soil is a veritable vegetable mould which has been accumulating for centuries. It is light and friable and free from weeds. While this condition lasts, questions of fertility and of manures do not enter into the calculations of the farmer. All his thought and effort are concentrated on the crop and the method which will bring him the most dollars, soonest. The more acres he can put in, the better he is satisfied. And how the crops grow! It seems as though mother earth exulted in the chance she had been waiting for, for thousands of years just to show what she could do. And what marvelous stories from Kansas were read, with open-eyed wonder—and doubt—by the people "back East" in the '60's and '70's.

This course is kept up year after year. The plan of the American farmer has seemed to be, to select a naturally good soil, plant himself upon it, and wear it out. The excess of available plant food in the soil is rapidly diminished. After while he begins to notice it. His crops grow less. Perhaps the soil works less kindly than at first. Weeds have increased, and he suddenly wakes up some day to the fact that his land is exceedingly foul. This change usually comes gradually. Some of the strong bottom lands in the Eastern States have kept up in almost undiminished vigor for forty, fifty, and even a hundred years. The Kaw and Wakarusa bottoms still maintain their original productiveness, more nearly than the prairie soils adjoining them. Sometimes it comes suddenly. The people of the Minnesota spring wheat region, still refer to "the year the wheat failed." And this is the second, or fallow stage of agricultural progress. Land is still plenty and cheap, and manure scarce. The farmer thinks his soil needs a "rest," and so he rests it. He summer fallows, and following a fallow he reaps a good crop again, and he figures that forty bushels every other year is as good, or better, than twenty bushels every year.

But his land is rising in value, and taxes, etc., on it are increasing. Labor is getting scarcer and higher. The country is being all settled up around him, and he must raise more forage crops for his stock. He can no longer afford to summer fallow. His land must be occupied all the time, so when he wants now to "rest" his land he sows it down to grass for a year or two. He changes the crops on the same land in a more or less

hap-hazard way. Possibly he hauls out a little manure occasionally. At any rate he has now reached the stage to which agricultural progress always and everywhere is brought, and that is this: When the income of plant food to the soil must equal the outgo from the soil, above a certain point, that point being what may be called natural strength, Sir J. B. Saure has very clearly shown that every soil will support a certain amount of plant growth without the addition of anything from outside sources, simply as a result of what we may call the weathering of the soil, the action of the air, heat, moisture and frost. This weathering renders soluble and available to plant life, from the soil itself, a certain amount of previously insoluble and unavailable plant food. Such a thing as the complete exhaustion of a soil is impossible. Lawes and Gilbert raised twenty bushels of barley for twenty years, sixteen bushels of wheat for twenty-six years, and one and one-fourth tons of hay for eighteen years, without change and without manure. There are soils in Russia that have yielded twelve to fourteen bushels of wheat for hundreds of years. Some of the sandy lands of eastern New York have raised ten to fifteen bushels of rye for fifty years, and would do so continuously for thousands of years.

What the natural strength of the soil in Johnson county may be we do not know, but we do know that it is too low for us to profitably make it the limit of what we shall realize from the soil. Now, that being the case, what shall we do to increase the amount of available plant food in the soil, and consequently our returns for our labor? Underdraining, possibly, and the judicious use of concentrated fertilizers would go far toward a solution of the problem, but they are not only beyond our reach but not exactly suited to our needs. The feeding of stock with purchased food, if it be made a specialty, will accomplish the purpose, but with the majority of farmers this is not practicable.

Undoubtedly a systematic rotation comes nearer meeting our requirements than anything else. The idea of rotation was, perhaps, originally based on the fact that plants will do better to follow each other in a certain order than they will to follow each other in any other order. And there is something in this, too. We know that oats will do better after corn than after wheat or grass; wheat will not do as well on freshly turned sod as it will after one or two other crops have been taken off, while corn, with proper management, will luxuriate on a sod; and flax—well, I don't believe flax is a very good crop to precede or follow anything. But let us not deceive ourselves. A rotation in this sense will not help us in the way we want—*i. e.*, the conserving and increasing of fertility. Rotation in itself does not add anything to or take anything from the soil. It is not a Yale lock by means of which, if we know the combination, we may be enabled to gain access to the treasures which we erroneously imagine to be in our soils, but just beyond our reach. On the contrary, rotation is simply a means to an end, and that end the addition of something to the soil which is not now there. It implies that agriculture is a system of exhaustion and return and not of exhaustion simply, and the return of fertility should be the primary object of the farmer and the amount of money he may realize, secondary. Not that he shall wholly disregard the result in dollars and cents, for of course that is the end of all his efforts, and he adopts a rotation simply that it may enable him to have more to sell; but that of two crops, or two modes of procedure of equal net money value, one of which takes more from the soil than the other, he ought to adopt that which takes the less. To illustrate: Some one has said that of every \$100 worth of wheat sold from the farm \$60 of it represents actual available plant food taken from the soil, and which must be returned to it to make it as good as it was before; of \$100 worth of horses or cattle sold, \$7 represents plant food removed, while of \$100 worth of butter sold, only 50 cents of it represents depletion of plant food.

Modern rotation is based on the idea of raising such crops as shall by being consumed on the land return more to the soil than they took from it, this excess going to supply that exhausted by the crops which may be sold directly from the soil. In short, the farmer must strike a balance between

the two classes of products, debiting those which deplete fertility, and crediting those which increase it and the credits must always equal, and if the soil is to improve, they must exceed the debits.

It will be seen that rotation implies a system of mixed farming to a greater or less extent; how mixed it shall be depending on circumstances; the man, the soil, climate, location, markets, etc. In determining the character of our rotation experience must as yet be our principal guide. The chemist cannot tell us with any certainty what to adopt and what to avoid; can at most only suggest lines of experiment. Not that I would say a word to detract from all that science has done for agriculture in the past. We farmers here to-day owe more than we realize to the many facts and truths which have been literally dug out by patient investigators. But there are heights and depths involved in these questions to which human ken has not yet attained. As that veteran feeder and skillful handler, Wm. Watson, said last week in the *Breeder's Gazette*, in referring to the German feeding tables, "There is no chemist like digestion," so in this case, there is no chemist like plant growth.

Experience would indicate that for this country the staple crops must be grass, corn, oats and wheat, and of these we might construct what it would not, perhaps, be out of place to call the typical rotation for eastern Kansas, as follows:

First year, corn; second year, oats; third year wheat; fourth and fifth year, grass.

First year, corn; second year, corn; third year, oats; fourth and fifth year, grass.

First year, corn; second year, oats; third, fourth and fifth, grass.

First year, corn; second year, corn; third year, oats; fourth, fifth and sixth, grass.

With this as a foundation each farmer can make such alterations, such additions to or subtractions from it as may suit his circumstances.

But the particular crops raised or the particular order in which they are raised, is secondary or subsidiary, to the main point of straining out the soil fertility they contain before they are allowed to leave the farm. As nearly as possible, pass every crop through a "straining machine" before it is sold. There are such machines always available, and if they are not allowed to stand out of doors the year round, and are kept in good repair, and well oiled, they will do the work. There are various styles; some prefer the house machine; others notwithstanding the depressions of the last four or five years, still have faith in the kine pattern; there are those who like the taking style of the hog, while some of our Gardner township farmers have been trying the sheep patent. In other words, everything produced under the typical rotation ought to be fed to stock except the wheat; and not from the notion which usually prompts men to feed stock, viz: That they may market these things at an advance in prices. That is or ought to be, an incident in the feeding. In a rotation, stock is fed so that in the marketing of the hay, oats and corn, the soil did not suffer that an equivalent shall be returned to the soil for everything that is taken from it. I think I need not enlarge on the point that all this implies and leads up to the necessity of carefully and systematically saving and applying the manure made, stabling or shedding with plenty of bedding for the stock, and sheds for such of the manure as can be at once drawn and spread.

I believe that the farmer who adopts a rotation can secure to himself benefits, and take advantage of circumstances, which he who farms in a hit or miss, hap-hazard way cannot. He can apply the manure to such crops as will be most benefitted by it, and at the same time distribute it over his farm when it most needs it. It will enable him to better keep weeds in check. One class of weeds will increase in spite of him in a hood crop, which grain or grass will enable him to subdue, while some other kinds will increase in grain or grass, which he can eradicate in a cultivated crop. The same is true of insects.

And lastly it will better distribute his labor through the year. He has something to do all the time and nothing is crowding him at any one time.

Corn Culture.

By John F. Hell, and read before the Wabaunsee Farmers' Institute, January 11, 1888.

The raising of corn has been made a specialty by the majority of Kansas farmers. Some of our land has been planted to corn every year since it was first plowed, twenty-five or thirty years ago. Its cultivation is closely connected with the growth and prosperity of our State. Corn has grown side by side of all cereals known to a temperate climate, and experience proves that in Kansas corn is king. As our lands become sterile by years of cultivation, it is necessary to adopt different and better methods of raising corn.

The effects of the climate of Kansas with its hot and dry winds upon our crops, require our careful attention as to how we shall secure the best possible results. First, consider the nature and condition of the soil. On the creek and river bottoms, where the soil is sufficiently heavy to prevent its being blown away by the spring winds, deep fall plowing and listing in the spring have brought the best results. Fall plowing will not do on the uplands, where the soil is light, for the spring winds might do considerable damage in blowing a portion of the soil away, thus seriously injuring the corn the coming year. Such has been my experience. Again, fall plowing is not always practicable, and for very sandy soil it is unnecessary.

HOW AND WHEN TO PLANT.

List the corn at a depth of from three to four inches, the rows being three and a half feet apart. How thick to plant in the row depends upon time of planting and nature of soil, about from thirteen to twenty inches. A common mistake is to plant too thick. I consider one stalk every twenty inches a perfect stand. This has not only been proved by experience, but figures show that one good ear every twenty inches, rows being three and one-half feet apart, will produce seventy-four and one-half bushels per acre, allowing 100 ears to the bushel. Plant early. You will recall the old adage, "The early bird catches the worm;" yet we must use caution, for the worm is caught by being too early. Wait until the ground is warm enough for the seed to germinate quickly.

HOW TO CULTIVATE.

First, roll down the ridges with a light roller; this will crush the lumps, enabling the cultivator to do better work. When the corn is three inches high the work begins. Dispense with all modern devices for cultivating listed corn, such as planks, harrows and straddle-bugs. Take the best two-horse cultivator, using a box the first time to shield the corn. Plow deep as possible. I use the two outside shovels, throwing the soil away from the corn. When the corn is six inches high it is ready for the second cultivating. Now use all four shovels and shields; plow deep; always set the shovels so as to throw as little soil into the ditch as possible, so that when the corn is laid by the ground will be level. This I consider the main cultivation. When the corn is over three feet high cultivate very shallow, so not to cut the roots of the corn, that when the critical time for corn arrives to put forth its ear, a portion of the roots will not be cut and torn by deep cultivation. The time to cultivate is not of as much consequence as to have the work well done. I always try to go through the corn four times. Never hill it up; it leaves the field in a bad condition, dries out worse and is of no real advantage to the corn. Weeds are poison to the corn, and the hoe is the best tool with which to destroy those that defy the skill of the cultivator. With ten years of experience in corn-raising I am just beginning to learn, and am quite certain that there is a good deal in which I am totally ignorant. Corn is our main crop, and we must by experience and observation improve the system of its cultivation that we may keep pace with the progress of the times, and sustain the reputation of Kansas as a corn-growing State.

Attention is called to the advertisement of Pearce's Improved Cahoon's Broadcast Seed Sower in another column of this paper. This ingenious little machine will save its cost in one day's use.

Kentucky blue grass seed is sure to grow if stripped when ripe and properly cared for. R. C. King, Carlisle, Ky., maker of King's Patent Seed-Strippers, can supply you with fresh, good seed. Write for price.

The Stock Interest.

THOROUGHbred STOCK SALES.

Dates claimed only for sales which are advertised, or are to be advertised, in this paper.

FEBRUARY 8, 1889. — Berridge Bros., English Shire Stallions, Lincoln, Neb.

Better Preparation.

EDITOR KANSAS FARMER:—I am satisfied that by grinding and cutting all the feed given to the stock that a considerably better gain can be secured in proportion to the amount of food supplied than is possible by feeding whole. Grind the corn with the cob. Oats can be ground with it; grinding together mixes it well together. Hay, straw and fodder can be cut. If on a small place where only a few stock are kept, the work can be done by hand, both the grinding and the cutting. On larger farms larger machinery, run by horse power, can be used more economically. In many cases two or three farmers can combine together and cut or grind a considerable quantity for each at a time. It can be stored in granaries or bins and then fed out as needed.

I am feeding my stock almost entirely upon cut feed this winter and am satisfied that the quantity of feed saved will pay for the work and a good interest on the money invested in the machinery. The per cent. of waste is very small; by taking care not to overfeed, the stock eat up everything clean. In feeding hay, straw or corn fodder, stock, if they are reasonably well fed, will waste more or less picking out the choicest parts and leaving the balance; there is always a loss when this is done, they will tramp what they do not eat under their feet.

Another decided advantage is, in combining different materials in this way, straw, hay and fodder are increased in value. I have found that with me at least it pays to purchase considerable bran and feed to the stock, especially so to the milk cows. Then with ground feed, corn and oats, especially, a variety can be supplied much better than when the grain is fed whole and the roughness fed in the same way. The food is better masticated and is in a condition to be more thoroughly digested and assimilated. It is in the saving of the feed that the profit is secured. It pays to keep stock in a good thrifty condition, but it pays also to do this as economically as possible, and I am satisfied that in the majority of cases this can be best done by cutting all or nearly all the roughness and grinding the grain, and in many cases purchasing and using bran. N. J. SHEPHERD.
Eldon, Miller Co., Kas.

Dehorning Cattle.

EDITOR KANSAS FARMER:—I will give my experience in dehorning cattle. I sent two years ago and got Haaff's tools for dehorning cattle; received them January 14, 1887. I dehorned my cattle January 15, 1887, all but calves, and they all did splendid. I have a barn to keep them in and they were not half the trouble to take care of, as I did not have to tie them up. The poor ones were not afraid of the others, and my milk cows did not shrink in milk. I was the first one to commence dehorning in this part of Kansas. Some of my neighbors talked of having me prosecuted for cruelty to cattle. They thought I must be crazy. But they all kept watch of my cattle to see if they did any better than cattle with horns on. My cattle came out in the spring in good flesh and not scratched up like cattle with horns on. The spring before I lost six head of cattle by horns, and I have had no loss since. My cattle did so much better than my neighbors'

that they opened their eyes, and those that did the most barking were the first to bring their cattle to me to get them dehorned.

It took me some time to learn to dehorn so that there would not be any stubs to grow. Experience has hardened my feelings so that I am not afraid to saw deep enough now. It does not take as long to heal up when they are properly dehorned, and they will all heal and hair over if properly dehorned. It makes rough-looking cattle look squarer and old cows look younger, and I do not think it as severe as branding. I have never had one die that I know of. Dehorned 1,500 head of cattle this fall, 500 head of steers I dehorned for Mr. George Ellis, Chelsea, Butler county, Kansas. In December I averaged one steer every three minutes.

Most any one can learn to dehorn. And to the readers of this valuable paper that wish to learn to dehorn, I would advise them to send to the KANSAS FARMER and get "Haaff's Practical Dehorner," and you will never be sorry of your investment. The danger is in not securing the head properly.

IRVIN BLANCHARD.

Cattle in Stalk Fields.

EDITOR KANSAS FARMER:—I read an article from Prof. Failyer, clipped from the *Industrialist*, on the death of cattle that are pastured in stalk fields. I have kept cattle and raised corn all my life, and have never lost one animal from feeding cattle in stalk fields, although I use from 80 to 140 acres in that way every year. I have heard about all the theories advanced that men could think of, but to my mind it is the corn left in the field by the huskers that kills the cattle, the smut and all other theories notwithstanding. Last year one of my near neighbors lost ten head of fine young cattle, fat and sleek, as he said from the smut in the stalk field. But my cattle on the adjoining section grazed in my stalk field of 110 acres all the fall and not one died. I noticed many years ago that many people would take their cattle from the prairie, turn them in the stalk fields, letting them stay there half a day or a whole day perhaps, and the result was more or less of them would die. It is my practice for one week or more before turning into a stalk field to begin to feed my cattle corn, a little at first, once a day; then increase the quantity and feed twice a day, toward the last giving them nearly all the corn they will eat; then turn them into the field in the morning, let them remain there about one hour, take them out, put them in again in the afternoon, let remain two hours; the next day the time can be doubled and so on until they can remain all day. You may think it some trouble to carry out this plan; so it is, but I think it better than to lose the cattle. Verily, there is no excellence without labor. D. F. VANNESS.
Waverly, Coffey Co., Kas.

Railroad Stock Yards.

The matter of the location of stock yards along the various lines of railroads in the country is grievously overlooked. The object of unloading and feeding cattle while in transit from the range to the markets is rest and recuperation. To secure this there must be given a condition of quietness about the surroundings. This is absolutely wanting at every yard we know anything about in the whole list of feeding places from east to west or north to south. The yards are always contiguous to the main track of the road where the rattle and whistle of the cars and the locomotive is so frequently heard as to keep the tired and nervous wild steer continually on the alert and

expecting some bodily harm to befall him.

Under this nervous tension food is taken in small quantity and that consumed is not handled by the internal organs in a way to give much result for good. Of course there is relief from the muscular strain incident to the motion of the cars, but there is no peace or contentment that is one of the requisites to food assimilation in the building up of the system. The shrinkage begun on the cars actually continues during the confinement in the yards at about the same proportion or degree as during the car haul.

The yards should be built at points so far off the main tracks as to be out of hearing of the passing trains and visitors should not be permitted around the premises. Once the feed and water are distributed the yards should be free from men or disturbing influences until the time arrives for the reloading. Were these conditions enforced, one-half the usual shrinkage would be overcome and the necessity for "improved cars," against which some of the roads are kicking vigorously, be greatly reduced. Railroad companies would make money by bringing about a radical change in this direction.

The subject is one that stockmen should agitate, because it would save many dollars annually and add greatly to the marketable appearance of the cattle on arrival at market, beside making the flesh of the animals more palatable and lessening the liability to disease. Many animals arrive at the end of a long haul in a feverish condition, not fit for slaughter, and are condemned by the sanitary authorities, that would be in health and good condition were they properly rested at the feeding yards en route.

Particularly do these remarks apply to the Western range cattle that have been reared on the open prairies and only see the cowboys on horseback. But they also apply to farm-raised cattle, because there are few pastures cut by the railroads, and the beef steers of which are familiar with the shrill whistle of the locomotive.—*Northwestern Live Stock Journal*.

A Pill in Time, Saves Nine!

Dr. Pierce's Pleasant Purgative Pellets are preventive as well as curative. A few of these "Little Giants," taken at the right time, with little expense and no inconvenience, will accomplish what many dollars and much sacrifice of time will fail to do after Disease once holds you with his iron grasp. Constipation relieved, the Liver regulated, the blood purified, will fortify against fevers and all contagious diseases. Persons intending travel, changing diet, water and climate, will find invaluable, Dr. Pierce's Pleasant Purgative Pellets. In vials convenient to carry.

A new and efficient process of manufacturing paper from straw consists in first cooking the straw, then reducing it to pulp, whereby the fiber is disintegrated but not destroyed, and all the gluten and albumen of the straw is retained, and finally bleaching it in a vessel of novel construction, which obviates the introduction therein of any solid particles of alkali. It is said this process renders the paper tough and pliable. It is asserted, also, that this paper treated with glycerine assumes the consistency of leather.

Mr. John Boyd, of 199 Lake street, Chicago, again comes to the front in our columns with his ever popular Cooley Creamer. It seems superfluous at this late day, for us to speak of its well-earned fame, as every live and well-posted dairyman in the country knows how often it has triumphed over all competitors in the public scientific tests made at the numerous State Agricultural Experiment Stations, both East and West. If we must eat butter, let us have the best every time, and all the time. The best possible butter, to our mind, is made from Jersey cream, after it has been separated from the milk by the best process in the world, viz.: the patented submerged or Cooley system.

In the Dairy.

"FALLACIES IN DAIRYING."

By A. T. Foster, read at a Wisconsin Farmers' Institute.

Don't take a dairy paper; ignorance is the most sure and rapid road to failure in the dairy. If you desire failure, time devoted to reading is wasted. If you do take a dairy paper lay it on the center table with the family Bible so you will not read. Keep no cows that will produce more than seventy-five to one hundred pounds of butter a year. Use only a scrub sire; the use of a thoroughbred would be sure to increase the production of your herd and might lead to better methods and more profit. In summer place your stock on a barren hillside, where there is neither grass nor water. Let the cow earn her living by getting it; you have to, and she is no better than you are. A rich, clean pasture, with plenty of pure water, is liable to so fill the cow's udder with milk as to cause her serious discomfort, and common humanity forbids such treatment, besides it takes more to draw and care for so much milk. Sell all the grain and best hay, as they are distasteful to the scrub cow, and if fed to her would be liable to double her product of milk and butter and unfit her for the part she is to play in the drama of ruin.

Leave the corn in the field uncut; husk it carefully, leaving no stray nubbins in the stalk, as they might form in your cows a taste for high living, which, if indulged in, would lead to prosperity instead of ruin. Sell all straw, as a good bed adds to the comfort of a cow, increases her product and enhances your profit. For the same reason there is no use of a barn. A snow-covered corn field is sufficient shelter, or a wire fence will serve the purpose of shelter. The fact that it is out of repair will make no difference; a few wires off will the more readily permit of her getting on the other side when the wind changes. If the cow's hair stands well toward her head, the ribs show plainly and the back-bone has a beautiful upward curve, there are sure signs that all is as it should be, and that the end is fast approaching.

To buy and feed bran is not only folly, but is a serious drawback in several ways. It increases production, strengthens the bone and muscle and renders the droppings doubly valuable to the farm. The latter point, however, is quite a side issue, as the manure should all be kept in the barnyard—to increase its beauty and comfort when the snow melts and spring rains come. The odor arising from it on warm spring days is as conducive to the joy of the shiftless farmer as is the odor of the tea roses to the joy of the lady of fashion. Don't use land plaster on the stable floors, as it keeps them dry and clean and adds to the comfort and health of the cow.

Don't get up early in the morning; it makes the day too long. Don't be annoyed if your wife tells you it is time to milk the cows, for neglect will cause them to dry up. Let them go dry; that is just what you want. It don't pay to milk in winter when butter is only 30 cents a pound; besides, women do not understand business, any way. If you follow your wife's advice you may get ahead in the world, and that is not what you desire.

Feed the calves cold skimmed milk; it is less trouble than to warm it, and if they don't grow they may live to add to the number of poor dumb brutes to curse you next winter for your inhuman treatment, and if they die you can attribute it to bad luck. Keep a few hogs; have the pigs come in May or June; keep them in a state of semi-

starvation until they are a year and a half old; they may then weigh 200 pounds and pay half the expense of their keeping.

Don't waste time taking extra care of milk, carding the cows or brushing dirt off their udders; let the dirt fall off into the milk; it will strain out, or if it don't it will only add flavor to the butter, which is highly essential. Set the milk in pans on an open shelf in the kitchen, where the fumes from cooking cabbage, onions and bacon can add to the flavor already obtained from the stable. Don't skim the milk until a mould appears on the cream, then put the cream in a stone jar which has been used for pickles or sauer kraut; let it stand several days until it emits a strong odor and the milk settles to the bottom in variegated colors, then churn it. Test the temperature of the cream with your fingers; it is correct enough and costs less than a thermometer. Churn until the butter is in a solid mass, then remove it to a wooden bowl that has been used to chop hash in. Wash the butter but slightly; too much washing might remove the butter milk and a trifle of the stable and onion odors; salt with barrel salt; it is cheaper than dairy salt, and the cheapest is best always. Work the butter until it has a beautiful salvy appearance; then make into balls and wrap in pieces of old cloth; be sure each piece of cloth has a botton-hole in a corner, as the buyer will then know it has been washed, if it is clean. This butter can only be sold at the corner grocery, where it will bring from 8 to 10 cents a pound, while your neighbor's butter brings from 25 to 30 cents; but he uses the modern appliances, feeds his cows well and goes to lots of trouble, which costs money.

If your wife wants cans and a tank for setting the milk, don't get them, as they will cause her less work and improve the flavor of the butter. She may think the old dash-churn too much of a back-breaker, but don't mind that; women are unreasonable creatures at best; your grandmother and mother both used a dash-churn, and what was good enough for them is good enough for your wife; there will be plenty of women after she is dead, and some of them will be foolish enough to marry just such a farmer as you are.

Don't be annoyed if your neighbor gets twice as much for his butter as you get for yours; it isn't any better than yours. It is only a matter of prejudice on the part of the consumer and you should let the world know that you will not cater to anybody's taste for 15 cents a pound extra on butter. As you can't believe in winter dairying you won't need to use butter color. Let the cows go a mile or two to some creek or slough to drink in winter; it makes them hardy and is fine exercise, and what you want is a regular rustler.

Avoid the use of all modern methods in the dairy; such things increase the fortunes of all who use them. Keep right in the old rut and don't thank any man for offering to help you into better methods.

Don't improve or beautify your home. Let the boys and girls go from home for the comfort and pleasure which you have always denied them. As the years go by and the old farm is sold to pay the mortgage, you can sit by a desolate hearth with your gray-haired wife and say—"Ma this is hard luck."

But there is a better way for the dairyman. It is the broad road of progress. The first step is to take and carefully read the best dairy papers. You will soon become familiar with the best dairy breeds and the methods of the men who have been successful. You will see that the cows have warm

barns, that they are kept warm, clean, and comfortable; that the corn is cut and carefully saved in shock or silo and judiciously fed, well mixed with oats, bran and oil meal, and that good pasture, pure water, and clean hay are regarded by such men as a necessity; that the best dairy utensils are used and that no old fogy notions are followed. You will also observe that the methods of their ancestors cut no figure with them. All their surroundings are neat and home-like; the house, dairy house and barnyard all tell the story of prosperity; father, mother and children are contented and happy; the home is adorned with works of art, music, a library of good books, and the best papers, and all who see the happiness within agree that there is no better life than farm life.

Improved Portable Creameries.

Improved portable creameries so conducted that in use there is no lifting of cans or skimming of milk, were first introduced in 1879. There was on the market at that time an article called a creamer. The only convenience it possessed over the common cans and tanks consisted in the fact that the milk could be drawn from under the cream; but before this could be accomplished the can required to be lifted from the tank.

The introduction of portable cream-

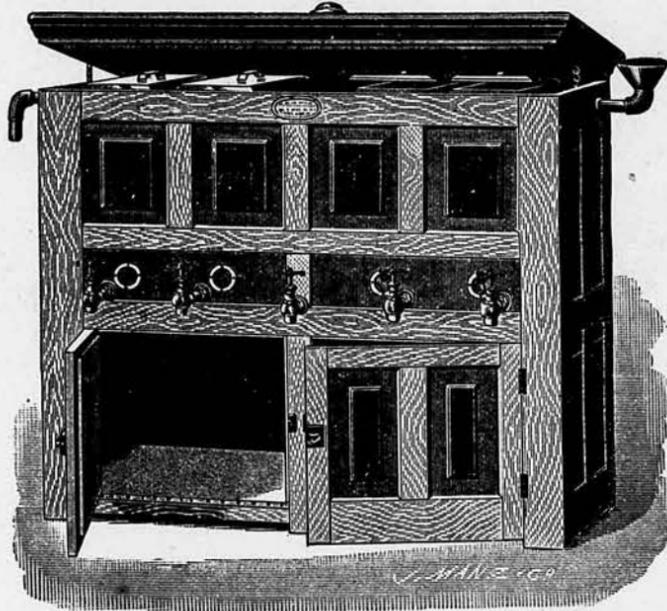
or refrigerator part, which is cooled by the same material used to cool the milk, is indeed a valuable feature.

The "Occident" is manufactured by the Moseley & Pritchard Manufacturing Company, of Clinton, Iowa, to whom all inquiries relating to it should be addressed.

Butter-Making.

By Miss Viola Bangs, read before the Wabunsee Farmers' Institute, January 11, 1889.

In thinking over the subject of butter and how to make it, I was surprised to see how much similarity there is in the character of people and the quality of butter. For instance, you have an apparent friend; if you believe all he tells you, you can mingle with your fellow men with the consciousness that you are not only beautiful, graceful and fascinating, but as well dressed as any one. With what revulsion of feeling do you see yourself in the glass; how about the little squint eyes, or the muddy complexion, the crooked mouth filled with dark irregular teeth, can they be called points of beauty? What, then, ails your friend? Oh, nothing, only his mother patted, smoothed and handled him until she blended all his grains of truth and modesty into one oily lump. And so he goes through the world flattering and cajoling people. But you say if he had too much petting, how about Mr. Crusty? Surely you



MOSELEY'S OCCIDENT CREAMER AND REFRIGERATOR.

eries (and nothing should be so designated that does not include the convenience referred to in first paragraph above), marked an era in the history of butter-making in this country. At the present time most of the portable creameries not only include these advantages, but also the additional one of having combined with them a refrigerator in which can be stored the cream and butter of the dairy, and articles for domestic use. At the time of the introduction, and for some time after, the purchase of such improvements was made merely by those who made butter at home, as those patronizing public creameries conducted on the cream-gathering plan, generally used cans and tanks. But by degrees it became known that the former was as valuable to patrons of public creameries as to proprietors of private dairies.

In this connection we deem it of interest to our readers to illustrate one of the most popular portable creameries of the day, viz.: Moseley's Occident Creamer and Refrigerator. The cut shows No. 8, dairy class, having a milk capacity of twenty-two or twenty-six cows. As will be readily seen, the "Occident" combines all the conveniences and economies desired in a portable creamery. In fact it is a small dairy house in and of itself. Its lower

never get him to smooth things over; if you get a civil word out of him you do well. Yes, that is true, and had you been with him during his childhood you would have found that he was salted too heavily with sharp words and sharper blows until he grew hard and bitter to the taste. Where, then, would you class Mr. Don't Care? He is pleasant enough, and yet you could hardly call him a flatterer; but for profanity and lack of principle, he is hard to beat. Ah! in his case you have to go back still farther. there you would have found neglect, carelessness and dirt. To be sure, when he is ready to paddle his own canoe, the outside is smooth and to all appearances of good color and quality; it is only when you taste that the greasy rancid flavor is discovered, and it is with a sigh of relief that we turn to Mr. Neverfail. In him we find the grains of reverence, faith, truth and honesty standing out clear and distinct. Firm in good principles, salted just enough with ambition and will power to make him strive for the right and remember the needs of his fellow men. He is never streaked or porous, but solid through and through, and you know just what to expect of him.

But to return to our subject. It seems almost useless to try to say anything on

Every Household

Should have Ayer's Cherry Pectoral. It saves thousands of lives annually, and is peculiarly efficacious in Croup, Whooping Cough, and Sore Throat.

"After an extensive practice of nearly one-third of a century, Ayer's Cherry Pectoral is my cure for recent colds and coughs. I prescribe it, and believe it to be the very best expectorant now offered to the people."—Dr. John C. Levis, Druggist, West Bridgewater, Pa.

"Some years ago Ayer's Cherry Pectoral cured me of asthma after the best medical skill had failed to give me relief. A few weeks since, being again a little troubled with the disease, I was promptly

Relieved By

the same remedy. I gladly offer this testimony for the benefit of all similarly afflicted."—F. H. Hassler, Editor *Argus*, Table Rock, Nebr.

"For children afflicted with colds, coughs, sore throat, or croup, I do not know of any remedy which will give more speedy relief than Ayer's Cherry Pectoral. I have found it, also, invaluable in cases of whooping cough."—Ann Lovejoy, 1251 Washington street, Boston, Mass.

"Ayer's Cherry Pectoral has proved remarkably effective in croup and is invaluable as a family medicine."—D. M. Bryant, Chicopee Falls, Mass.

Ayer's Cherry Pectoral,

PREPARED BY

Dr. J. C. Ayer & Co., Lowell, Mass.
Sold by all Druggists. Price \$1; six bottles, \$5.

a subject; that has been so thoroughly canvassed. You can scarcely take up a paper without seeing something on butter-making. But to review the process. Cleanliness is essential from the time the milker seats himself to milk the cow, until the butter is placed in the hands of the receiver. If possible, the milk and cream should be kept free from all strong odors, such as cabbage, onions or fish. You have only to let a glass of milk stand uncovered over night in the sick room, to test for yourself how foul it can become. In skimming, let as little milk as possible go into the cream jar, and beat thoroughly after each skimming. The temperature of cream for churning in winter can run as high as 64 deg., but in summer 58 deg. is high enough. Churn until the butter reaches the granular state; draw off the butter milk and wash first in clear water and then in a weak brine, and you will find your butter free from butter milk and ready for salting. The general rule is, one ounce of salt to one pound of butter. Work well, but do not blend the salt into the butter if you do not wish it to be greasy. It is then ready to print or make into rolls for market. If you can keep the cream and milk at a temperature of 58 deg. during the summer months, you can have firm, solid butter, that can be printed or handled without turning to oil. But now comes to most persons the most disagreeable part of churning, that is, washing the churn. If of wood, and it has been thoroughly soaked with cold water before the cream was put in, all it needs is to scrape off the surface butter with a knife and wash well with cold water. But if the grease has penetrated the wood, after washing, rub well with dry corn meal and follow with a wash of cold water to which has been added a little washing soda.

These are only a few hints on the creamery process, but I hope they may be the means of bringing forth newer and more approved methods.

Leading physicians recommend Ayer's Sarsaparilla. Old and young take it with perfect safety. It cleanses the blood, strengthens the nerves, and vitalizes the system. Popular experience has long placed this medicine at the head of tonic alteratives.

See Tinker's cedar ad. in 2-cent column.

Correspondence.

A Good Living in Western Kansas.

EDITOR KANSAS FARMER:—"The Only Hope for Western Kansas." Under the above heading ex-Gov. Glick gives the State Legislature some excellent advice, which I hope will be acted upon this winter. But I object most emphatically to the caption of his article. The only hope for western Kansas is not in raising sorghum for sugar, great as that industry, aided by legislative encouragement may become, but in the adaptation of crops to our climate. Mr. Glick argues truly that corn, cattle and hogs are the basis of profitable farming, but says that "the raising of a corn crop upon the scale on which it is done in eastern and central Kansas is manifestly out of the question," and consequently he thinks that cattle and hogs cannot be successfully raised. Now we already have several substitutes for corn which bid fair to rival if not out-do that famous cereal. Alfalfa does well wherever tried, and Kafir corn, milo maize and large African millet yield about fifty bushels per acre of excellent grain, besides a large quantity of good fodder. I had about an acre of the large African millet which was sown in June and grew about ten feet, making excellent fodder, and the grain is preferred by my old horse (whose teeth are not good) to corn. My cattle and hogs are very fond of the grain, but I did not have enough of it to test its fattening qualities. This so-called millet grows much higher than Kafir corn, but is in other respects about the same.

Every farmer knows, or ought to know, that red clover is especially well adapted to building up the frame of a hog. Alfalfa clover will undoubtedly serve the same purpose, and as alfalfa and these non-saccharine sorghums—Kafir corn the milo maizes and African millet—will make a crop with very little rain, and also make fat cattle and hogs, I think I see a little ray of hope for western Kansas outside of the sorghum sugar industry. If we are dependent on the raising of sorghum for sugar, the exodus from western Kansas would certainly drive Frank Wilkeson to an insane asylum. There are twenty-five counties west of the 100th meridian. One factory in each of five counties would leave twenty out in the cold—with no hope—to be depopulated. We must abandon corn culture, at least for the present, as Gov. Glick suggests, but let us turn our attention to these and other substitutes, and wrest a living and a competency from these fertile lands, drouth or no drouth. And let us also hold up the hands of Mr. Glick while he besieges the Legislature for aid to the sugar factories, but mildly suggest that the plan advocated by the KANSAS FARMER of having a central factory with a number of "feeders" at easy hauling distances, would result in "the greatest good to the greatest number." R. W. DRAKE, Lakeland, Meade Co., Kas.

A Better Remedy.

EDITOR KANSAS FARMER:—A better remedy than that proposed by F. W. B., of Marion, for high rates of interest will be found in such legislation as will fix a reasonable maximum rate of interest that may be collected upon contracts for the payment of money at some future time. One reason why rates of interest are high is that notes and mortgages and monies due are taxable, and taxes are high. Naturally the lender and the creditor add to the net rate of interest they desire to obtain for the use of their money, such a percentage as will pay the taxes that will be levied upon the securities held by them. There is no injustice in their making such a provision. But it is quite possible under existing laws for them to avoid the payment of the tax. Right here is a real wrong done the borrower and the mortgagor. He pays the mortgage taxes upon the full face of the mortgage and then pays the County Treasurer the entire tax levied upon the property incumbered by the mortgage. This is double taxation. One of two methods of relief should be promptly adopted. Notes and mortgages should be exempted from taxation, or a law should be enacted requiring the Register of Deeds to furnish annually a complete list of uncancelled mortgages recorded and on file in his office with amounts due and the designation of

the property incumbered, to the County Clerk, who should be authorized to levy the tax and certify the levy to the County Treasurer, whose duty it should be to deduct amount of tax on the mortgage from the amount of tax levied upon encumbered property and give the mortgagor a receipt that shall be good against the mortgagee for the amount of tax paid on the mortgage. The remainder of tax-levy on incumbered property to be received for in full in the usual manner. It may be said that this remedy practically exempts mortgages and evidences of indebtedness from taxation. It does more than that: It prevents those who hold them from collecting a tax from the borrower and debtor that they may fraudulently withhold from the County Treasurer. At the same time it secures the payment of the tax on the mortgage and relieves the mortgagor of the double burden. P. C. BRANCH, Sterling, Kas., Dec. 31, 1888.

Letter From Wichita County.

EDITOR KANSAS FARMER:—Wheat and rye look well; corn selling at 25 cents; feed plenty and very cheap. Our county is in a fair way to greet the coming emigration of '89; we have feed and grain at less than half what it was last year. One township west of me is offering 4,700 bushels of corn. Millet and sorghum will not exceed 40 to 50 cents. Rice corn threshed and clean as flour 60 cents per 100 pounds. There seems to be a good many men who are still afraid to dehorn cattle. I have written a good many letters since I did my first work three years ago, don't think I gave my plan of chute which was so simple to me as I thought any one would do this way. I put a rope noose around neck and half hitch on nose and make fast to post, and another noose on one hind foot, and as the cow backs take up the slack until she can't put this foot to the ground, then tail her on this side and she will lie down very easy and can't get up. By this plan I do 100 wild range cattle in a day. I have told all my correspondents that there was no secret, and a great many have come and looked at my herd and got information enough to do their own cattle. There is not a bunch of cattle in the county that I know of with horns now. J. W. C. Leoti, Wichita, Kas.

Corn Culture.

EDITOR KANSAS FARMER:—I have Mr. Hammer's letter before me, telling us how to raise corn in Kansas. While we could adopt part of Mr. H.'s system, I do not agree with him in all the particulars. I believe deep fall plowing is a very good plan for the land, but in our section of Kansas of late years corn put in with the planter has not done well on account of a species of worm which works on the roots, causing it to blow down before it matures. Mr. H. advocates drilling corn twenty inches apart in the row, covering it five inches deep, with rows five feet eight inches apart. I think two inches is deep enough to cover early corn, and three feet ten inches wide enough between rows. In order to get 100 bushels, or even sixty bushels per acre, according to Mr. H.'s way of planting, each stalk would have to bear from two to five ears. His plan of planting so as to have it bloom before or after the extreme heat of July and August is good if we only knew when said weather would begin or end. Last year my early corn blasted in the bloom between the 10th and 15th of July, while that which was later blooming, the last of July and the first of August, made a good crop.

As to variety, almost every farmer has one or more varieties which he thinks is the best for his particular locality. I would say stick to your old friends and improve them by judicious selections of seed each year. While yellow corn may be better for stock the white generally outyields it from five to fifteen bushels per acre, besides bringing from 2 to 5 cents more per bushel on the market.

Mr. H. admits that listing has done well, but thinks it looks like a shiftless way unless you first plow the ground. I am in favor of the lister and think it the greatest invention of the age in the way of farm implements. In the first place, you can handle one-third more land with the same team and help, thereby lessening the expense that much, which is a great item in corn culture.

Second, it does not blow down so bad, making it much easier to husk; it stands the drouth better and yields fully as well.

H. A. FULMER.

Wamego, Pottawatomie Co., Kas.

Assessors--Interest.

EDITOR KANSAS FARMER:—In your issue of January 3, "B." wants the views of the FARMER and the farmers upon the question of county assessor. I favor an assessor for each Commissioner district, to be nominated at the same time and in the same manner as are our county officers. And I favor a full cash valuation for assessing. Though there seems to be no difference, yet I prefer to vote 5 mills on \$100 worth of property, instead of 10 mills on \$50 worth; the same amount of tax has to be raised, no matter what our valuation.

Mr. F. O. Popenoe questions the advisability of reducing the legal rate of interest in this State. "If the legal rate is placed below what capital can secure for its use in other States, etc.," of course it will be diverted from this State, but would that be a hardship? Wait and see. He speaks of us in the western part of the State being compelled to pay exorbitant rates; we prefer to say our seeming (?) needs and our love of speculation induces us to pay such rates. He says: "Half the farmers of this State would be tenants, net owners, if it were not possible to borrow money." I wish to emphasize the fact that it is the ability to borrow that is fast reducing us to a condition of tenantry. How so? Simply because we borrow more than we can pay; the mirage that showed us so many beautiful things, if we only had a little money to help us out, vanisheth, and our last end is worse than our first. D. E. STEVENS, Hedgewood, Norton Co., Kas.

Whence Come the Losses.

EDITOR KANSAS FARMER:—I notice in FARMER of December 20 Bro. Fadely discusses "Where the loss comes in." I send you an article I wrote for and had published in the Ohio Farmer several years ago. The points made in it are good yet, although the figures are now different:

Again, I buy four boxes matches for 5 cents. Cost \$1.25 per case of 144; allow 19 cents for freight, etc., and they cost 1 cent a box; profit, 25 per cent., with a chance to sell out a case and turn the money over at least every month. Twenty five per cent. a year is pretty good, but compound it twelve times a year and see how it compares with farming profits.

Again, take sugar. Standard A is quoted at 7½ cents in Detroit; I pay 8 cents. Cost of 300-lb. barrel at 7½ cents, \$21.63; freight, 60 cents; rent, interest and running expenses will vary, say 20 cents; total cost, \$22.43. Sales of 300 pounds at 8 cents, \$24. Profit, \$1.57, or 7 per cent., with a chance to compound from six times a year up. The grocer will say loss in handling and down weight take off the profits. Yes, but the brown paper sold with it at 8 cents and costing 2 or 3 cents makes it on again. Weigh the paper on your ten-pound package of sugar and see what it cost you, then figure its worth to you.

Again, I pay 50 cents a pound for tea. I am offered a better article by a Detroit house at 25 cents. The coffee trust raises it a cent. Oh, no; that isn't much. Figure it on 600,000,000 pounds imported and see. I am told the trust has raised it about 10 cents all around since it was organized. Grocers figure on 30 per cent. profit at least all round.

Take drugs—sulphur, coppers, and some other—3 cents a pound wholesale, retail at 10 cents; over 200 per cent. profit. Bromide of potash, 35 cents a pound; retails at 10 cents an ounce. The doctor will leave you 1 cent's worth and charge 50 cents to \$5. Men's ready-made clothing will average 25 per cent. or over. Price an overcoat in the fall and in the spring and see.

Everything is sold you on an advance of from 7 per cent. on a few staples like sugar and nails that can be compounded often, to 1,000 per cent. on some kinds of drugs, fancy articles and bric-a-brac. It isn't interest and taxes, nor trusts, nor freights, nor the weather, nor what you sell, nor what you buy; it is all of them and what you buy is the worst. Your purchases cost you an average of at least 12½ per cent. more than they ought. Farming is the foundation wall. The weight of the super-structure is crushing it into the dirt. The hosts of Lill-

WELLS, RICHARDSON & Co's
IMPROVED
Butter
Color.

EXCELS IN STRENGTH
PURITY
BRIGHTNESS

Always gives a bright natural color, never turns rancid. Will not color the Buttermilk. Used by thousands of the best Creameries and Dairies. Do not allow your dealer to convince you that some other kind is just as good. Tell him the BEST is what you want, and you must have Wells, Richardson & Co's Improved Butter Color. Three sizes, 25c, 50c, \$1.00. For sale everywhere. WELLS, RICHARDSON & Co. Burlington, Vt.

put have bound the agricultural Gulliver and are gormandizing like turkey buzzards on a dead donkey. Moral—KICK!

ERNEST HOLLENBECK.

Davison, Mich.

Farmers' Institute at Vinland.

Special correspondence Kansas Farmer:

Douglas county institute assembled at Vinland the 17th and 18th inst., with President Fairchild and Professors Lants and Kellerman from the Agricultural college, also Professor Graham, of Baker university, at Baldwin.

Subjects discussed:—"Horses for General Purposes." General drift seemed to favor Clyde and Percheron stallions with our best native mares. "Horticulture."—For commercial orchards the Jonathan, Missouri Pippin, Winesap, Rome Beauty and Ben Davis were the choice.

A paper was read by Mrs. Thomas as to "The Value of Woman's Labor in Successful Agriculture." Her essay was well written and read, and heartily approved. President Fairchild addressed the meeting on "Speculation on the Farm," which was timely. Professor Kellerman's subject was "Pure Air and Cleanliness Essential to Health." He handled this well, but I fear it will not be heeded as it should be. Professor Lants treated of "Highways," and mentioned the right accorded to footmen in his State, saying that vehicles and such gave footmen half the road, but here it was not done. Here Mr. Roe spoke of sending the speaker before the Legislature to secure the rights of tramps by having the roads provided with good foot paths, so that they could keep moving, to the good feeling of the general public.

The meeting was well attended, and a general good time was had. There was a fine small display of fruit, corn, vegetables and grasses. The hall was nicely decorated, and the hospitality was all that could be asked of any people. J. C. H. S.

Topeka Weather Report.

For week ending Saturday, January 10, 1889:

Date.	Thermometer.			Rainfall.
	Max.	Min.		
January 13.....	28	16	.....	.05
" 14.....	32	19	.....	.05
" 15.....	50	29	.....	.46
" 16.....	52	27	.....	.05
" 17.....	36	17	.....	..
" 18.....	39	17	.....	..
" 19.....	32	24	.....	.02

MANLY
PURITY
AND BEAUTY

CUTICURA REMEDIES CURE
SKIN AND BLOOD DISEASES
FROM PIMPLES TO SCROFULA.

NO PEN CAN DO JUSTICE TO THE ESTEEM IN which the CUTICURA REMEDIES are held by the thousands upon thousands whose lives have been made happy by the cure of agonizing, humiliating, itching, scaly, and pimply diseases of the skin, scalp and blood, with loss of hair.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, are a positive cure for every form of skin and blood disease, from pimples to scrofula. Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c.; RESOLVENT, \$1. Prepared by the POTTER DRUG AND CHEMICAL CO., Boston, Mass.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Rheumatism, Kidney Pains and Weakness speedily cured by CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster.

The Veterinarian.

[This department of the KANSAS FARMER is in charge of Dr. F. H. Armstrong, V.S., Topeka, a graduate of Toronto Veterinary college, who will answer all inquiries addressed to the KANSAS FARMER concerning diseases or accidents to horses and cattle. For this there is no charge. Persons wishing to address him privately by mail on professional business will please enclose one dollar, to insure attention. Address F. H. Armstrong, V.S., No. 114 Fifth St. West, Topeka, Kas.]

J. W.—Umbilical hernia is common in colts, calves, etc. It is quite commonly congenital, but may be brought on by a strain, as by violent jumping, running. It is manifested by soft fluctuating swelling at navel, can be returned into abdomen. Treatment. In young animals the sac oftentimes becomes effaced with the growth of animal. A suitable pad made soft applied to navel and held in position by elastic bands attached to animal is quite successful. Again by the application of the wooden clamps. Return the protrusion. Apply clamps up snug to abdomen, in ten or twelve days the clamps will drop off, leaving the parts smooth.

I have a 2-year-old filley that has had a breaking out of the skin at different times for some eight or ten months. These sores are first small, but keep getting larger and spreading. Some on her now as large as your hand. They look raw—discharge of a reddish color. She tries to bite and rub. What can I do for her?

W. W. S.—Wash the sores carefully, removing all scurf and scabs. When dry touch the surface with a crystal of sulphate of copper. In a couple of days wash it off, and keep the sores dusted with some of the following preparations: Jodoform, 1 ounce; burnt alum, 2 ounces; powdered charcoal, 3 ounces; Mix. Make powder. Internally give a tablespoonful of sulphur in feed twice a day for some weeks.

D. N. H.—Am a little uncertain how to advise you. It is barely possible that she may have some additional injury other than the one you speak of. Examine carefully all parts of her limb. I am of the opinion that the injury at hock may have opened the joint. If the joint is now swollen any, hot and painful to touch, it is probable that the injury caused an inflammation of hock joint with the formation of bone. Your only resort will be the repeated counter irritation of joint. Use the following: Powdered cantharides, 2 drachms; hog's lard, 2 ounces. Mix, make ointment. Rub this ointment on the sides, not just in front. Wash blister off in twenty-four hours and keep parts greased. Repeat the blister in three weeks. If you see any change let us hear from you again.

CHRONIC NASAL CATARRH OR GLEET—R. P.—It may be one of the sequelae of a very severe cold, where the pus or matter becomes collected in the nasal sinuses. Again it may be occasioned by a diseased tooth. If the latter, it will be recognized by the intolerable factor, when the tooth is enamored with the hand. Also by swelling and tenderness around the fang of the tooth. Such a tooth must be extracted before the factor and discharge will cease. When pus is collected in the sinuses—there will be a constant discharge bad smelling; and some swelling or tenderness between the eyes or beneath the eyes. When in such a condition, the bone must be trephined and pus washed out. Sometimes a slight collection of this kind will do well under the following treatment. Injections into the nostrils of weak solutions of tincture of penicillin of iron, 1 ounce to the quart of water. Feed animal upon a generous diet. Give tonics as sulphate of iron, 1 ounce; iodide of potash, 1 ounce; powdered ginger, 2 ounces. Mix. Make twelve powders. Give twice a day in soft feed. Must be continued for some weeks. However, would advise you to have her examined by some competent man.

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for Consumption. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy FREE to any of your readers who have consumption if they will send me their Express and P. O. Address. Respectfully, T. A. SLOCUM, M. C., 181 Pearl St., N. Y.

PUBLISHERS' PARAGRAPHS.

Attention is directed to the special club list in another column of some very valuable papers in connection with the KANSAS FARMER at greatly reduced prices, for the accommodation of our readers.

We are pleased to acknowledge receipt of seed catalogues and manuals from Frank Ford & Son, Ravenna, O.; Z. D. Forest, Ely & Co., Philadelphia; H. W. Buckbee, Rockford, Ill.; Wm. Henry Maule, Philadelphia.

We cannot spare space to note each advertiser, but under the head of "New Advertisement" each week may be seen a list of all new advertisers for that issue. Our readers are cordially requested to note such, as they will find numerous things needed and many special bargains. Always mention this paper when you write to, or call upon advertisers.

Subscriptions still continue to pour in for this paper, not only from all parts of Kansas, but from every other state. This is indeed encouraging, and we thank all our friends for their valuable services and good words in our behalf. We hope that every reader will make a special effort to send one or more new subscribers. Send for our new club list, and request your neighbors who are not now subscribers to send for a sample copy.

In another column of W. W. Barnard & Co., 6 and 8 North Clark St., Chicago, who at the beginning of this year succeeded the Chicago branch of Hiram Sibley & Co's, immense seed and implement business. The senior member of the firm is an old employe of the retiring firm, and has in connection with other capitalists ample means to allow them to continue the business on the same scale. Send for their catalogue, which is mailed free upon application.

Maule's Seed Catalogue for 1889 certainly surpasses all previous efforts of this house; the letter-press is particularly fine, while the illustrations of the various vegetables are very beautiful and life-like, many of them being reproduced direct from photographs. The catalogue this year contains over three thousand square inches of wood engraving alone, it is in fact a veritable picture book. Mr. Maule this year proposes to distribute among his customers \$3,500 in cash prizes, for premium vegetables, etc., raised by his customers the coming season. No reader of this paper interested in gardening, should fail to send for a copy, which will be mailed free to all sending their address to Wm. Henry Maule, of Philadelphia.

Inquiries Answered.

FOREST TREES.—Read letter of commissioner in another part of this paper.

SEEDS.—If T. W. will write to Trumbull, Reynolds & Allen, Kansas City, Mo., referring to KANSAS FARMER, he will be treated well.

TREES.—Let L. W. H. write to Hart Pioneer Nurseries, Fort Scott, Kansas, referring to this paper. We give the same advice to S. G. C., of Gove county.

ALFALFA.—Sow about twenty-five pounds of seed on an acre in the spring as soon as the weather and ground are both in good condition. The land you describe will produce alfalfa if worked as you describe.

SEED CORN.—W. S. Romigh, Cottonwood Falls, Chase county, answering a query in the FARMER, says he planted seed of Dakota corn—common yellow corn—last spring, April 15th, and began to feed hogs on the crop August 1st. The yield was 35 bushels to the acre.

SEED CORN.—A correspondent wants the experience of Kansas farmers with the following named varieties of seed corn: Improved ninety day Leaming, Pride of the North (90 days), Champion White Pearl (100 days), Hickory King White (100 days). He wants an early corn, not flint, that yields early.

WEIGHTS AND MEASURES.—There is now no distinction in Great Britain between liquid and dry measures. The gallon there is the unit; it contains 277½ cubic inches, while the United States gallon, (which was once the English wine gallon) contains 231 cubic inches. The bushel is eight gallons, the quarter is eight bushels. In commerce generally the British unit of weight is the avoirdupois pound—7000

grains troy; the hundred weight is 112 pounds; the ton is 2,240 pounds. The United States pound avoirdupois is the same as the British, but the hundred weight is 100 pounds, and the ton is 2000 pounds.

PANAMA CANAL.—We cannot undertake to give a history of this enterprise. It was begun by a company of Frenchmen under direction of DeLesseps, engineer; the company recently failed and the canal is not more than half completed. It is said the water on the Pacific side of the Isthmus of Panama is higher than that on the Atlantic side, and the principal reason assigned is, the diurnal motion of the earth.

WHEAT GROWING COUNTRIES.—If not asking too much, will you please print in the KANSAS FARMER a list of the principal wheat growing countries and their time of harvesting?

—Wheat harvest in England is in July and August; in Russia July to September, according to the latitude; India, March and April; Australia, October and November, and Chili and Argentine Republic about the same time. Germany and Austria harvest about the same time as New England and Dakota.

Gossip About Stock.

Remember the sale of English Shire stallions by Berridge Bros., at Lincoln, Neb., on February 8th.

John Buche, breeder of Poland-China, also harness maker, Miltonvale, Kansas, offers to trade harness of his own make for pure bred Poland-China swine.

J. O. McDonald, Gardner, Kas., wants to buy some thoroughbred stock of different kinds. He wants close prices for cash. Breeders will notice his adv. in the Two Cent Column, and govern themselves accordingly.

Hon. T. A. Hubbard, Wellington, Kas., the inimitable breeder of Poland-China and Berkshire swine reports a brisk business and asserts that he can supply as good stock as may be found anywhere at tempting prices. Our readers need have no hesitation in favoring him with their orders.

That enterprising swine and poultry breeder, I. L. Whipple, Ottawa, Kas., reports the best swine sale of the season for the opening trade of 1889, and receives as high as sixteen letters per day from his ads in KANSAS FARMER. Reputable breeders should advertise in this paper to secure a prosperous trade.

NEW ADVERTISEMENTS.

Advance Courier Pub- } Presents.
lishing Co.
Beyd, Jno. Cooley Creamer.
Barnard & Co., W. W. Tested Seeds.
Buche, Jno. Harness to trade.
Bonner Springs Nurs'ry. Trees, plants, etc.
Covell, M. D. Breeder's card.
Currie Bros. Seeds.
Downs, S. H., Manager. Topeka Seed House.
Delano, W. S. Seed corn.
Degen Bros. Public sale of stallions.
Douglass & Son, R. Trees.
Electric Belt Agency. Electric Belts.
Farming World. Count Beans.
Fleming, Geo. W. Stallion.
Glick, J. F. Wanted, 100 steers.
Gale M'fg Co. Walking Plows.
Griess, A. H. Nursery.
Hanson, J. W. For sale.
Mosher, E. Hand Seed Drills.
Manglesdorff & Co. Seeds.
Mason, A. M. Clyde Stallion.
McDonald, J. O. Wants pure-bred stock.
Rumsey M'fg Co. Seed Sowers.
Root & Co., J. B. Seeds.
Sedgwick Bros. Steel Wire Fence.
Stinson & Co., Geo. \$85 Gold Watch.
Turk, B. N. Mill property to trade.
Thomas, H. A. Buff Cochins.
Tomlinson, A. Seed potatoes.
Turner, Robt. A. Kaffir corn.
Kansas City Times. Weekly Times.
Williams, J. W. Langshans.
Wallace, Alex. C. Northwestern Homes.
Wells, Richardson & Co. Butter Color.
Ziller, J. D. Toulouse geese.

Farm Loans.

Loans on farms in eastern Kansas, at moderate rate of interest, and no commission. Where title is perfect and security satisfactory no person has ever had to wait a day for money. Special low rates on large loans. Purchase money mortgages bought. T. E. BOWMAN & Co., Jones Building, 116 West Sixth street, Topeka, Kas.

Catarrh Cured.

A clergyman, after years of suffering from that loathsome disease, Catarrh, and vainly trying every known remedy, at last found a recipe which completely cured and saved him from death. Any sufferer from this dreadful disease sending a self-addressed stamped envelope to Prof. J. A. Lawrence, 88 Warren St., New York city, will receive the recipe free of charge.

If you want the best Garden you have ever had, you must sow

MAULE'S SEEDS.

There is no question but that Maule's Garden Seeds are unsurpassed. Their present popularity in every county in the United States proves it, for I now have customers at more than 31,000 post-offices. When once sown, others are not wanted at any price. My new catalogue for 1889 is pronounced the most original, beautifully illustrated and readable Seed Catalogue ever published. It contains among other things, cash prizes for premium vegetables, etc., to the amount of \$3,500. You should not think of purchasing any seeds this Spring before sending for it. It is mailed free to all enclosing stamp for return postage. Address

WM. HENRY MAULE,
1711 Filbert St. PHILADELPHIA, PA.

Tutt's Pills

stimulates the torpid liver, strengthens the digestive organs, regulates the bowels, and are unequalled as an

ANTI-BILIOUS MEDICINE.

In malarial districts their virtues are widely recognized, as they possess peculiar properties in freeing the system from that poison. Elegantly sugar coated. Dose small. Price, 25cts.

Sold Everywhere.

Office, 44 Murray St., New York.

When You Travel

Please bear in mind that during the past year the Burlington Route (Hannibal & St. Joseph R. R.) has completed arrangements whereby they have been able to open up a new through line to St. Louis which is already justly considered one of the best. By this line the passenger leaves Kansas City after supper (or if he prefers, takes his supper in the dining car) and arrives in St. Louis in time for breakfast, thereby losing no time in the journey, which is a matter of great importance, to business men especially.

The Burlington runs on this line through Pullman Palace Sleeping Cars, of the latest approved design, and Reclining Chair Cars. Seats in the latter being free of charge.

The new St. Louis Line forms a part of the Burlington's through line between St. Louis and Denver, on which there are through daily trains with Palace Sleeping Cars and Reclining Chair Cars.

The Burlington's Chicago Short Line still holds its own against all competitors. Two through trains daily between Kansas City and Chicago, one of which is Solid Vestibule, having through Pullman Palace Sleeping Cars, and free Reclining Chair Cars; time as quick as the quickest.

We should also strongly advise any one going to St. Paul, Minneapolis or the Northwest to take the daily forenoon train on the K. C., St. J. & C. B. R. R., which has a through Pullman Buffet Sleeping Car from Kansas City to St. Paul and Minneapolis.

The above trains are in every way models of comfort and convenience.

A. C. DAWES,
General Pass. & Ticket Agent,
St. Joseph, Mo.

I will mail a valuable present to any minister, teacher or friend of education on receipt of address. THOS. J. BRYANT, St. Joseph, Mo.

Money.

Write or call on the National Loan and Trust Co., of Topeka, for loans on real estate. Rates reasonable and terms favorable.

Bulls for Sale.

Fifteen choice Short-horn bulls, from 8 to 20 months old; also a choice number of heifers. Will sell at reasonable prices on terms to suit purchasers. Address F. B. Babst, Dover, Shawnee Co., Kas.

"The Future by the Past," and the Kansas Farmer one Year for \$1.50.

We have made arrangements for a limited time with J. C. H. Swann, author of the "Future by the Past," price \$1.00. It has had a wide sale on account of being a perpetual calendar of predictions. The supply on hand is small and we propose to give our readers a chance to secure the book at half price in connection with the FARMER.

The Home Circle.

To Correspondents.

The matter for the Home Circle is selected Wednesday of the week before the paper is printed. Manuscript received after that, almost invariably goes over to the next week, unless it is very short and very good. Correspondents will govern themselves accordingly.

The Soul's Song of Action.

Like the silver wings of starlight, sweeping on its silent race,
Widening forward and forever through eternities of space,
Moves the human soul in longings and in thought and deed sublime,
On from summit unto summit, o'er the solemn hills of time!

Earth would sink to night and chaos, were the golden draught no more
From the sun's o'er-brimming chalice on the thirsty gloom to pour,
And the spirit-planet darkens in its orbit blind and chill
When its flaming wings are folded and its pulse of lightning still.

Not with sweat of weary labor, as we shed on earthly soil,
But with the hills of power and glory goes the spirit to its toil—
To the long and eager striving for the grasp of things afar,
Like the throbbing of the fire-fly for the luster of the star!

Toil and grief and self-denial, must its burdened pinions bear,
Beating vainly for the freedom of the far empyreal air;
But above earth's wall and struggling, like a trumpet in the van
Through the dim and listening ages, speaks the destiny of man!

From the living soul of nature comes an echo to the heart,
Filled with deep, resistless longing, when the fading beams depart—
When the holy shadows gather and the stars are in the sky,
And a saddened fire of feeling kindles in the dewy eye.

When the noon of night is silent, and the silvery moonlight falls
On the forest's branching columns, on its broken foliage walls—
Comes the starry presence nearer, hushing all the fearful air,
Till the soul has prophet glimpses of the glory it shall wear.

Not within the sick winds sighing, nor in sleeping sea and field—
Outward types of weary toiling—are oracles revealed;
But in shadows and in whispers from the void and vast unknown,
And in thoughts whose holy beauty seems to come from God alone.

Far away appears the gleaming of a radiant star of bliss,
As if that sublime existence were foreshadowed unto this;
And the Spirit onward speeding, to the summit yet untrod,
Sees the shining path of angels leading upward unto God.

Through the hushed and solemn portal where a silent warden stands,
Rests its purer gaze, rejoicing, on the shores of better lands;
In the night it triumphed over, lie the fetters it has worn,
And it floats with wing unshackled on the golden tides of morn.

With a kingly grasp of knowledge shall it mount before the sun,
Adding realms of conquered darkness to the wide dominions won;
There the love of truth eternal shall the angel-mind employ,
And in active being blossom the immortal flowers of joy!

THE FARM FOR GIRLS.

By Miss Winnie Cotton, and read before the Wabausee Farmers' Institute, January 11, 1889.

The subject, "The farm for boys," has often been discussed, but as yet I have never heard anything said in regard to the farm for girls. Is it because the girls are of less importance? Fortune favors the girl who is born on the farm, for she has all that nature can give to insure her health and happiness. Can any one be happy without health to enjoy this magnificent world God has given us?

The most important adjunct of the farm is the home and the home life of the toilers thereon. If happiness and pleasure can be given to these toilers, the burden becomes comparatively light. One of the most admirable aids in securing happiness in the home life is the ability to sacrifice self for the benefit of others, to be able to lend a helping hand to all who may need it. The great and wise Teacher has said, "He that would be greatest among you, let him become the servant of all," and none knew better than He the secret of human happiness. And happy indeed will that girl be who can make her presence necessary to the happiness of the household. The home is the nursery of the nation, the cradle of the church and the mother of society.

It is a false notion that a life upon a farm

is one of unceasing toil and void of pleasant recreation and happiness; that it is without advantages for education and a high development of intellect. In this age of abundant and cheap literature, we may become well acquainted with the best minds and have always near us the best of friends, that is, good books. But we should be as careful of what we read as with whom we associate. The great book of nature is ever open and before the eyes of the girl living upon the farm, and the wonders of animal, insect and plant life are sufficient to engage her attention for years. If she desires to become useful, to add in any degree to the happiness of those around her, it seems to me the farm is the best place possible on earth. Labor, good food, and an observance of the laws of health bring to all the highest degree of physical development, and the food of the family is by no means an unimportant factor in producing this result. And the farm furnishes the materials to meet all of man's necessities in this line. It furnishes the nicest milk and cream, the freshest eggs and butter, the sweetest and most delicious meats, the purest honey, the most luscious fruits, and all the golden grains as accompaniments. To combine and prepare these things in a way to give health and happiness to the family, under the direction of mother or some one else competent to instruct, should be one essential element in her education. I think I do not understand what are termed the accomplishments in a girl's education; but if they are sought to the neglect of what is useful and absolutely necessary, then let them go. I think both may be acquired with advantage to home and family. I have seen a girl who could play the piano and rake hay, who could drive a horse and buggy and do the finest of art embroidery, who could sing well, paint well, and make good butter, who was not ashamed to be caught at the wash tub, or at any service that would add to the happiness of the family. And this girl lived on the farm.

In conclusion, I will say that there is no place like the farm for girls. God intended, when he made this beautiful world, that His creatures should live and grow up on the farm.

Exchange of Labor.

In friendly communities, harvest and threshing times call together all available help from brother farmers. If at no other time in the year, then will be an exchange of table bounties witnessing the mutual exchange of help in the busy time. The old-time "barn-raising" had a similar advantage of engendering and fostering good feeling through the welcome help given and received.

It may be a source of gratification to some to feel themselves independent of outside help; but the "self-binder" may bring about a selfishness with the independence, ease and rest in the house as well as out.

There is a combination of work on each farm for the successful results sought; the two divisions may be termed "outside" and "inside" work. The man and his sons and hired men are supposed to be able to do all the outside work; and the woman, her daughters and hired help to successfully keep the inside machinery in easy motion. This would be very satisfactory were the different agents in this combined work mere machinery; but keeping the different hands moving always in the right direction and without disastrous pause, is a more difficult task than attending to bolts and "pitman" and putting on the occasional drop of oil. The son goes off to school; the hired man becomes disaffected; a daughter concludes to carry on the inside work in a smaller household; the mother becomes tired out too soon. Sometimes when the hands outside are too few to make the proverbial "light work," some of the other hands are willing to give a lift, sometimes by helping feed the stock, sometimes by doing the milking, or even by running the mowing machine or rake. How many women help draw water for stock, or see that the hogs have their daily allowance of swill? There are, on the other hand, households which need some of the more unaccustomed masculine hands to help out with the weekly washing, to wash the dishes after a meal, the getting of which has tired out one pair of hands, or to run the family sewing machine.

When all interested parties understand and appreciate these unexpected situations, and when there is a willingness to exchange

labor for the good of the whole, there is no need of anybody to come to the rescue and teach duty. Unfortunately, there are some women and some men who believe this exchange of work to be undignified, to be a departure from a proper sphere. One woman will say with unpardonable pride, "I never milk; I don't think it my place," and the overworked husband will come in late, after a hard day's work, with the milk, which his wife strains (if she can leave her lace pattern long enough to do so). I believe such instances to be rarer than those where the husband thinks because his mother neglected his education in dish-washing and sewing on of buttons, he never can learn. His willingness to remain in ignorance savors of shirking duty. Perhaps he doesn't call it duty, not having considered the worthiness of doing "with his might what his hands find to do." He looks with an emotion, almost, of gratitude when his busy, helpful wife tugs at the well bucket or splits the few sticks of wood he has forgotten, but forgets the necessity, in very decency, of returning the compliment when she in her weakness wishes that she had somebody to do up the work.

Are there some men or women who have never learned the blessedness in "lending a hand?" There is one comfort—"It is never too late to mend," and I am afraid I know some people who ought to be about their mending.

PHEBE PARMALEE.

The Baby.

Christine Terhune Herrick, in *Harper's Bazar*, says a healthy baby is not a *luxus natura*, but is a child that enters the world in sound condition, and whose good constitution, with good training, enables it to throw off the ills that would prostrate a weaker organization. It is a baby who sleeps well, eats well, and digests his food, and passes through the natural processes of childhood—cutting his teeth, learning to creep, to stand, to walk, with no hindrances from inherent debility.

Once in possession of a healthy baby, in six cases out of ten it is the mother's own fault if she does not keep it healthy.

That class of parents is unhappily large who appears to accept a child's strong constitution merely as a basis for experiments. The child drops asleep readily, then he is awakened at any time to be exhibited; does not catch cold easily, and is therefore taken out in all weathers and kept out late evenings; has an excellent digestion, and is permitted to eat anything, and all he wants of it.

Mrs. Herrick tells of a young mother who said of her first baby, a little girl: "Baby's father insists she shall taste everything he has on his plate. She is a year old now, but has liked potatoes and gravy ever since she was 6 months old; is so fond of cake and preserves, and of nearly every sort of vegetable. I did protest when her father began feeding her pickles and cucumbers and cabbage with vinegar on them, but she seemed to like them and I can't see that it does her a bit of harm. Don't you think it a good plan to accustom babies to eat everything? Then their digestions will get used to all sorts of food."

The baby was even then of a pasty complexion, but had plenty of flesh, though it was flabby and lacked the firmness the flesh of a healthy child should have. By the time this little one was sixteen, she was a confirmed dyspeptic, with a skin the color of dirty dough, decayed teeth and intolerable breath; and the parents, who lamented their daughter's ill health, utterly failed to connect cause and effect, saying: "She used to be such a healthy baby; she could eat anything."

A regular, simple diet is of paramount importance in keeping a child well. Next after that comes regular out-door exercise and early hours. No wonder babies are cross and fretful when they are kept up nights till 10 or 11 o'clock, and abnormally excited by lights and unusual surroundings. Let them have their frolics in the daytime, but put them to bed at the twilight hour.

No pains should be spared to detect the first appearance of indisposition; the work of checking an incipient disease is simpler than that of arresting it after it is under way. Often everything depends on controlling a disease in its earliest stages. The baby has little reserve power, and though the recuperative ability of children has be-

come a by-word, it is unsafe to tax it too severely.

These are very sensible ideas, and mothers and babies will be the better for putting them into practice.—*Michigan Farmer*.

Notes and Recipes.

Never omit regular bathing, for unless the skin is in regular condition the cold will close the pores and favor congestion or other diseases.

Never stand still in cold weather, especially after having taken a slight degree of exercise, and always avoid standing on ice or snow, where the person is exposed to the cold wind.

Keep the back, especially between the shoulder blades, well covered; also the chest well protected. In sleeping in a cold room establish the habit of breathing through the nose, and never with the open mouth.

Good Fried Cakes.—Take one pint of buttermilk; one egg; one cup sugar; a piece of butter as large as a hen's egg; a little ginger; one teaspoonful soda. Knead as soft as you can roll out; cut and drop in hot grease one-third beef tallow to two-thirds lard.

Ginger-naps.—One large cup butter and lard mixed; one coffee-cup sugar; one cup molasses; one-half cup water; one tablespoonful ginger; one tablespoonful cinnamon; one teaspoonful cloves; one teaspoonful soda, dissolved in hot water; flour for pretty stiff dough. Roll out thin, and bake quickly. They keep well.

Old-fashioned Gingerbread.—One quart good Orleans molasses; three-fourths pound butter; one tablespoonful soda; one gill water; ginger to taste. In winter it will take more water than in summer. Mix with flour as soft as you can roll out, and roll about one-half inch thick. Cut in squares or cards and bake in a flat pan.

VIOLA.

A Woman's Confession.

"Do you know, Mary, that I once actually contemplated suicide?" "You horrify me, Mrs. B. Tell me about it." "I was suffering from chronic weakness. I believed myself the most unhappy woman in the world. I looked ten years older than I really was, and I felt twenty. Life seemed to have nothing in it worth living for." "I have experienced all those symptoms myself. Well?" "Well, I was saved at the eleventh hour from the commission of a deed which I shudder to think of. A friend advised me to take Dr. Pierce's Favorite Prescription. I did so. In an incredibly short time I felt like a new being. The 'Prescription' cured me, and I owe Dr. Pierce a debt of gratitude which I can never repay."

There are more than 4,000 people in the United States who are over 100 years of age.

If all so-called remedies have failed, Dr. Sage's Catarrh Remedy cures.

A genius has invented a flat iron, and has utilized the principle of expansion of metal by heat so that a little bell rings when the iron is hot enough to iron clothes with.

A lease of 999 years, made in the days of King Alfred, has just expired in England. The land was leased by the church to the crown, and reverts now to the Church of England after a millennium of years.

That beautiful glossy sheen, so much admired in hair, can be secured by the use of Ayer's Hair Vigor. There is nothing better than this preparation for strengthening the scalp and keeping it free from dandruff and itching eruptions.

It appears from investigations that aerial wires transmit electricity faster than subterranean wires. The higher the wires the greater the velocity. Ordinary pole telegraph wires transmit electricity at the rate of 14,000 to 16,000 miles per second.

A Rare Novelty in Roses.

A pink rose, striped with white, which is perfectly hardy, enduring northern winters without protection of any kind. The flowers are large and fragrant, the color soft, satiny pink, distinctly striped, and dashed with white and carmine. It is a very profuse bloomer, and is destined to become a most popular rose.

James Vick, the Rochester, N. Y., Florist and Seedman, offers this new rose free. Why or how, we do not understand; but it can be learned by writing him. The house is an old and reliable one, and has an enviable reputation.

The Young Folks.

Ballad of the Bird-Bride.

(ESKIMO.)

They never come back, though I loved them well.

I watch the south in vain;
The snow-bound skies are bleak and gray,
Wild and wide is the wa' gull's way,
And she comes never again.

Years ago, on the flat white strand,
I won my wild sea-girl;
Wrapped in my coat of the snow-white fur,
I watched the wild birds settle and stir,
The gray gulls gather and whirl.

One, the greatest of all the flock,
Perched on an ice-floe bare,
Called and cried as her heart were broke,
And straight they were changed, that strange
bird-folk,
To women young and fair.

Swift I sprang from my hiding-place
And held the fairest fast;
I held her fast, the sweet, strange thing,
Her comrades skirled, but they all took wing,
And smote me as they passed.

I bore her safe to my warm snow house;
Full sweetly there she smiled;
And yet, whenever the shrill winds blew,
She would beat her long white arms anew,
And her eyes glanced quick and wild.

But I took her to wife, and clothed her warm
With skins of the gleaming seal;
Her wandering glances sank to rest
When she held a babe to her fair, warm breast,
And she loved me dear and leal.

Together we tracked the fox and the seal,
And at her behest I swore
That bird and beast my bow might slay
For meat and our raiment, day by day,
But never a gull more.

A weariful watch I keep for aye
'Mid the snow and the changeless frost;
Woe is me for my broken word!
Woe, woe's me for my bonny bird,
My bird and the love-time lost!

Have ye forgotten the old keen life?
The hut with the skin-strewn floor?
O wild white wife, and bairnies three,
Is there no room in your hearts for me,
Or our home on the low sea-shore?

Once the quarry was scarce and shy,
Sharp hunger gnawed us sore,
My spoken oath was clean forgot,
My bow twanged thrice with a swift, straight
shot,
And slew me sea-gulls four.

The sun hung red on the sky's dull breast,
The snow was wet and red;
Her voice shrilled out in a woful cry,
She beat her long white arms on high,
"The hour is here," she said.

She beat her arms, and she cried full fain
As she awayed and wavered there,
"Fetch me the feathers, my bairnies three,
Feathers and plumes for ye and me,
Bonny gray wings to wear!"

They ran to her side, our bairnies three,
With the plumage black and gray,
Then she bent her down and drew them near,
She laid the plumes on our bairnies dear,
And some on her own arms lay.

"Babes of mine, of the wild wind's kin,
Feather ye quick, nor stay,
Oh, oh! but the wild winds blow!
Babes of mine, it is time to go;
Up, dear hearts, and away!"

And lo! the gray plumes covered them all,
Shoulder and breast and brow,
I felt the wind of their whirling flight;
Was it sea or sky? was it day or night?
It is always night-time now.

Dear, will you never relent, come back?
I loved you long and true,
O, winged white wife, and our bairnies three,
Of the wild wind's kin though ye surely be,
Are ye not my kin too?

Ay, ye once were mine, and till I forgot,
Ye are mine forever and aye,
Mine, wherever your wild wings go,
While shrill winds whistle across the snow
And the skies are bleak and gray.

—Graham R. Tomson, in Harper's Magazine.

LION HUNTING.

Stories of Adventures With the King of Beasts.

We were once camped in a grove on the bank of a creek, our party numbering over thirty people. We had horses, oxen, wagons and dogs, and were spread out over two acres of ground. It was in the lion country, and they might be expected to approach at night, but on the second afternoon of our camp, while all were engaged in cleaning up and making repairs, an alarm was suddenly raised. I supposed that some of the animals had stampeded, and ran around the wagon to get a clear view of the space between us and the creek. This creek was 200 feet away, and was so nearly dry that one could step across it. The bank on the other side was rocky ground, pretty thickly covered with scrub, and right on the brink stood one of the largest lions I ever saw. He was out in full view, head and tail up, and stood so still for a moment that I doubted if he was alive.

There was a light breeze blowing toward

us, and as soon as our animals got the scent it required the efforts of every native to prevent them from breaking away. My guns were being cleaned and oiled, and my two white companions were looking after their horses. No one had the least idea that the lion meant mischief, and we were presently dumbfounded to see him spring across the creek and come walking into camp. We measured his leap and found it to be twenty-eight feet. He made it without an effort. I was to the right of him, and the center of the camp was his objective point. The lion advanced at a walk, uttering no sound, and the shouts, screams and whoops of the men, backed by the bellowing of the cattle and the snorts of the horses, had no effect on him.

We had a new milch cow tied to the wheel of one of the wagons, and the lion advanced to within thirty feet of her, and then made a spring which landed him fairly upon her back. She fell in a heap, and he seized her by the neck, gave her two or three shakes, which broke the grass rope around her head, and he then got his right shoulder under her and started off. The cow weighed at least 500 pounds, but he carried her with perfect ease, her hind feet dragging on the ground. At the creek he made a jump of eleven feet, ascended a sloping bank without a halt, and soon disappeared in the broken ground with his prey. He was gone before we had a gun ready. Indeed, we were lucky not to have lost half our animals. I was no greenhorn in the animal business at that date, but this was the first time I had ever witnessed such cheek in a lion. Had I been told that he had such courage and coolness I should have laughed the statement to scorn.

As soon as order had been restored the three of us mounted our horses and, preceded by five or six natives and their dogs, crossed the creek and took up the trail. After going about half a mile we discovered the lion sitting beside the carcass in a little hollow. He was sitting up like a dog, head turned toward us, but as soon as he saw us divide he ran off with his tail down, evidently thoroughly alarmed, and such was his speed that we soon lost him. We could count on his returning to the body during the night, and the natives were therefore set to work to dig a pit and conceal it. They regarded the lion as being as cunning as he was wise, and the pit was not dug near the body, but thirty feet away from it and in the direction in which it was believed he would drag the body.

If a lion or tiger leaves a body during the day and returns to it at night the first act is to drag it some distance, as if fearing an ambush. While the rule is not invariable, it holds good in most cases. During the night a dozen lions scented around our camp, but without causing any alarm, and soon after daylight the natives went out to investigate the trap. No hunter ever had such a windfall before or since. As night came several lions must have scented the carcass, and gathered for a feast. The rightful owner objected, of course, and there was a fight, the result of which was that three full-grown males tumbled into one pit. The fact did not prevent others from picking the carcass clean. One of the captives was the cheeky old fellow who had entered our camp, and the other two were fully as large. In the course of the forenoon we had them out and in the cages, and two of them are in the United States today in zoological gardens.

There are plenty of instances where men have been seized by lions and lived to relate the particulars, though no two agree as to sensations. A week subsequent to our capture of the three lions I had been out with some of the natives to prepare a bait in a rocky ravine. We had built a stout pen of rocks and logs and placed a calf as a bait. The sun was nearly down as we started for camp, and no one had the least suspicion of the presence of danger until a lion, which had been crouching beside a bush, sprang out and knocked me down. In springing upon his prey the lion or the tiger strikes as he seizes. This blow of the paw, if it falls on the right spot, disables the victim at once.

I was so near this fellow that he simply reared up, seized me by the shoulder and pulled me down, and I was flat on the earth before I realized what had happened. I was on my back, and he stood with both paws on my middle, facing the natives and growling savagely. The men ran off about 300 feet and then halted, which was doubtless the

reason why I was not carried off at once. I can say without conceit that I was fairly cool. It had come so suddenly that I had not had time to get rattled. I had been told by an old Boer hunter, if I ever found myself in this fix, to appeal to the lion's fears. Had I moved my arm to get my pistol, the beast would have lowered his head and seized my throat. So long as I lay quiet he would reason that I was dead, and give his attention to the natives.

All of a sudden I barked out like a dog, followed by a growl, and that beast jumped twenty feet in his surprise. He came down between me and the natives, and I turned enough to see that his tail was down and that he was scared. I uttered further barks and growls, but without moving a hand, and, after making a circle clear around me, the lion suddenly bolted and went off with a scare which would last him a week. If you had picked up a stick and discovered it to be a snake you would do just as the lion did. He supposed he had pulled down a man. The man turned into a dog. It appealed to his fears.

After the lion had gone I grew so weak that I had to be carried to camp. He had inflicted a pretty bad bite on my shoulder, and it was a fortnight before I could hold my gun for an offhand shot. I had the presence of a fourth captive during this time to console me, however. No animal went near the calf on the first or second night, but on the third we captured a fine half-grown male, and got him caged without trouble. Curiously enough, he had offered the calf no violence, being overcome by the situation, and when we found him the two seemed on the best of terms.—Cor. New York Sun.

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Snow and rain last week reported from many parts of the State.

A Farmer's institute will be held at Wellington, February 15, and 16.

Florida International and semi-tropical exposition opens at Ocala, January 29, and will continue to May 1.

It is proposed to erect a "corn pavilion" at the Paris exposition—of American corn, of course. Go ahead, and if you lack corn, call on Kansas.

Peter Voorhees, of Douglas county, (P. O. Lawrence) says he has a variety of corn—his own production—that, if planted early, will mature by August 1.

Mr. O. P. Curl, Haddam, Washington county, says he has listed corn ten years and will continue listing. His corn crop for 1888 averaged forty bushels per acre.

Steel rails continue low, selling at \$27 a ton at the mills. The tariff duty on foreign rails is \$17 a ton. If the duty is added to the price, foreign rails, at the mills, ought to cost about \$9 a ton, but they don't. They cost twice that much.

We have an excellent paper on file for next week's issue—"Dairy Possibilities in Kansas"—prepared by Secretary Graham, of the Agricultural college, and read at the Wabaunsee Farmers' Institute. It was received after our Dairy department for this week was made up.

Mr. N. Brosius, of this (Shawnee) county, planted a mixture of Leaming and Golden Beauty corn on the first day of May. The crop was ripe August 1, and turned off fifty-five bushels to the acre. Open prairie land, just east of Burnett mound. Specimen ears shown us are the best corn samples we have seen of the 1888 crop.

The editor this week surrenders a large part of the space which he usually occupies, to more interesting matter furnished by correspondents. We believe that no farm paper published anywhere this week contains more letters from its readers than are printed in this issue of the *KANSAS FARMER*. And this we regard as a good sign. The paper is growing in influence, and its friends are multiplying in numbers.

THE LEGISLATURE.

The rush of the first days over, some 200 boys and girls—candidates for page—are disappointed while some twenty others, twice as many as are needed, are employed at \$2 a day; a hundred or two candidates for places that do not need to be filled have departed sadder and wiser, while at least twice as many clerks and other supernumeraries as the public business requires are employed at \$3 a day; a corps of enrolling clerks, all girls, are employed and not one of them will be needed short of three weeks; \$10 worth of postage stamps voted to every member of both Houses, an item of \$1,760, for which there is no warrant of law or constitution, while every member, as we have good reason to believe, is provided with a pass over the railroads for himself with authority to draw on the companies for transportation of friends to and from the State capital. It is high time that all these things be stopped. For pages \$2 a week is plenty; for committee clerks, \$10 a week is as much as they can earn at ordinary work; postmasters, doorkeepers, assistant sergeant-at-arms, janitors and the like, do not earn more than \$30 a month at home. The free railroad pass business ought to be abolished utterly, and the prohibition enforced with heavy penalties. It is an outrage to see a horde of sponges, men, women and boys and girls traveling at the expense of people who have to pay. The other day one member objected to some proposed expenditure of public money and took occasion to say a word in favor of economy when he was rebuked by a fellow member who cast reflections upon his honor because he opposed extravagance. Members ought to know—surely they do know—that they have no more right to use the public money—the people's money—for any purpose not authorized by law or by some grave emergency, than they have to use the money of their neighbors without their neighbors' consent. It is not a whit better to put one's hand into the public treasury unlawfully than to put it into a friend's pocket and take his money without his consent.

The leading questions before the body are those relating to trusts, to interest on money, and redemption of real estate sold under execution. There is a strong lobby operating against action in all three cases; but we believe there will be some decided legislation against trusts, and that interest rates will be reduced to 6 per cent. as the legal rate. Whether a redemption law can be passed is not now so clear. In the Senate 157 bills have been introduced, since our last report, and in the House 266, total 417, up to and including Saturday. The following are of general interest. On some subjects several bills have been introduced by different persons, but we do not need to report more than one. Probably a dozen bills have been presented on the interest matter:

SENATE BILLS.

S. B. 62, by Norton: An act to regulate the weight of coal at the mines, and to regulate the payment of miners and others employed to assist in the output of coal.

S. B. 63, by Howard: An act fixing the rate of interest.

S. B. 70, by Bently (by request): An act to encourage the planting and care of shade or forest trees along the public roads and highways outside of incorporated cities.

S. B. 71, by Bently (by request): An act to encourage public watering places for stock along roads and highways outside of incorporated cities, and to provide payment for same.

S. B. 74, by committee on public buildings: An act making an appropriation to continue the construction of the main and central building of the State house, and to provide for a special levy of taxes therefor.

S. B. 75, by Carroll, of Miami: An act making an appropriation for building four cottages at Osawatimie and furnishing the same; for the purchase of the Bowers farm, etc., and for cleaning and draining fifty acres of bottom land.

S. B. 79, by Mohler: An act to restrict the ownership of real estate in the State of Kansas to American citizens and those who have lawfully declared their intention to become such, and so forth, and to limit the quantity

of land which corporations may acquire, hold or own.

S. B. 77, by Elliston: An act providing for the inspection of live animals intended for human food, and prohibiting the sale of un-cured meat of uninspected cattle, calves, sheep and hogs, and the sale of imported fresh meats.

S. B. No. 97, by Senator Wright (by request): An act to amend chapter 171 session laws of 1885, and provide for uniformity of text books for public schools.

S. B. No. 98, by Senator Kirkpatrick: An act providing for the appointment of a commission to revise the statutes of the State of Kansas.

S. B. No. 100, by Senator Buchan: An act to prohibit the slaughtering and sale of diseased or unwholesome meats, and providing for the inspection of all animals or fish intended for food.

S. B. No. 111, by Senator Schilling: An act requiring the owners of hedge fences along public highways to keep the same out down to not more than five and one-half feet, after hedges are more than seven years old, and to provide for the cutting down the same by the road overseers and making the expense therefor a lien on the lands.

S. B. No. 116, by Senator Swearingen: An act for the protection of the records of the several counties of the State of Kansas, and regulating the business of abstracting in relation thereto.

S. B. No. 117, by Senator Mechem: An act to protect laborers, mechanics, servants and others in the construction of railroads.

S. B. No. 128, by Senator Kelly: An act to create a township school board for levying, collecting and disbursing certain taxes for the support of common schools.

S. B. No. 131, by Senator Kelly: An act to regulate the preparation and publication of official reports, and to repeal section 13, chapter 93 of the session laws of 1871.

S. B. No. 140, by Senator Kirkpatrick: An act relating to the fencing of railroads, prescribing penalties for the violation thereof, and repealing all laws in conflict therewith.

S. B. No. 142, by Senator Mohler: An act to amend an act to compel railroad companies to fence their roads by and through lands enclosed with a lawful fence, being chapter 154 laws of 1885, approved March 6, 1885.

S. B. No. 147, by Senator Elliston: An act to regulate the manufacture, sale or use of oleomargarine and oleaginous substances, or compounds of the same, in imitation of dairy products.

HOUSE BILLS.

H. B. 7, by Mr. Rice, of Bourbon: To repeal chapter 183 of the laws of 1887 authorizing counties, townships and cities to aid in the construction of railroads.

H. B. 8, by Mr. Rice, of Bourbon: To prevent monopolies and combinations intended to restrain trade, control production or increase the market price of commodities known as the necessities of life.

House joint resolution No. 1, by Mr. Rice, of Bourbon: Proposing an amendment to the constitution prohibiting counties, townships and cities from incurring indebtedness in aid of railway and other corporations.

H. B. 10, by Mr. Rice, of Bourbon: Relating to fire insurance companies and their agents, and respecting applications for and contracts of insurance.

H. B. 15, by Mr. Fairfax, of Chautauqua: An act in regard to aliens, and to restrict their rights to acquire real estate and personal property, and to provide for the disposition of the lands now owned by non-resident aliens.

H. B. 19, by Mr. Street, of Decatur: To provide for commissioners to be called the artesian well commissioners, for the purposes of developing the resources of western Kansas; to discover natural gas, coal or other valuable minerals.

H. B. 20, by Mr. McLennan, of Ellsworth: Regulating the rate of interest and to prevent the taking or receiving of a greater amount than the law allows.

H. B. 22, by Mr. Smith, of Franklin: Regulating the interest on money.

H. B. 24, by Mr. Jones, of Finney: Providing for a stay of execution.

H. B. 25, by Mr. Jones, of Finney: Providing for the redemption of real estate.

H. B. 30, by Mr. Miller, of Lincoln: To secure uniformity in taxation of bonds, mortgages, notes and other securities of indebtedness.

H. B. 43, by Mr. Hoeh, of Marion: To indemnify the owners of sheep killed by dogs and creating a fund therefor.

H. B. 40, by Mr. Elliott, of Montgomery: To provide against the adulteration of food and drugs.

H. B. 50, by Mr. Elliott, of Montgomery: Relating to mortgages on real and personal property.

H. B. 51, by Mr. Crew, of Ottawa: To provide for the levying of a tax upon all the property of the county for the support of free schools of the county for a period of not less than three months.

H. B. 63, by Mr. Davies, of Riley: To amend chapter 171 session laws of 1885, and provide for county uniformity of text books for public schools.

H. B. 65, by Mr. Andrews, of Rush: Relating to the consolidation and extension of railroads.

H. B. 66, by Mr. Andrews, of Rush: To provide for the better protection of the earnings of laborers and other employes of corporations, firms and individuals.

H. B. 69, by Mr. Boyle, of Sedgwick (by request): To encourage public watering places for stock along the roads.

H. B. 70, by Mr. Boyle, of Sedgwick (by request): To encourage the planting and care of shade or forest trees along public roads.

H. B. 76, by Mr. McAfee, of Shawnee: To prohibit selling, giving or furnishing tobacco in any of its forms to minors under 16 years of age.

H. B. 80, by Mr. Chambers, of Sheridan: To amend section 1 of chapter 153 laws of 1871, to restrain state, county and city treasurer from speculation in their offices.

H. B. 81, relating to the foreclosure of mortgages, deeds of trust, etc., and providing for redemption thereof.

H. B. 84, by Mr. Guthrie, of Sumner: For assessment and taxation of debts secured by mortgage.

H. B. 80, by Mr. Guthrie, of Sumner: For the erection of an insane asylum at Wellington.

H. B. 103, by Mr. Berry, of Clark: Declaring it unlawful for school officers to contract

or have any interest in any contract for building school houses or furnish supplies.

H. B. 128, by Mr. Heber, of Meade: Regulating primary elections and to punish illegal voting thereat.

H. B. 138, by Mr. Admire: Repealing all laws permitting counties, cities and towns to vote bonds.

H. B. 204, by Mr. Jones, of Finney: To encourage the erection of mills and the manufacture of sugar and syrup out of sorghum cane.

Mr. Douglass, of Sedgwick, offered a joint resolution yesterday, proposing an amendment to the constitution by which the legislative session is increased from fifty to ninety days.

H. B. 207, by Mr. Walker, of Atchison: To regulate the manufacture, sale or use of oleomargarine.

H. B. 209, by Mr. Carter, of Barber: To restrict the ownership of real estate to American citizens.

H. B. 212, by Mr. Elder, of Butler: To provide for the location, erection and management of two industrial homes for indigent children.

H. B. 215, by Mr. Canon, of Comanche: To prescribe the qualifications, duties and compensation of county superintendents.

H. B. 221, by Mr. Spencer, of McPherson: To create a township school board for levying, collecting and disbursing certain taxes for the support of common schools.

H. B. 258, by Mr. Hanna, of Trego: To establish a uniform maximum of prices for accommodation in railroad and railway sleeping cars or coaches.

ASSESSMENT AND TAXATION.

There is much interest manifested just now in the matter of assessing property and levying taxes, and the interest is increased because of different opinions entertained by different persons concerning the efficiency of remedies proposed. The *KANSAS FARMER* does not believe that any legislative committee could possibly do, during the short period of a session, all that is needed to be done before wise and just legislation on this subject can be enacted. We believe that radical reform is needed, and time, talent and energy will be required to collect information that must be collected before justice can be done. Our assessments are unjust; men most able to pay taxes because their profits are largest on given capital pay least in the way of taxes, and many men who are lending money at exorbitant rates of interest do not appear on the tax rolls at all. Every town in the State has men who are prominent among their fellows, making noise enough for twenty times their number, living off the people, and yet when the assessor discovers one of them all the property he has is a writing desk in some friend's office, and that is exempt from taxation under the \$200 clause of the constitution.

The law needs overhauling and remodeling, not merely some slight amendments, so that the burdens of taxation may be equally distributed among the people, and to do this wisely will require a careful and deliberate study of the whole subject in the light of present conditions. We favor the appointment of some competent person, with a good clerk to assist him, to investigate the whole subject of State taxation, with the view of both distributing and lessening burdens. Let him have a whole year to do the work and make his report to the Governor, who shall cause the same to be printed and distributed among the people for their information at least three months before the meeting of the next Legislature.

Upon such a report, giving reliable facts, figures and references, the Legislature could frame a comprehensive and just assessment law, one that would deal fairly by the people. As a partial remedy for some existing inequalities we have advocated enlarging the jurisdiction of the State Board of Equalization, so that the values to be put upon different classes of property in every county in the State shall be fixed by that tribunal, leaving the assessors such limited discretion, under general rules, as may be necessary to avoid injustice in particular cases. Then add penalties for neglect and fraud by assessors, paying for the work according to what is done and not by the day. In taking the United States census, enumerators are paid according to the number of persons reported, and they do quite as much work as our township assessors do in precisely the same territory at about one-half the expense. We are paying out too much money in every jurisdiction, township, county and State; except only in school districts—there we do not always pay enough.

LETTER FROM THE COMMISSIONER OF FORESTRY.

So many inquiries have been made at this office concerning the address of the Commissioner of Forestry, that we addressed a letter to that officer, calling his attention to complaints about not receiving answers to letters. In reply we received the following communication, which the Commissioner says he had prepared before the receipt of our letter. It explains itself.

OGALLALA, TREGO CO., KAS., Jan. 18, 1889.

EDITOR KANSAS FARMER:—As your paper circulates more largely than any other among the farmers and those interested in the distribution of trees from the State Forestry stations, please allow me the use of a small portion of its valuable space, to say to all those of your readers who made application for seedlings of last year's growth, before the 6th of last November, that their applications are on file and without further correspondence they will receive blanks in ample time for the distribution which will take place as early in the coming spring as the weather will permit. Before the necessary details could be arranged for the printing of blanks, the trees had to be taken up and counted, since which time sickness has prevented me from getting them ready as soon as I had expected. No time, however, will be lost as the fall was entirely too dry over the greater portion of the State for the successful transplanting of tree seedlings.

I desire to say further, in this connection that the idea seems to have gotten out somehow that the forestry law was passed for the special purpose of enabling those who had timber claims to comply with the requirements of the timber culture law, and therefore a great many demand enough trees to plant five acres, and if they have once failed, (which is the rule) enough to plant ten acres; in other words they want fourteen or twenty-eight thousand trees, and they want them at the exact time that the law compels them to plant their tree claims.

Now the obvious intention of the law is, that it may become a positive force in the further foresting of Kansas. This result cannot be attained by simply planting a large number of trees to comply with the requirements of the timber-culture law. The man who properly plants and cares for 1,000 trees each year will become a much greater factor in the problem of foresting the plains, than he who plants fourteen or twenty-eight thousand, for the simple reason that not one farmer in a hundred, can afford to give the planting and care of so many trees that attention which is necessary for the successful growing of forest trees, especially in western Kansas. Let us therefore, make haste slowly and not attempt to "bite off more than we can chew."

As we must grow trees or emigrate, let us go at it intelligently and plant only as many as we have the ability to plant and care for properly, and the failures will be the exception and not the rule. Let all endeavor to be satisfied with their proportion of seedlings from the stations, and cheerfully comply with the rules and regulations adopted for their distribution, planting and culture.

S. C. ROBB, Commissioner.

The Interest Question.

A large majority of the members of the Legislature came to the State House expecting to assist in amending our interest laws so that a substantial reduction will be effected. They find a different atmosphere here from that which they had at home. Topeka is growing fast and substantially; a great deal of money is being invested here in permanent improvements, and much of it is borrowed. We have several strong trust companies, half a dozen incorporated banks, and as many large mills and elevators. We have street railways extending out in different directions two to four miles from the postoffice. Topeka is growing rich and her strongest citizens naturally are growing conservative.

Members of the Legislature recognize this and feel its influence. The thing to do under such circumstances is not to suspect everybody who opposes a change in the law as a robber or a monopolist, but as one who, whether right or wrong in his opinions, has a right to be heard. Consider what he says, learn his reasons for the faith he professes, obtain all possible informa-

tion from every available source, then remember what you came here for, put your own opinions and those of your constituents together again, look at both sides, all sides, remembering that a party which gave 82,000 votes plurality in this State at the last election, did it on a platform which declared that 6 per cent. is enough. It is enough.

Non-Saccharine Sorghums as Farm Crops.

The KANSAS FARMER has unlimited faith in Kansas. It has all along insisted that the one thing needful is to know what farm crops are best suited to the climate and soil. Lately we have urged the raising of Kaffir corn and other plants of the same family in the western counties. Experience of farmers confirms this view of what ought to be done. Here is a paragraph in point from Prof. Shelton, of the Agricultural college, and Director of the Kansas Experiment Station:

"Now that public attention is turned to the sorghum plant as a possible source of our sugar supply, it seems appropriate to call attention to the somewhat numerous class of so-called non-saccharine sorghums (we believe none are wholly wanting in sugar) as a farm crop, especially in regions of uncertain rain supply. The white and yellow milo maize and Kaffir corn have been very successfully grown, even during the last two or three very dry summers, in central and western Kansas. Correspondents of undoubted veracity assure us that they have grown crops of forty to sixty bushels of grain per acre, to say nothing of the heavy crops of fodder, when the common Indian corn in the neighborhood was a complete failure. We have grown at the Station the past year the sorts named above and several of their near relatives, including Rural Branching sorghum and African millet. These sorts of cane have the sorghum's ability to resist drouth, and give a heavy yield of grain and fodder. Farmers living in the western and southwestern counties ought not to allow another season to pass without giving these new (?) sorghums a thorough trial. The seed is inexpensive (a bushel costing \$2.50 will plant a dozen acres), while the cultivation given corn or common sorghum is sufficient to make the crop."

Kaffir Corn.

EDITOR KANSAS FARMER:—Seeing a few articles in your valuable paper about this new forage plant, I thought I would say what I know of it. It is a variety of sorghum, non-saccharine, and distinctly different in habit of growth and other characteristics from all others of that class. The plant is low, stocky, perfectly erect, the foliage is wide, alternating closely on either side the stalks. It does not stool from the roots until cut, then one stalk will seed out from five to twenty shoots, which grow up and make another good crop. It branches from the top joints, producing from two to four heads of grain from each stalk. The heads are long, narrow, and perfectly erect, well filled with white grain, which at maturity is slightly flecked with red or reddish brown spots. This grain weighs sixty pounds per bushel. The average height of growth is five to six feet. The stalk is stout, never blown about by winds, never tangles, and is always manageable, easily handled. If the growth is checked by want of moisture, the plant waits for rain, and then resumes its processes, and in the most disastrous seasons it has not failed so far to make its crop. On very thin lands it yields paying crops of grain and forage, even in dry seasons in which Indian corn has utterly failed on the same lands. The whole stock, as well as the blades, cures

into excellent fodder, and in all stages of its growth is available for green feed; can be cut in any stage and cure up nice and bright and retain all its substance. Stock of all kinds eat it very greedily. I think as a forage plant it has no superior, while the heads make a fine feed for horses, mules, cattle, hogs and poultry, as was ever fed.

Kaffir corn should be planted early in April, or as soon as the ground is warm enough to grow it. It bears earlier planting than other millets or sorghums. It should be put in rows not over three feet apart, even on best lands, and it bears thicker planting in the row than cane; it should be drilled along in the row. No plant can equal it for quality and quantity of grain and forage on thin lands.

The cultivation of Kaffir corn is conducted just as that of common Indian corn. Standing four to six stalks in every foot of drill, the plow or cultivators must be chiefly relied on, but little hoe work being practicable, or ever necessary. The first seed heads form at the top of each stalk, and as soon as these show the grain well, the joints next below the top send up shoots which yield the second, third, and often fourth seed heads.

Flour from the Kaffir corn grain has been found more nearly analagous to wheat flour than that from any other grain of its class. It is darker of course, but is of light texture in the dough and in the cooking. For batter cakes, muffins, etc., it is excellent, having a slightly sweetish taste, otherwise not distinguishable from wheat flour; and for buckwheat cakes it is esteemed by many who have eaten of it, as an improvement on the original.

Kaffir corn will grow and do well in any place where amber cane will make a crop. I have grown it for some years and get two good crops of forage and one good crop of seed. It yields from forty to sixty bushels of seed per acre, and a bushel of seed is worth as much to feed stock as a bushel of the best Indian corn. Every farmer should plant a few acres of it, so that if he made a failure in raising Indian corn he could have something to feed on till he could raise another crop. I have a large lot of seed for sale and can supply any farmer with enough to get a good start from. My advertisement will be found in this issue of the KANSAS FARMER. Farmers, give this corn a trial next year. You will be highly pleased with it, I am sure.

R. A. TURNER.

Lone Oak, Mo.

Kaffir Corn and Milo Maize in Ford County.

EDITOR KANSAS FARMER:—While attending the meetings of the State Board of Agriculture in Topeka, as a delegate from this county, I recommended as a substitute for corn in the west end of the State, Kaffir corn and Milo maize, among other crops adapted to our soil and climate for feeding and fattening stock of all kind; but felt surprised that so little was known of these two valuable plants. Milo maize was grown with good results in the Southern States for some time, and has been raised in this county to a small extent the last two years. Kaffir corn, also has been raised here the last two years, and those that planted only two or three acres of either in 1887, liked it so well that in 1888 they put in from thirty to fifty acres, and had the satisfaction of harvesting a big crop of fodder, as well as grain. This spring, our farmers and stockmen will put out more of the Kaffir corn and milo maize than of Indian corn.

Kaffir corn I planted in rows four feet apart, three to four grains to the hill, and hills three feet apart. A dry spell and the ground squirrels prevented me from getting more than a three-fourths stand. I planted in second sod, the ground not being in very good condition, I cultivated the corn twice only, wishing to test it as to its capacity of standing the dry seasons. It stood the dry spells well; it simply stopped until the rain came, and then went on, and made a good yield. On a stand of only two-thirds of an acre, I threshed thirty-two bushels to the acre of clean grain. I cut and fed the cured fodder to my stock, and it was relished by them.

I have been raising the rice corn and sugar cane for ten years in western Kansas, both of these being sure crops, too; but find that either Kaffir corn or Milo maize is fully as sure in all seasons, and the grain yield is double and

thrifty as much as either of them, and fodder fully as good.

The average weight of the grain yield of either Kaffir corn or milo maize to the acre is fully as much as Indian corn.

Would like to hear from others, who have raised it, their experience through the columns of your paper.

NIC MAYRATH.

Dodge City, Kas.

Crops for Western Kansas.

EDITOR KANSAS FARMER:—In renewing my subscription to the FARMER I want to endorse the article of ex-Gov. Glick in your issue of December 27. I am heartily in sympathy with my brother farmers in all that will advance our mutual good. One thing I think we need in this part of the State as much as anything else is organization, that we may all work together. There has been some talk of organizing a Farmers' Institute in this (Grant) county, which I think would be of much benefit to us all.

Our winter has been very mild and pleasant thus far, and stock of all kinds doing well, and in good condition. No grain raised in this immediate part of the county, but plenty of roughness; such as corn fodder, cane, milo maize, millet, etc. In regard to milo maize I would like to say this: There was not much planted here, and what was made good fodder, but for some cause the seed did not get ripe, though planted about the middle of May, consequently we will be compelled to buy seed. I expect to try it again this year.

S. M. ALEXANDER.

Zionville, Grant Co., Kas.

Early Maturing Corn--Chinch Bugs.

EDITOR KANSAS FARMER:—In your issue of January 10, I see an inquiry for corn that will develop by August 1. I think I have it and will give the facts. In the spring of 1887 I bought a load of corn, in which I found some good looking ears of hard white corn. May 5, I planted this on stump ground (creek bottom) and July 9, I gathered roasting ears. The season was dry and owing to pressure of other work this corn was not cultivated at all, yet from half an acre I husked twenty-five bushels of sound corn. My yellow corn yielded from twenty-five to forty bushels per acre. May 2, 1888, I planted a piece of Neosho river bottom, said by the owner to contain from twelve to fifteen acres, with this corn. It received three cultivations. July 20, the corn was so far matured that I fed it to my horses. From this field 700 bushels were gathered. Chinch bugs damaged it to some extent. I planted from one to three grains in a hill. A great many stalks had two ears. The ears measure eight to ten inches in length, cob small, grains rather deep, two reaching across the cob.

I am ignorant as to the origin of the corn, and my experience with it is too limited to justify me in claiming it will do as well every year, but I believe it to be a valuable variety and shall plant from fifteen to twenty-five acres with it this year. I have had no intention of offering any for sale, but if any of your readers desire to try the corn, I can supply a limited number on application.

I have a theory about chinch bugs, which is borne out by my four years of Kansas experience. I have talked with others whose observation seem to point the same way. Briefly my theory is, that when the young (wingless) bugs leave small grain, the large majority travels in a southeasterly direction, and consequently corn fields southeast of small grain suffer more damage than any others. Let us hear from other readers. If this theory should prove to be true in all, or nearly all cases, the lesson is obvious, that is, sow small grain in the southeast corner of your farm. Your neighbor on that corner may not like that very well, but self-preservation is the first principle in human nature.

I have read the KANSAS FARMER four years and think it grows better each year. The editorial or State department of agriculture is timely, and I believe the proposed change would be a decided benefit to Kansas.

OTTO OUTCALT.

Burlington, Coffee Co., Kas.

We are in receipt of a long article on money and its uses. We cannot now publish long letters on any subject, because we have so many on file. This one is laid aside for the present; and when the rush is over, it will be examined. Let every person that wishes to do so write to the FARMER, but be brief.

Horticulture.

HOT-BEDS—THEIR PREPARATION AND CARE.

A paper read before the Pottawatomie county, Iowa, Horticultural Society, by L. A. Casper.

While it is a fact that there are many in the business of growing vegetables and plants in hot-beds that do not think there is any science in the business, (there may not be), but I have been in the business for nineteen years, and I now believe that I can learn more than I know about the business. There are new ideas coming to me every year, and some of the very simplest and most profitable ones I have neglected to put in use. I think it is a science within itself; that it requires great judgment to be successful in the business and make it profitable.

I do not mean to go into details of making the frame of hot-beds as most every one knows how to make a frame, yet there are many new beginners who do not know, and a little information in regard to the making of a frame should be valuable to such. The construction of a hot-bed is merely a simple box, made in any size desirable; it would be two and one half feet deep, and the sashes should be three feet by six, and a cross-bar at the edge of each sash to support the sash. To be successful, you should haul your heating material, which consists of fresh horse manure, early in the fall before the ground freezes, so that it may start to heat and keep a warm place for later on and keep adding fresh all the time. To make it successful it should be turned over three or four times before using for early beds; it requires the manure to be in good condition so that you may get good results from your crops to follow. As many of you are aware, it does not pay to raise one crop in a bed now. By keeping your manure in this condition you can start your bed at most any time, and it gives you the advantage of fine days, which is necessary for a good bed. In handling manure on a cold day it chills it so that it is liable to freeze out in spots or altogether. Care should be taken that the bed is evenly warm from one end to the other.

After filling your beds with manure to the top of the frame, place your sash thereon until sufficiently warm, say from one to three days as the weather may require, then remove sash and tramp manure solid, let it remain for one day longer, then place from four to six inches of soil over the entire bed; this soil should be prepared in the fall and thrown through a screen; by so doing it can be got at very easily any time during the winter.

For general crops the soil should consist of sandy loam with about one-fourth manure. When the soil in beds becomes sufficiently thawed out and warm, it may then be planted with lettuce taken from cold beds. Some may not understand what cold bed means; to them I would say it is simply a frame constructed the same as a hot-bed only not so deep, and the lettuce seed is sown in those beds from September 10th to the 30th in the natural soil. As soon as severe frost approaches sashes are placed on those beds, only on cold nights, or when there is a sudden change of temperature. They are placed on them for the purpose of what we term "hardening plants." The plants are then hardened by degrees. When the weather is mild the sashes are removed and the plants protected only when extreme changes come. By this treatment lettuce plants can be hardened so that they will stand 25 or 30 degrees of cold; in other words, the ground may freeze from eighteen inches

to two feet under the plants and still not destroy them. After the cold weather sets in the sash should be covered by manure, the manure to remain on all winter. If it should turn warm and your plants begin to get mouldy and wet, it is necessary to raise up the sash and give them air; also, in thawing out in spring; the sash should be open when there is warm air and closed when it turns colder, so as to thaw the plants out by degrees.

By this process a large amount of plants can be half-grown and they can be got at most any time in the year. This enables you, therefore, to grow two or three crops in one hot-bed. Now, I will come back to where I left off on the hot-beds. Those plants should be transplanted six inches apart in those beds. February is the month in which cabbage seed is generally sown. This is a very important part of the business, as a great deal of the success of the grower depends on the good quality of his plants. It is my opinion, cabbage should be sown in boxes in two inches of soil; there should be two inches of soil put on the manure before putting the boxes in the bed, the boxes should be raised to the height of two inches from the soil, the soil should consist of half sand and half loam. By this method you prevent altogether or partly so at least, a fungus that comes on your plants at the surface of the ground, and eats the bark all off the plants. Many of us have labored under great difficulty to overcome this fungus, but when this fungus appears, the grower had better throw away his plants, or all those that are affected and sow new seed, as his results from new seed will be a great deal better than from the wire-rooted plants.

Next comes tomato and egg-plants, which are sown about the 15th of March. I would advise for them fresh manure right from the barn, as the season is advancing then, and it is not necessary to have heat for any great length of time. Tomato and egg-plants sprout best in a temperature of 60 deg. at night and 75 to 100 deg. in the day time. After tomato and cabbage plants come to a sufficient size to allow transplanting, the cabbage plants should be transplanted in a cold frame, and hardened off so that when they are removed to the field the change won't affect their growth. These plants may be picked out to the distance of one and one-half inches to two inches apart. Cauliflower requires the same treatment. Tomatoes, egg and all tender plants should be picked out into a hot-bed with bottom heat, at a distance of four inches apart.

All beds of lettuce, radishes and cabbage plants should be aired whenever an opportunity occurs, especially in the early stage of the bed, as the heat is more intense and the plants require more air, as the change is great from a cold bed to a hot bed. The plants should be kept as cool as possible for the first few days to start in. This gives your plants a chance to get well rooted. The beds may be forced to extreme heat at the latter end of the crop without injury to it, both for lettuce and radishes.

Any information that I can give to any person in regard to anything connected with the business, I shall be pleased to impart.

Listing Corn.

EDITOR KANSAS FARMER:—Permit me to say a word in favor of listing in corn. In last week's FARMER I read an article by E. P. Elkington, who says you don't have to plow the ground, this is all the advantage there is. I beg leave to differ with Mr. E. as I am well assured by practical experience that listed corn will stand more drouth,

heavy winds and rain storms, than if planted on top of the ground.

I list about six inches deep with a combined lister, and the corn always goes right into moist soil, and the row is clean of weed soil, which are all thrown out and covered up between the rows, when the young weeds as they come up are much easier killed than they would be had the seed remained in the row. By the time we go over the ground once with the harrow, and three times with the cultivator, we have the listed furrow filled up, and the ground all level with the corn roots six to eight inches below the surface; therefore always coming in contact with moist soil.

This last season a man rented a field for corn, adjoining my place,—he listed in his corn about two inches deep, it came up and grew if anything, faster than my own corn that was listed at the same time, but fully six inches deep; and when the hot dry season came, the shallow-planted corn wilted rolled up while mine remained fresh and green, and at fattening time made forty bushels per acre,—and this shallow farmer sold his field at \$3 per acre for fodder as there was not enough corn to pay for the gathering.

W. N. HALL.

Sterling, Rice Co., Kas.

The Poultry Yard.

POULTRY CONVENTION.

A convention will be held at Wichita, February 20, 1899, for the purpose of organizing a poultry breeders' association. Let every poultry breeder attend.

POULTRY AND ITS PROFITS ON THE FARM.

Address by G. C. Watkins, before the Farmers' Institute, at Hiawatha, last month.

There are very few farmers who think there is enough money in chickens to pay for giving them any care at all. They leave the chickens for their wives to take care of, and if they are unable or disinclined to give them the necessary care they go without it. They roost on the fences, in the tree-tops, or perhaps in the barn, where they make themselves a nuisance by roosting over the harness and other traps about the place. There is not one farmer in ten, of the average type, who will acknowledge that there is enough money in poultry to justify him in building a good house for them and giving them the same amount of attention that he bestows upon his hogs. In the early settlement of the United States, when the rail-splitters and elm-peelers were about the only kind of hog known, there was no money in hogs for the average farmer. They were allowed to run wild and shift for themselves; expected only to supply their owner with ham and bacon. No profits were counted on and of course none were made. To-day hog-raising is one of the principal sources of profit on the farm. I am not going to prophecy that poultry will ever pay the average farmer as much money for the same amount of care and labor as some other kinds of stock, but the demand for poultry and eggs is increasing every year, as statistics will show, and I make the assertion, and can back it up with ample proofs, that for the same amount of capital invested, be that amount large or small, poultry with proper care will pay better than any other branch of live stock raising on the farm. I say proper care, because there is a right way and a wrong way of doing it.

The three things most essential in making poultry pay are, first, good stock; second, a good place to keep it, and third, giving them the right kind

of attention. Keep either pure breeds or good crosses. Always use a pure-bred male, no matter what variety he is or what kind of hens you have, and above all introduce new blood into your flocks every year. You will lessen the liability to disease 50 per cent. by so doing. In getting new stock don't get half a dozen different kinds and mix them up together; there will be no uniformity in your flocks and you can't get top prices for your market birds. A lot of fowls uniform in size and color will always sell more readily at a good figure than a mixed lot of all sizes and colors. Select whatever variety that best suits your wants, either for market or egg-production, and then use only pure-bred males of that breed. For farmers, a general-purpose fowl is the most satisfactory. What is meant by a general-purpose fowl is one of sufficient size for marketing, good layers, and not inveterate sitters. Winter eggs are always the most profitable, and for that reason winter-laying qualities should be more closely looked after. Almost any variety can be made to lay in winter, with proper management, although their ability to withstand cold makes some difference. The building for winter-laying hens should be large enough to give each hen five or six square feet of floor space, and should if possible face the south. Instead of using glass for windows stretch bleached muslin tightly over the window-frame and give it a coat of boiled linseed oil. It makes a cheaper and more satisfactory window for a poultry house than glass. The floor should be kept covered several inches deep with straw, into which all their grain feed should be thrown. This gives them plenty of needed exercise in scratching for their feed. The straw should be changed frequently and must not be allowed to become damp and foul. In feeding care must be used not to feed more than enough to keep them in a moderately good condition, as an overfat hen won't lay. In the fall, save all the inferior cabbage heads and store away a few bushels of turnips and beets for the chickens. Green food of this kind is the best stimulant to egg-production in winter that can be used. An occasional feed of meat scraps is also very beneficial. No exact rules, however, can be laid down for feeding for eggs, as the different breeds require different quantities of food to receive the same amount of benefit. The main thing is to keep the hens from getting too fat, make them scratch for their feed. Scratching is hen nature, and they won't keep healthy long if they have nothing to do but stand around and eat.

Many of you who have never given the matter any thought will perhaps say that all this is too much trouble and expense to be profitable. For the benefit of such I will give an estimate of the cost of keeping and feeding 100 hens for one month in the winter season, and the profits from the same. Taken for granted that they have comfortable and roomy quarters:

200 pounds bran at 65 cents per cwt.....	\$1.30
3 bushels wheat at 60 cents per bushel.....	1.80
3 bushels oats at 30 cents per bushel.....	.90
3 bushels corn at 25 cents per bushel.....	.75
5 bushels turnips or beets at 25 cents per bushel.....	1.25

Total cost of feed.....\$6.00

Skim-milk and scraps from the kitchen thrown in. One hundred yearling hens well cared for will average no less than five dozen eggs per day. At the end of thirty days that would amount of 180 dozen eggs, and at 20 cents per dozen they would come to \$36. Deducting \$6 for feed gives us \$30 net profit on 100 hens for one month. This calculation as to the amount of feed consumed and number of eggs produced is taken from an actual experiment with a smaller

number of fowls. The rest of the figures no one can dispute. Does it pay? There is seldom any very pressing work on hand in the winter, and the time it takes to tend the chickens will not break any man up. I leave the intelligent farmer to answer the question for himself. Does \$30, or even \$20 per month, pay interest on the amount invested in 100 hens and the building they occupy?

You who have at times lost all your chickens from the so-called "cholera," may be inclined to pull down the corner of your eye when anyone tells you there is money in poultry. Nobody can blame you for being doubtful about the profitable part, as it has never paid you. But there is positively no excuse for letting your chickens die. I know very little about the cholera from personal experience, but from information gained from good authorities and in observing the conditions and circumstances in which the fowls of neighbors have died, has led to the conclusion that in a majority of cases the loss is not due to the existence of cholera. Cholera may be brought into a flock by infection, or it may arise from filth. Being highly contagious it seldom leaves any survivors when it once enters a flock of fowls. The strongest and healthiest are as apt to take it as the weaker ones. On the farm where the chickens have plenty of range and their roosting places are kept reasonably clean, or when they roost in trees, as is quite frequently the case, they will never have the cholera, unless they take the disease from infection. Why, then, do so many die under these very same circumstances that have never had the chance to become infected? Simply nothing more nor less than starvation in one sense of the word—on an exclusive corn diet. They are fed corn in the morning, corn at noon, and corn at night, with all the corn they can pick up between times around the crib and pig-pens. Corn supplies nothing but fat to the body, and as they don't have proper nourishment, the whole system soon gets out of order. The birds take a diarrhea and you begin to find them dead under the roosts. Of course you say it is cholera, but I say it isn't. All you have to do in this case to keep them from dying is to cut off their corn supply and feed something that will build up their vitality a little instead of piling up fat. That the genuine cholera is incurable has been proven beyond a doubt. Although the fact that there are other curable bowel diseases, the symptoms of which are very similar to those of cholera, has led many to believe they can cure the disease. If you are sure that your birds have the cholera, kill all that show any of the symptoms and burn or bury them; then disinfect thoroughly with carbolic acid and strong whitewash wherever the diseased birds have used, and you will lessen the liability of the rest taking it.

When chickens become badly infected with lice they almost invariably show some of the symptoms of cholera. Lack of gravel or grinding material in the crop is also a cause of bowel troubles that frequently prove fatal. So don't be too sure that your fowls have the cholera until you have investigated the matter a little. All good authorities on poultry claim that lice kill more chickens, young and old, than any disease. My own experience has proved the fact to my entire satisfaction, that lice are the worst enemy of the poultry-raiser. There are several different kinds and they are always to be found

wherever poultry is kept. Old fowls in good health and having access to dry dirt to wallow in, will keep themselves comparatively free from the pest; but place them in confinement with no dirt to scratch in, or let them get a little under the weather, then the louse gets in its work, and if allowed to multiply and flourish as they may, will sap the life out of a flock of chickens in a very short time. They can only be kept out of the roosting houses by a liberal use of whitewash and coal oil. Whenever we have conquered the lice and can keep them entirely in subjection, we are ready to make poultry-raising profitable, not before.

In order to give some idea of the magnitude of the poultry industry a few statistics may not be out of place. The figures may surprise some of you, but they are taken from reliable authority. Take the following clipped from a copy of the *Prairie Farmer*, published in 1884: The wheat crop of the United States in 1883 was worth \$488,000,000, the cotton product \$410,000,000, the dairy product \$254,000,000; but the poultry product of that year was worth \$500,000,000—almost half again as large as the cotton product, and larger than the iron and steel product together. Still it was not large enough to supply the home market, as we imported 15,000,000 dozen eggs, worth \$2,667,000. Again, we have the following from a late number of the *American Poultry Journal*: "At the present time the poultry products of the United States amount to \$650,000,000 per annum." This we see shows an increase of \$160,000,000 per annum in five years. Yet a gentleman who claims to know all about it, told me at our fair last fall that the day had gone by for making any money in the chicken business. The demand is also on the increase, as last year we imported poultry and eggs to the amount of \$4,000,000 in addition to our home production. The pork product of this country is only \$225,000,000 per annum, just a little over one-third the amount of the poultry product; yet pork rules the market according to most farmers' ideas. We say that poultry may be made to rule the market if producers will but devote a short time each day to the care of fowls.

Poultry for Food.

By Mrs. Nellie Stiles, and read before the Wabunsee Farmers' Institute, January 11, 1889.

Every housewife knows how valuable eggs are, and how hard it is to do extensive cooking without them. They are one of the most convenient and healthful of foods, and admit of many varieties of palatable dishes. They can be baked, boiled and fried in less than five minutes, and if fresh are always ready for use. In the last *American Poultry Journal*, in an article entitled "Poultry in the South," it makes the statement, and claims it to be a fact, "that a fowl, or chicken, contains more that is nutritive, digestible, as well as relishable, than the same weight of bacon." How many people can be made to believe this? We all know how valuable poultry is in making broth and dainty dishes for the sick; and many people are willing enough to eat their share of a nice fat chicken well cooked, on Sundays, and enjoy a good piece of chicken pie on some special occasion; but to have to eat chicken week days, that's too much. Preacher's meat and chicken fixings are good enough for occasions; but give me good fat pickled pork or salt beef



JENKS' DREAM.

Jenks had a queer dream the other night. He thought he saw a prize-fighters' ring, and in the middle of it stood a doughty little champion who met and deliberately knocked over, one by one, a score or more of big, burly-looking fellows, as they advanced to the attack. Giants as they were in size, the valiant pigmy proved more than a match for them. It was all so funny that Jenks woke up laughing. He accounts for the dream by the fact that he had just come to the conclusion, after trying nearly every big, drastic pill on the market, that Pierce's Pleasant Purgative Pellets, or tiny Sugar-coated Granules, easily "knock out" and beat all the rest hollow! They are the original and only genuine Little Liver Pills.

Beware of Imitations, which contain Poisonous Minerals. Always ask for Dr. Pierce's Pellets, which are little Sugar-coated Pills, or Antibilious Granules. **One a Dose.**



SICK HEADACHE,

Bilious Headache, Dizziness, Constipation, Indigestion, Bilious Attacks, and all

derangements of the stomach and bowels, are promptly relieved and permanently cured by the use of Dr.

Pierce's Pleasant Purgative Pellets. They are gently laxative, or strongly cathartic, according to size of dose. Smallest, Cheapest, Easiest to take. 25 cents a vial, by druggists.

for every-day. So say the majority of farmers.

If this notion could be overcome, and people would look at it differently, it would be much better for the poor farmer who cannot afford to keep an animal especially for beef or a hog for pork. With very little money, time and care, enough chickens might be raised to keep them in good wholesome fresh meat, to say nothing of the eggs and feathers. Counting the price of one beef and one hog to be \$30, the same amount of money invested in poultry will furnish a farmer's table with more and better meat at less expense. On a farm it costs little to keep chickens, and a flock of good, thrifty, healthy fowls, are a profitable investment to any farmer, rich or poor. There is money in eggs at 20 and even 15 cents a dozen, and there is usually a demand for early spring chickens. On a fruit farm they destroy enough insects to pay for their keeping. White feathers are

quoted at 20 and 22 cents a pound, dark feathers at 15 to 18 cents per pound.

There is much discussion among poultry men and dealers as to the best breeds to raise; some say one variety, some another. It seems to me what we farmers need is a good-sized fowl, and a good layer. Leghorns and Games are good enough as egg-producers, but when it comes to cooking them for table use, they are a poor excuse for chickens. Plymouth Rocks, Wyandottes and Brahmans are also among the list of good varieties.

Just now poultry papers have a good deal to say about the Black Russian, and it is claimed they are likely to have a boom that will be permanent. The question that is bothering me most just now is, how are we going to hatch the chickens next spring? Are we to move in the same old rut, and follow the time-honored method of letting the hens do the hatching and raising; or shall we try an incubator? For my part I am strongly inclined toward an incubator. The chicks might freeze or smother. The whole thing might explode or burn up—but it never could peck.

M.M.L. MEXICAN MUS-TANG LINIMENT Should be kept in stable, Kitchen, Factory, Store & Shop

M.M.L. MEXICAN MUS-TANG LINIMENT Should be kept in stable, Kitchen, Factory, Store & Shop

M.M.L. MEXICAN MUS-TANG LINIMENT is for Man & Beast. Kills Pain. Rub it in very vigorously!

M.M.L. MEXICAN MUS-TANG LINIMENT is for Man & Beast. Kills Pain. Rub it in very vigorously!

THE MARKETS.

By Telegraph, January 21, 1889. LIVE STOCK MARKETS.

St. Louis. CATTLE - Receipts 300, shipments 800. Market steady. Choice heavy native steers \$3 20a3 80, fair to good native steers \$2 75a3 00, medium to choice butchers steers \$2 75a3 00, fair to good stockers and feeders \$2 00a3 10, grass rangers \$2 00a2 50. HOGS - Receipts 1,000, shipments 1,000. Market lower. Choice heavy and butcher's selections \$4 60a4 90, medium to prime packing \$4 85a4 95, ordinary to best light grades \$4 90a5 00. SHEEP - Receipts 400, shipments 300. Market firm and strong. Fair to choice \$3 00a4 00.

Chicago. CATTLE - Receipts 9,000. Market steady. Best, \$3 75a4 30; good, \$3 40a3 70; medium, \$3 20a3 40; common, \$2 75a3 10; stockers, \$2 00a2 50; feeders, \$2 75a3 15; bulls, \$1 50a2 00; cows, \$1 15a2 00. HOGS - Receipts 19,000. Market closed dull. Mixed, \$4 50a4 95; heavy, \$4 70a5 05; light, \$4 90a5 05; skips, \$4 20a4 60. SHEEP - Receipts 5,000. Market weak. Natives, \$3 25a3 80; Texas, \$2 25a3 15; lambs, per cwt., \$4 00a4 90.

Kansas City. Receipts for 1889 to date are 74,197 cattle, 115,592 hogs and 21,244 sheep, showing a gain of 16,555 cattle, 22,694 hogs loss and a gain of 10,875 sheep, compared with 1888.

CATTLE - There was a better feeling on steers than any day since the early part of last week. Trade was fairly active. Both shippers and dressed beef men were buying. Thin, half-fat stuff showed less improvement. Anything that was fat and made a good appearance brought 10a15c higher prices. Sales at \$3 10a3 30. All good grades or butcher cows were strong to a dime higher. Some sales of extra fat smooth bunches were made at \$2 85a extra fat class was not large and soon changed hands. Medium grades sold some better, probably strong to 5c higher. Canners were taken at about steady prices. There was not much life to stockers and feeders. Sales at \$2 00a3 00.

HOGS - There were only about 50 fresh loads on the morning market. Trade opened up about steady with Saturday, buyers paying \$4 75a4 80 for choice heavy, \$4 85 for choice light weights, \$4 70a4 75 for mixed hogs. Trade at these figures was slow and unsatisfactory. A lower provision market and weak market at Chicago caused a break and by 11 o'clock trade stopped. Salesmen and buyers quoted the forenoon close at 10c lower. Buyers had instructions to buy best grades at \$1 75.

SHEEP - The receipts were liberal. The high prices last week brought in some common and half fat stuff that of course brought only fair prices. Good fat muttons sold at steady prices and the common truck was quoted weak. Sales at \$3 50a4 40.

PRODUCE MARKETS.

New York.

WHEAT - Easier. No. 2 red, 97 1/2c; 97 3/4c. CORN - Weak and 1/2c lower. No. 2, 43 1/2c. OATS - Dull, weak and 1/2c lower. Mixed, 28 1/2c; white, 34a36c. COFFEE - Options steady. Sales, 53,000 bags. Spot at: onger at 17 1/2c. SUGAR - Dull and easy. C, 5 1/2c; extra C, 5 1/2c; white extra C, 6 1/2c; yellow, 5 1/2c; standard A, 6 1/2c; granulated, 7c. EGGS - In fair speculative demand at 17a 17 1/2c. BUTTER - Weak at 13a18 1/2c. CHEESE - Strong at 10 1/2a11 1/2c.

St. Louis.

FLOUR - Quiet and unchanged. WHEAT - The decrease in the visible supply of wheat being larger than was expected, and better prices elsewhere, caused an improvement here, but the market was unsettled and irregular. The close was about as Saturday. No. 2 red, cash and January, 93 1/2c bid; May, 97 1/2c; June, 94 1/2c; July, 85 1/2c; year, 83 1/2c. CORN - Firm, except for May, which was easier. No. 2 cash, 29 1/2c; March, 31a31 1/2c; May, 32 1/2c. RYE - No. 3, 46c. BARLEY - Quiet; sample lots of Wisconsin sold at 70c. HAY - Quiet. Prairie, \$6 00a8 50; timothy, \$10 00a14 00. FLAXSEED - Steady at \$1 50. BUTTER - Dull. Creamery, 21a23c; dairy, 12a20c. EGGS - Steady at 18a18 1/2c. LARD - 86 65.

Chicago.

Cash quotations were as follows: FLOUR - Steady, unchanged. WHEAT - No. 2, spring, 96 1/2c; No. 3, spring, 95 1/2c; No. 2, red, 96 1/2c. CORN - No. 2, 34 1/2c. OATS - No. 2, 24 1/2c. RYE - No. 2, 48c. FLAXSEED - No. 1, \$1 62. TIMOTHY - Prime, \$1 57a1 58.

Table with 3 columns: Articles, Receipts, Shipm'ts. Wheat: 20,000, 14,000. Corn: 107,000, 92,000. Oats: 93,000, 81,000.

Kansas City.

WHEAT - Receipts at regular elevators since last report 1,377 bushels; withdrawals, 2,713 bushels, leaving stock in store as reported to the Board of Trade to-day, 235,016 bushels. The market on the call of any of the different grades, either for cash or future delivery. No. 2 Red Winter - Cash, no bids nor offerings; January, no bids, 95c asked; February, no bids nor offerings; May, 70c bid, 70c asked. No. 2 Soft Winter - Cash, 93 1/2c bid, 95c asked; January and February, no bids nor offerings; May, 97c bid, 98 1/2c asked; year, 74c bid, 78c asked.

CORN - Receipts at regular elevators since last report, 12,877 bushels; withdrawals, 3,774 bushels, leaving stock in store as reported to the Board of Trade to-day, 136,391 bushels. There was a steady market on 'change to-day with no sales on the call except No. 2 white, for January, at 26 1/2c against 26 1/2c bid Saturday when 27c was asked. OATS - No. 2 cash, no bids nor offerings;

January, no bids, 22c asked; February, no bids nor offerings; May, 23 1/2c bid, 24 1/2c asked. RYE - No. 2 cash, no bids nor offerings; January, no bids nor offerings. HAY - Receipts 8 cars. Weak. Strictly fancy prairie, \$8 50; good medium, \$4 50a5 00; poor, \$2 50a3 00; fancy timothy, \$9 50. SEEDS - We quote: Flaxseed, \$1 40 per bu. on a basis of pure. Castor beans, \$1 50 per bu. for prime. OIL-CAKE - Per 100 lbs. sacked, f. o. b., \$1 25; \$1 00 per 1,000 lbs.; \$2 10 per ton; car lots, \$20 00 per ten.

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Weather During the Year 1888.

From the meteorological summary for the year 1888, prepared by Prof. Snow of the University at Lawrence, we extract the following points:

The chief meteorological feature of the year 1888 at this station, representing the eastern portion of Kansas, was the abundant and well distributed rainfall. The total precipitation came within one-hundredth of an inch of the maximum rainfall of the year 1876, and has nearly made good the deficiencies of the years 1886 and 1888.

In temperature the annual mean was below the average. This result was chiefly due to the abnormal coldness of January, March, August and October, which more than overbalanced the unusually high temperature of April, May, July and December. Other peculiarities of the year were the low wind velocity, the small proportion of cloudiness, and the usually high barometric pressure. The year 1888 was the fifth successive year of wind deficiency. Our records of the wind show four alternate periods:—four years of excess (1873-1876); three years of deficiency (1877-1879); four years of excess (1880-1883); and five years of deficiency (1884-1888).

The last hoar frost of spring was on May 19; the first hoar frost of autumn was on September 28; giving an interval of 132 days, or nearly five months, entirely without frost. This is twenty-four days shorter than the average interval.

The entire rainfall, including melted snow, was 44.17 inches, which is 9.51 inches above the annual average. Either rain or snow or both, in measurable quantities fell on eighty-three days—twenty less than the average. On seventeen other days rain or snow fell in quantity too small for measurement.

The number of thunder showers was thirty-seven. There were five light hail storms during the year—two in May, two in August and one in October.

The entire depth of snow was twenty-two inches, which is exactly the yearly average. Of this amount three inches fell in January, two inches in February, two inches in March, twelve inches in November and three inches in December. Snow fell on twenty-five days, on ten of which the quantity was too small for measurement. The last snow of spring was on March 27. The first snow of autumn was on November 9, which is just the average date.

A New York dairyman says he can get more milk from cows fed on beets, two bushels per diem to the cows, than from ensilage. The milk yield ran up to twenty quarts. He asserts he can produce beets at a cost of 4 cents a bushel, 1,000 bushels to the acre.

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A horse appreciates a comfortably-fitting harness as much as he does a properly-fitted shoe. The latter, when set too tight or with a nail driven into or near the sensitive tissues, produces positive lameness. Under this condition of things he is promptly taken to the shop for relief. But he may suffer nearly or quite as much from the

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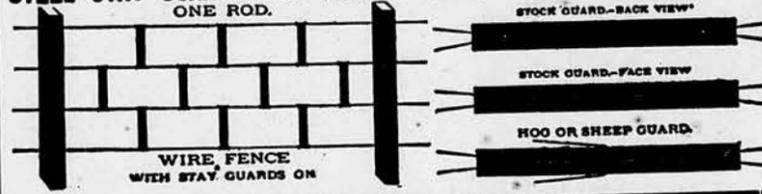
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chafing of a badly-fitted collar or a narrow belly-band drawn too tight, or from a check-rein shortened up so as to form of itself one of the severest punishments. Either of these conditions will produce restiveness in the dullest brute, and in the case of an animal of nervous temperament and having a thin, sensitive skin, he is liable to become frantic, the obtuse owner or driver seldom appreciating the origin of the difficulty.

From the Centropolis, Kansas City, Mo., December 1st, 1887:

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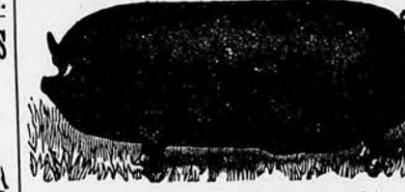
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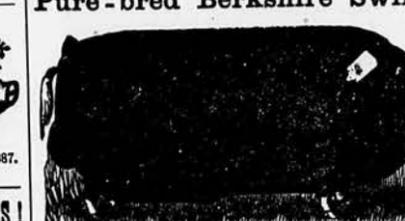
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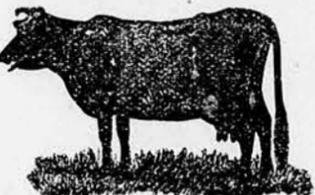
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THE STRAY LIST.

FOR WEEK ENDING JAN'Y 10, 1889.

Shawnee county—D. N. Burdge, clerk. STEER—Taken up by Josep Dollfka, in Auburn tp., one red steer, 2 years old past, no marks or brands. STEER—By same, one red steer, white spots, 2 years old past, no marks or brands. Pottawatomie county—L. D. Hart, clerk. STEER—Taken up by N. P. Axelton, in Blue Valley tp., December 4, 1888, one red steer, a few white hairs mixed in, white in face, 3 years old past; valued at \$30. Nemaha county—W. E. Young, clerk. STEER—Taken up by E. M. Williams, in Gilman tp., P. O. Oneda, December 16, 1888, one red and white steer, 1 year old; valued at \$15. STEER—Taken up by William Calnan, in Clear Creek tp., P. O. Clear Creek, December 3, 1888, one dark red steer, 1 year old, no marks or brands; valued at \$15. STEER—By same, one dark red steer, 1 year old, no marks or brands; valued at \$15. STEER—Taken up by M. Laughlin, in Mitchell tp., P. O. Seneca, October 22, 1888, one red steer, 3 years old, brand on right hip supposed to be 6, right ear cropped; valued at \$27. Cherokee county—J. C. Atkinson, clerk. HORSE—Taken up by Joseph Coal, in Shawnee tp., December 18, 1888, one strawberry roan horse, 4 years old, 16 hands high, star in forehead, left hind foot white; valued at \$30. HORSE—By same, one dark roan horse, 4 years old, 16 hands high, no marks; valued at \$35. Lyon county—Roland Lakin, clerk. COW AND CALF—Taken up by Levi Dumbauid, in Elmendorf tp., P. O. Hartford, one red 4-year-old cow, some white on belly, no brands visible; calf 4 months old at side; valued at \$15. (Taken up December 19, 1888.) STEER—Taken up by Robert Best, in Ivy tp., P. O. Admire, November 20, 1888, one black 2-year-old steer, line back, white belly, ears disfigured; valued at \$15. STEER—Taken up by J. W. Floyd, in Americus tp., November 23, 1888, one yearling or small 2-year-old red steer, some white on belly; valued at \$12. STEER—Taken up by S. L. Ruggies, in Americus tp., December 15, 1888, one red and white 2-year-old steer, short tail, branded I on right hip; valued at \$22. STEER—Taken up by E. F. Moon, in Pike tp., November 6, 1888, one red yearling steer, white on belly; valued at \$12. STEER—Taken up by J. A. Gengerich, in Reading tp., December 11, 1888, one red yearling steer, no marks or brands; valued at \$11.

FOR WEEK ENDING JAN'Y 17, 1889.

Anderson county—S. Durall, clerk. STEER—Taken up by Joseph Greer, December 1, 1888, one small white-roan 2-year-old steer, branded P on right hip; valued at \$18. Pottawatomie county—L. D. Hart, clerk. STEER—Taken up by C. Umscheid, in Pottawatomie tp., one red and white spotted steer, 1 year old, split in left ear. Coffey county—H. B. Cheney, clerk. HEIFER—Taken up by W. H. Robson, in Key West tp., one light roan heifer, 1 year old, no marks or brands; valued at \$12. Butler county—T. O. Castle, clerk. 2 COLTS—Taken up by John B. Tilley, in Hickory tp., P. O. Keighly, December 4, 1888, two 2-year-old horse colts—one black, with a few white hairs in forehead, the other brown or bay, with white blaze in face; valued at \$20 each. Wilson county—D. N. Willits, clerk. COW—Taken up by James White, in Gullford tp., December 26, 1888, one red cow, 4 years old, no marks or brands; valued at \$15.

FOR WEEK ENDING JAN'Y 24, 1889.

Greenwood county—J. W. Kenner, clerk. STEER—Taken up by E. D. Miller, in Janesville tp., December 8, 1888, one red steer with some white in face, 2 years old, short tail, under-bit in left ear; valued at \$25. STEER—Taken up by S. H. Winters, in Janesville tp., December 6, 1888, one red yearling steer, upper bit in left ear and under-bit in right ear; no brand visible. MARE—Taken up by E. S. Myers, in Janesville tp., December 13, 1888, one gray mare, about 8 years old, diamond-shaped brand on left shoulder and 8 on left hip; valued at \$30. STEER—Taken up by Fred Hanl, in Quincy tp., December 1, 1888, one dark red steer, 1 year old, no marks or brands; valued at \$15. STEER—Taken up by John Edwards, in Janesville tp., December 1, 1888, one red 3-year-old steer, no marks or brands; valued at \$35. STEER—By same, one red 3-year-old steer, no marks or brands; valued at \$35. STEER—By same, one red and white 2-year-old steer, branded R on left hip, under-bit in each ear; valued at \$15. Lyon county—Roland Lakin, clerk. COW—Taken up by August Good, in Elmendorf tp., December 21, 1888, one hind cow, right horn broken off, branded H on left hip and O on right shoulder; valued at \$10. COW—Taken up by John I. Price, in Emporia tp., November 6, 1888, one red cow with red and white face, some white on belly, 3 years o.d., no marks or brands; valued at \$2. COW—Taken up by G. P. J. nes, in Center tp., P. O. Elc, December 19, 1888, one red and white 5-year-old cow; valued at \$13 50. STEER—Taken up by Fred Gentner, in Jackson tp., January 12, 1889, one red-roan yearling steer, crop off right ear, under-bit in left ear; valued at \$15. Kearney county—D. H. Browne, clerk. HORSE—Taken up by S. W. Day, in Kearney tp., December 6, 1888, one dark bay horse, 14 1/2 hands high, white spot below right ear, white collar mark on top of neck, speckled with white on hips, very sore back, caused by saddle, had bridle on when taken up. Shawnee county—D. N. Burdge, clerk. COW—Taken up by A. M. Kistinger, P. O. Tecumseh, January 7, 1889, one light red cow, 9 years old; valued at \$10. Bourbon county—J. R. Smith, clerk. COW—Taken up by Josep L. Miller, of Drywood tp., January 4, 1889, one roan cow, face mostly white, medium size, about 4 years old; valued at \$16. STEER—Taken up by Chas. Pittman, in Mill Creek tp., January 10, 1889, one red-roan 3-year-old steer, medium size, straight horns. Coffey county—H. B. Cheney, clerk. STEER—Taken up by Jno. Duncan, in Star tp., one red and white steer, white on back and belly, no marks or brands; valued at \$15. Sumner county—W. H. Berry, clerk. PONY—Taken up by Charles E. Wright, in Valverd tp., October 4, 1888, one brown pony mare, 14 hands high, branded C K C W on right shoulder and a mark on the left hip similar to a horseshoe, and a brand similar to E; valued at \$15.

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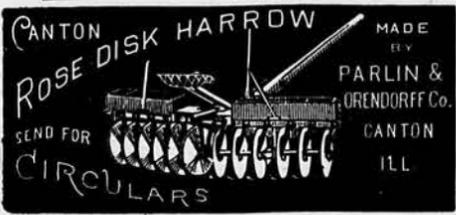
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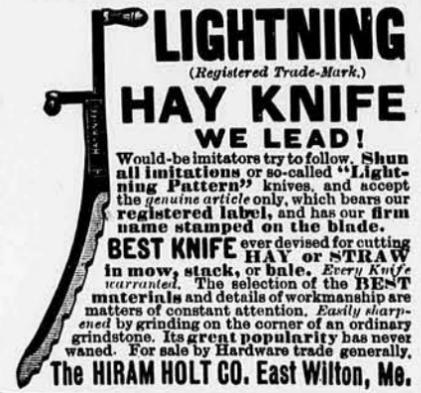


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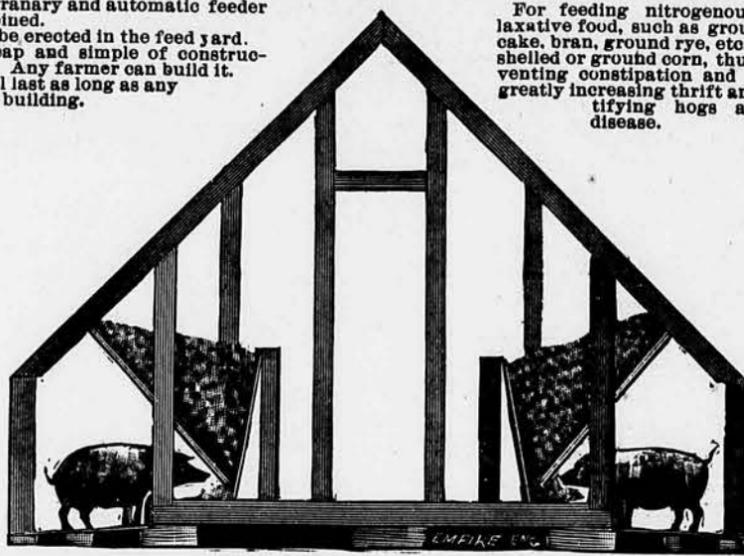


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