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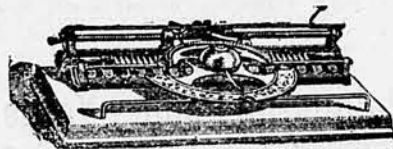
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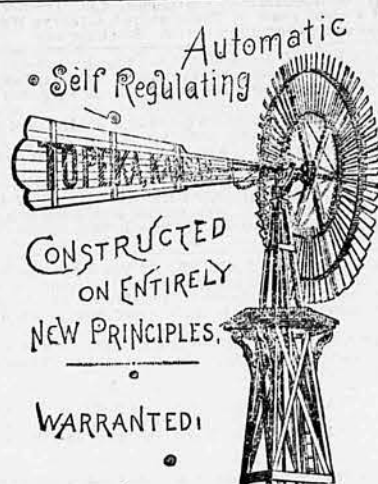
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Agricultural Matters.

Forage Crops.

EDITOR KANSAS FARMER:—There seems to be much thought given to the question—what is our best crop to grow for winter feed? Every thinking farmer that has lived in Kansas for a decade or more, realizes that the old method of stock-growing and farming must give way to better management, better stock, and we must find some way to keep more stock to the acre. If tame grasses were a sure and easily grown crop here the question would be easily answered. Alfalfa seems to do well after it is once up and rooted, but cattle don't seem to eat it very well after there gets to be a good bite of the native grasses, and in Colorado it is considered a risky feed for cattle when pastured, on account of the danger of the cattle bloating. A few patches here have been fed all the spring, and I have heard of no cases of bloating. Some stockmen have sown quite largely of alfalfa this spring, and if it makes a good stand, it may be voted a success—as it has been a very unfavorable season for getting a good stand. A few patches of orchard grass have done fairly well until last winter, when most of it was winter-killed. Our main standby for late fall and early spring pasture is rye, and in favorable seasons it produces an immense amount of feed at little cost. Our wild grass pastures furnish good feed for the first few months, but start late, and most of them have been overstocked; they do not, in some cases, carry over one-half of the stock as when first fenced, and the number of acres to keep a cow is too large for profit, as land increases in value. In time we will have to adopt a partial soiling system, or keep a small amount of stock.

I know of no crop that fills the bill better than sorghum as a stock feed in this part of the State. It should be put in thick if wanted as a general feed. As a part ration for horses a better way is to mark one way and plant every 20 inches in hills, it will then seed heavily, and horses will go through the winter in good condition on it without grain. It makes a No. 1 feed for hogs. But stock want a variety, and I have for several years raised corn for fodder alone, planted the same as the sorghum—about 3 feet 10 inches by 20 inches, as many grains as the planter would drop. I have raised as much corn per acre, as when planted the ordinary distance apart; but it was all nubbins, and I fed it without husking. The best corn fodder I ever raised was from seed saved from a mixed planting of a variety of field corn that had a large amount of leaves—Squaw corn—and sweet corn. In time the result was a plant that grew an immense amount of forage and several nubbins on a stalk. Last year the chinch bugs took the entire planting, so I lost the seed. I first got the idea of thick planting from reading Prof. Shelton's reports. This year I have planted sorghum, field corn, pop corn, field corn and sorghum mixed—all thick, for fodder. Perhaps in time we may most of us adopt the silo.

Maj. Alvord ranks crops for ensilage as follows: Millet, sorghum, Japanese bean, corn, peas and oats, cow peas, grasses, rye and clover. He raised in 1888, weighed when first cut, ensilage corn 27½ tons per acre; common Southern white corn, 21 tons; corn and sorghum mixed, 20½ tons; sorghum alone, 20½ tons. The ground was probably heavily manured. John Gould, of Ohio, kept 54 head of cattle and three horses through the winter from the product of eleven acres of corn made into ensilage, five acres of field corn, and one ton of wheat shorts, and the herd was milked all winter.

Our way of wintering cattle back in the "seventies" is gone, never to return. Then if a herd of cattle had an unlimited range of buffalo grass and a few straw stacks to run to in stormy weather, they came through the winter in good shape as a general thing, and the cost was next to nothing; if a cow was stabled nights and fed a little millet or corn fodder, she got extra care. As the dairy interest grows, so the demand for more feed to the acre and better feed will increase.

J. G. McKEEN.

Russell, Russell Co., Kas.

The best dollar investment in the world is for any reader of this paper to send us \$1 for the KANSAS FARMER one year.

CONCERNING ALKALI LANDS.

The following article, though written in Chicago, Ill., will be interesting to a good many farmers in Kansas. We copy from the May edition of the *American Sheep-Breeder and Wool-Grower*.

It is hardly too much to say that a fortune surely awaits the man who shall discover some practical process for the reclaiming to the use of man the vast ranges of the far West, now rendered valueless, or nearly so, by the presence of "alkali" in the soil. This is a somewhat loosely comprehensive designation of several saline matters, which consist of soda, lime, potash and magnesia, partly in chlorides, partly in carbonates, sometimes in sulphates.

The presence of these salines in the soil of the mid-continent and the Pacific coast, is accounted for by scientists chiefly from the extreme aridity of the climate. In the more humid lands of the Atlantic slope the movement of the waters, except during a protracted drouth, is downward, the rainfall leaching into the subsoil and down to the rock strata, to emerge in springs; or else running off directly as surface wash into the rills and streams. But in the great arid regions of the West the movement of the waters is principally upward in the soil, on account of the excessive vaporization from the surface. The constant evaporation and waste is as constantly replaced by capillary attraction from the supply below, and this again by the same process from still deeper sources. The water thus continuously attracted to the surface, only to be vaporized by the sun's heat, brings up with it the salts above mentioned, but parts with them at the surface when it is converted into vapor. As this process continues the salts accumulate to such an extent that most forms of vegetation are impossible. It is generally the case that the lowlands and rich river bottoms, which would otherwise be most valuable for pasturage, are more saturated with this "alkali" than those lands which lie higher. This is due to the fact that the water of the streams is diffused laterally through the soil along their banks by percolation (on which fact is sometimes based a system of irrigation along the low-banked rivers of California), and rises to the surface. Hence we find more salines in these low bottom lands than on the uplands, simply because there is more water rising through the soil to carry them to the surface.

As above stated, most forms of vegetation disappear in the presence of these salines, but there are some varieties of grass, called by the plainsmen "salt grasses," which resist a certain amount of alkalinity and maintain a more or less sickly existence, according to the amount of salts in the soil. A notable instance of this is the vilfa (*Sporobolus atroides*), a grass with a widely-spreading purple panicle and perennial roots, which occurs in scattered tussocks in the strongly alkaline soil of the river bottoms. It is extensively pastured by cattle and sheep. The testimony of the plainsmen respecting its effects on stock is conflicting; though it appears to be settled that at first they are injured somewhat by the excess of salt, but gradually become accustomed to it. Some stockmen assert that cattle are rendered sterile by these "salt grasses." As to sheep, we believe no one has announced any such result as occurring to them under like circumstances; the injury arising to them seems to be of a temporary character, such as would be induced by an over-feed of salt. Careless shepherds rather like a certain amount of alkali, as it, like the pastures near the ocean, saves them the trouble and expense of dealing out salt. It is hardly necessary to say that careful flockmasters do not approve this system, or lack of system.

The practicability of washing the alkali out of these soils has been abundantly demonstrated. Every one who has crossed the continent by the Union Pacific and Central Pacific railroads has been gladdened by the arrival of the train at Humboldt Station, an oasis of verdure in a miserable alkali desert. This was redeemed from the desolation by a stream of pure water brought in pipes from a neighboring mountain. Fields were surrounded by an embankment and flooded; the water settled into the earth and carried down with it the noisome salines. Mormon settlers have often adopted the same process—"washing" the land, as it is called; sometimes it has to be continued two or even

three years before the soil is freshened enough to bear crops.

But water is too scarce and the application of it is too expensive to permit this method of reclamation to be adopted over large areas. The question arises: Is there not some variety of grass, valuable for pasturage, which is capable of enduring the alkali? Some years ago a paragraph was published in a California newspaper, stating that a farmer in that State had planted Bermuda grass on some of the strongest alkali soil, and that it not only survived but flourished. We beg to suggest to our Western readers a trial of this grass on their alkali ranges. In our Southern States it grows vigorously under many discouraging circumstances—in the bottom of ditches, on barren sands, along the edge of salt marshes. It resists drouth and heat with great hardness; it succumbs temporarily to frost, dying down nearly to the ground under a temperature of 15 deg.; but the tawny herbage still affords farm pasturage, and as soon as it starts again it is eaten with avidity by all kinds of stock. It keeps green all summer, even in the severest drouth. It is propagated by the sod, cut into small pieces; and all prominent Southern seedsmen have it for sale by the barrel. It certainly is worth a trial.

A Chapter on Alfalfa.

Mr. Rust, a Colorado farmer and stock-raiser, recently prepared a good article on alfalfa, and it was printed in *Breeders' Gazette*. It will be interesting to Kansas people; we therefore give it entire, as follows:

The attention which is being paid on all sides to forage plants and the anxious desire shown to obtain something better, if possible, than those now in cultivation, indicates that there is a growing appreciation everywhere of the prime importance of the live stock side of farming. If men care little for their live stock, or do not realize that they have any special interest at stake in the manner and results of its keep, they are not likely to concern themselves much about the comparative merit or habits of forage plants, and a "swale" grown to coarse sedge or wire grass is estimated as of equal value with a field of luscious clover. But the last season's drouth must have opened the eyes of a good many farmers who were not able to see much before as to the importance of live stock on the farm, how narrow farm incomes would generally be without it, and of the advantages of providing it with abundant and proper food of the most economical production. It is needless to say that this better appreciation of the live stock of the farm will also lead directly to efforts for its improvement, since no man ever studied the live stock problem with reference to discovering how live stock can be made the source of the largest profit who failed to be speedily impressed with the fact that it was necessary, to start with, that the live stock be of an improved character, and that the best results could not be realized from the inferior descriptions.

Among the forage plants concerning which there appears to be a desire for information none seem to have attracted more attention than alfalfa, if one may judge by the frequent inquiries concerning it appearing in the agricultural press. Here, in Colorado, we think very highly of it. It thrives in our climate and under our irrigation system, produces well, and is the main reliance for that portion of the hay crop which is consumed upon the farms, and promises to ultimately become, if not such already, the main support of our agricultural system. There is considerable hay required for shipment in bales to the cities and mountain towns, and for this alfalfa is not well adapted, as it does not present an attractive appearance in the bale and the operation of baling breaks up the leaves too much. I do not regard it as desirable as a long-continued feed for horses, although the majority of farm horses are maintained on it. Its great drawback is the danger attending its use as pasture for cattle and sheep. Both are liable at any time to bloat badly on it, and serious losses often occur from this cause. But for this difficulty it would be the "grandest grass on earth," as it starts very early in the spring, affording a bite almost as early as fall rye, and enduring the extreme cold weather at the other end of the season, and growing most luxuriantly when the temperature is at all favorable to growth. But it cannot be safely depended upon as pasture, and its value is almost exclusively as a hay grass.

As a soiling crop for milch cows it could not be surpassed, for if its use is avoided when wet there need be little danger of hoven from its use, and it springs up so quickly after being cut and grows so fast that no other crop is needed to keep up the succession. And as a milk-producer, whether fed green or as hay, it is absolutely without an equal in the whole range of cultivated grasses. Hogs like it, and will eat considerable of the hay in winter time with apparent relish, but it will not, summer or winter, as has been claimed by some over-zealous people, support a condition of satisfactory growth or thrift. The grass has a coarse stem which causes the hay to lie very light when first cut, and the apparent bulk often leads to the yield being greatly over-estimated. My own alfalfa I regard as better than the average, but although I get three cuttings, haul in a great many loads, and make a big showing in stacks, I do not believe I am getting much above three tons per acre. This is pretty good, but it seems small beside the claims some people make of six or seven tons. A grain ration is required with it to make first-class beef, but sheep are said to feed up well and make choice mutton on the hay alone.

It will answer to plant at any season of the year when there is sufficient moisture to germinate the seed and allow the young plants to get a hold of the ground. The only care that need be given as regards frost is to see that it does not get caught when just out of the ground; at that stage it is as tender and sensitive as a bean; but after the third and fourth leaves have appeared it will safely endure a good, sharp freeze. The ground should be in good condition for small grain. About twenty-five pounds of seed to the acre is the proper amount. It is better sown alone, though some sow small grain with it. Should weeds appear in sufficient numbers to impede its growth, which is not unusual the first spring when the plants are small, run over the ground with a mower set high enough to take off the tops of the weeds and give the alfalfa an even start again, and it will never ask odds of weeds after that.

Whether it will thrive in a practical way under the climatic conditions which prevail in the older States I do not know, neither am I certain that it would be desirable. The need of it is not so great where clover can be easily raised. Nevertheless, if I were running a farm there, and especially if paying much attention to dairy products, I should try it in a moderate way and see what it amounted to. I should not plant it largely, however, as they do in the West, because of the great difficulty of getting rid of it should a change of crops, and land, and farm plans be desirable. It can be killed of course, but it is not an easy matter. I do not think there is any danger of its winter-killing, so far as the effect of extreme cold is concerned, but I am not so sure of how it would come out from beneath a long covering of snow and ice. It is a mistake to suppose it is entirely independent of drouth. Once established, its long roots descend to a considerable depth, and it is capable of supporting itself under conditions of the most severe drouth, but as to making any growth worthy of the name under such circumstances it will not do it. If the soil-water, however, is within a reasonable distance it will make some growth—more than any other grass I know of—and will be the last of all to come to a standstill.

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Creameries and Dairies.

D. W. Willson, Elgin, Ill., makes a specialty of furnishing plans and specifications for building and operating creameries and dairies on the whole milk or gathered cream systems. Centrifugal separators, setting cans, and all machinery and implements furnished. Correspondence answered. Address, D. W. WILLSON, Elgin, Ill.

The Stock Interest.

HOGS AND CLOVER.

Probably the cheapest meat that the farmer ever makes is the pork that he makes on clover. Of course reference here is had not so much to the actual pork which fills the barrel at Christmas as to the muscle and bone which are built up and the general foundation which is laid for the fat. The summer clover makes the frame; the old corn fills it with fat.

An experience of many years on the Muskingum, added to observations upon the experience of my neighbors, has satisfied me that one-third of the weight of spring pigs, when dressed in the fall, can be made on clover. And their flesh sells higher than that of any other animal that is brought to market by the general farmer. My neighbor Mr. C. J. Wood, always has a very fine bunch of fat hogs in the fall, generally about fifteen in number; they are usually about eight months old when slaughtered, and dress on an average 250 pounds each. One-third of this is eighty-three pounds; at 5 cents a pound it is worth \$4.15, which amount may fairly be credited to clover. An acre of good river clover will, with the slops and bran which my neighbor gives, support five pigs through the summer; if cut and given to them in a clean pen it will support seven or eight. Without any slops whatever it will support four pigs, averaging the season through, and keep them growing well enough to justify the above calculation. This would give a revenue of \$10 per acre. This is not a very large sum in itself, but it must be remembered that it entails no labor whatever; the clover is harvested by the hogs. Add to that the increase of fertility which will take place in a single summer under this treatment, and it will hardly be an exaggeration to estimate the value of the clover consumed on an acre in this way at \$20.

My own experience has been with hogs of a year's growth or nearly so. The best general results are attainable with spring pigs, but on a sheep farm it is impracticable to have litters of hogs come in the spring, because they are not likely to receive the attention and the milk slops which they require. One year I had about sixty head of shoats through the winter, for which I had reserved a twenty-acre field of white clover. This I esteem nearly, if not quite, as valuable for hog pasture as the red variety. Knowing that I should not have much cow's milk for them in the spring, and that they would be more or less bound up from a winter's regimen on dry feed, I provided an acre of rye to be cut green for them before the clover would be ready. It was an exceptionally mild and open winter, even for southeastern Ohio, and I was able to cut a considerable swath off the rye on March 25. The pigs ate it readily, a certain ration every day; if I gave them more than that they seemed to sicken of it and would leave it and would be a little "off feed" for a day or two.

Of course the rye was very green and watery, and I do not suppose it nourished them very much; but it had an excellent effect upon them. It gave them what all animals need and crave, that is the sap of green vegetation to relax the system and set the juices of the body in circulation. It gave their bowels a loose and healthy action, and prepared them for rapid growth. A pig in the spring, unless it has been wintered with more care than most farmers bestow, on plenty of succulent food, is like a bush which lost its leaves in the fall; it takes a number of days to

start the juice flowing, even after it begins to feed on green vegetation. The winter crust has to be cracked. I did not weigh my pigs, but after ten days or so on the rye I could see that they were beginning to spread out, their hair became smooth and glossy and they were plainly growing.

I am satisfied that I gained fully a month in growth on the pigs by giving them rye. It is injudicious to turn much stock on clover before it is nearly ready to blossom. The rye got pretty woody before that time, but the pigs continued to masticate it for its juice, rejecting the balls of fibre after they had sucked them dry.

Meantime I began to feed them on soaked corn. It will pay the farmer to soak corn for stock hogs as early as the first of February every day when water does not freeze too hard. I soak it twenty-four hours. Dry corn is so hard and shells off so easily that the hog will swallow it half masticated, and fully one-third of the nutriment that might be extracted from it is lost.

I do not now recall the date when I turned on the clover. I was governed by the stage of the clover, as above mentioned. The pigs were first carefully ringed, each with two rings in its snout. In this operation we employed a patent hog-holder or a pair of pincers, one prong of which curves over the upper jaw, while the other is furnished with a ball which presses between the branches of the lower jaw, repressing all motion of the head and most of the squealing. Anything which enables the operator to hold the hog in a vise-like grip is not cruelty, but genuine kindness. The really cruel man is he who holds the animal loosely and does a bungling job, jabbing the rings in at random between jerks and squeals, getting one thrust in too deep into the nostril, where it will impede the breath, and another bareley caught in the outer rim of the snout. And a hog without rings has no place on my farm; I would kill him before I would see him rooting up a nice field of clover or polluting a velvety sward.

After the pigs were turned on the clover the feed of corn was gradually diminished, and in about a week was discontinued altogether. A mess of salt with about one-tenth part of finely-ground copperas was kept in a dry place constantly accessible to them. It is a difficult matter to give salt to hogs at just the right time and in the right measure; the best way is to leave the regulation of the matter to their own instincts.

For about three months they were fed on clover alone. They showed by their satisfactory growth that they are as well adapted to subsist on grass as horses are. I began to give corn again about six weeks before new corn would be available; it was soaked as before. Twenty-four hours' old corn soaked and given with green clover is worth fully as much as new corn, if not more. The feed was gradually increased until about three bushels per day were given. This was not heavy feeding at all for sixty hogs, but I am satisfied they gained more on it with the clover than they would have done with six bushels and no clover. Their alimentary apparatus had been distended all summer by the abundant feeding on clover, their systems were thoroughly wholesome, their blood cool. The clover taken in connection with the corn served admirably to cool and correct the heating tendency of the corn. The general effect was admirable.

They were sold to go on a market not yet broken down with a glut of new-corn hogs. For a long time I preserved a record of prices obtained and general results, but it is finally lost. I remem-

ber simply I estimated at the time that the clover had paid me \$20 an acre (for it grew so abundant that summer that, in addition to the hogs, I frequently had a flock of three hundred sheep in the field a week or two at a time, besides three cows and three horses nearly all the while). It was a fine spectacle, a solid sheet of white clover, often six inches high, resounding with the buzzing of thousands of bees.

Fortunate is the farmer who is forehanded and foresighted enough to keep a crib of old corn and a field of red and white clover to feed a bunch of hogs on for the early fall market. Undoubted as are the advantages of spring pigs where one has plenty of milk slops for them, they have to be thrown on the late market; and I am far from certain that a greater profit would not be secured from a bunch of hogs wintered through, to be fattened for the early market as "breakfast bacon." True, they are a source of considerable expense in winter, but in summer they live very cheaply on clover, and strike a market so much better than do the late-slaughtered spring pigs, that the expense of the winter is reimbursed in handsome fashion.—Stephen Powers, in *National Stockman and Farmer*.

LUMP-JAW IN CATTLE.

The following interesting report was made to the government by a Chicago cattle inspector:

The question is very often asked, what is "lump-jaw" in cattle? To try and popularize the scientific term by which it is designated *actino mycetes*, we will need to describe somewhat the disease and how it first manifests itself in the animal. It can attack the tongue or the lining membrane of the cheeks, and also the bone of the jaw.

While several years ago there was some doubt of the etiology of *actino mycetes*, it is not so now. The *actino mycetes* is constantly found in new formations of a special kind, and through its irritating and disintegrating influence not only produces these formations, but sets up destructive processes in the tissues which ultimately produce death. It has been called by the German pathologists the "infection tumor." The forms, or rather the processes of the disease, vary with the animal in which the infection has taken root. In man the tendency is to suppurative processes and metastatic abscesses, while in animals it is to new formation tumors and induration or degeneration of tissues. Whether hard or soft the extension of this cancerous fungus being progressive by means of its spores, which localize themselves, multiply and produce their characteristic changes in their surroundings. These spores find their way into the gullet, the stomach, the bowels or into the windpipe and lungs, and there multiply. That the disease can be transmitted from one animal to another there is positive proof. John and Ponfick have demonstrated this to be the fact. Their first experiments failed on account of the matter being too old, or having undergone a change. Since attention has been directed to the subjects, veterinarians have traced it from animal to animal, and Ponfick relates the following case:

"A woman 34 years old was attacked by the disease. She had been employed as a servant for several years and was frequently about sick cattle—these cattle at the time suffering from what the veterinary surgeon who attended them called 'wurm,' the common name by which the disease is known in Germany."

As seen in the Chicago stock yards and described by Wm. T. Belfield in a letter to Health Commissioner Oscar

De Wolff, the appearance of the animal is as follows:

"The live animals examined belonged to four different lots which had been shipped from the West. All but one of these animals were in poor condition. Their hides were rough, their bodies much emaciated—each presented a swelling on the face, the smallest tumor being about the size of an orange, this was the healthiest appearing one, the largest having about the size of an average musk melon.

"In three cases the tumor was connected with the upper jaw, in one the lower jaw, in the fifth case located just below the animal's eye. In every case except the last the tumor was hard, resisting and cutting under the knife like gristle or cartilage, at different points softer and semi-fluctuating points were felt. The surface of the growth was raw and ulcerated, a thick matter covering portions of the ulcer. The mass was firmly attached to the bone, sometimes rendering it difficult to distinguish between where one began and the other left off. The bone itself was enlarged and very soft, so that it could be readily cut with a strong knife. It was moreover honey-combed with channels and cavities containing thick pus. Under the microscope these little yellow masses are groups of a microscopic slant (fungus) called *actino mycetes*, and the disease therefore has been called '*actino mycetes*.'"

"Since the disease has never yet been recognized in America (Dr. Belfield's report to Health Commissioner of Chicago in 1884), I shall take the liberty of including in this report a brief sketch of our present knowledge of the disease." Our knowledge is due to the steady work of German pathologists. Bollinger, Royal Professor of Veterinary Surgery in Munich, Bavaria, supposed these tumors to be a cancer or tubercle, and the American surgeons designate them as such to-day. The term *actino mycetes* means "radiating fungus," because its parts radiate from the center like the spokes of a wheel.

Within the past four years it has been discovered that this disease attacks not only cattle and hogs, but also human beings—more than thirty cases have been reported by the German observers, and in man the aspect of the disease is different from that in animals.

In man the disease does not remain localized, as is often the case in animals, but rapidly spreads to the chest and abdomen, involving the internal organs of these regions. In many cases the spinal column is also invaded by these parasites. Hence the symptoms in man vary and simulate other diseases. So far, in man, the disease has proven to be incurable, but that can perhaps be accounted for by the fact that in many cases it has not been recognized until after death, the microscopic examination of the matter of tumor having betrayed the cause of the disease.

The disease is contagious—that is, it can be communicated to a healthy animal by contact with one already diseased. That it can be communicated to man by contact with diseased cattle is highly probable.

The question, therefore, which concerns this city and to which the health department have already called attention, is whether the flesh of these animals is fit for food. No one who has seen these animals with their jaw bones honey-combed with pus and deformed with tumor, can answer this question in the affirmative. It may be said to be safe to eat it after thorough cooking. It is said that all that have died on the way are converted into soap grease, and yet this very winter some such meat found its way to this city.

With these facts before our readers there is not one but will have a strong desire to know the condition of the animal before it was killed, part of whose flesh is represented in the smoking steak or roast coming to his table. There is but one way out, by a thorough and efficient inspection during life, on foot.

In the Dairy.

Short Lecture on Cheese-Making.

Mr. T. D. Curtis, editor of *Farmer and Dairyman*, gave a course of lectures to Wisconsin dairymen recently. His first lecture was reported for the Sheboygan county *News*, from which Massachusetts *Ploughman* makes extracts copied herewith, as follows:

"We have here, said the lecturer, a vat of milk composed of eighty-seven parts of water and thirteen parts of solids. Our object is to separate the solids from the water and get rid of about eighty parts of the water. We begin by putting in rennet, which causes the solids to separate in about three-quarters of an hour, at a temperature of 82 deg. We use more or less rennet, according to the time in which we want the cheese to mature. At first we have a coagulation, the solids, though separated from the water, being distributed all through it. To get rid of the water, we cut the curd into small pieces. This should be done as soon as the curd will make a clean break over the finger when in it and carefully lifted. The reason why the curd should be cut early is because, to use an Irish friend's expression, "it bleeds better when young." The older and tougher it gets the more slowly the whey exudes from the pieces, and the more force must be used to cut the curd, this of course causing more friction, more injury to the delicate mass, and more waste. By cutting early, we therefore get a clearer whey and a more perfect running off of the whey. We pause a few minutes after cutting, to give the rennet a chance to further condense the pieces of curd, that they may not be too easily broken by stirring. We then start the heat and begin to gently stir the mass, raising the temperature at the rate of about one degree in five minutes and never stop the stirring so long as the heat is rising. We raise the heat slowly, and keep up the gentle agitation, for the purpose of securing an even temperature throughout the mass, and an even action of the rennet. The slow heating enables the heat to penetrate the bits of curd, so that the surface does not become cooked and tough before the whey can escape; and the constant stirring prevents any portion of the mass from heating faster than the rest of it. We stop the heat at 98 deg., because this is blood heat, and the temperature at which the gastric juice of the rennet is most active. We hold the heat here until the curd is cooked, or of an even texture throughout the pieces, and has become firm and elastic. After this the whey may be drawn at any time before the acid develops, but the curd should not remain in the whey and soak after the acid appears. Acid is an enemy to rennet action, and if we get too much, it will neutralize the rennet altogether. If it develops in the curd before the whey is out sufficiently, it will dissolve the minerals in the curd, and they will run out with the whey. But if we get the whey out of the curd, and the curd out of the whey before the acid appears, no apparent harm comes from the development of the acid, as nothing runs out of the curd, and if the acid dissolves the minerals, they still remain in the curd. These minerals are principally the phosphate of lime, the phosphate of iron, the phosphate of magnesia. The lime is essential to the formation of bone, the iron of blood and the phosphorus to feed the brain and nervous system. Hence, if these wash out, we render the cheese innutritious and to a large extent indigestible. This is why we must do our cooking before the acid shows itself. This acid is

formed from the sugar in the milk, all of which will turn to acid at some stage, either in the vat or in the curing room. If we get out enough of the whey, there is not sugar enough in what is left to make sufficient acid to cause injury. The whey drawn, the curd may lie and take on acid, or it may be salted and then allowed to take acid. Only about so much will appear any way, in a good curd.

"It is well, where curds are not ground, to let them remain in the whey as long as it is safe—that is, until there are signs of approaching acidity—in order to keep up the temperature and save so much labor in stirring, if the curd is out of the whey. Otherwise it would be better if the whey could run entirely clear from the curd as fast as it exudes from it. After the curd is done and salted, let it lie and air as long as possible, giving it an occasional stirring up. It is not likely to get too cool to face in hot weather, and should not be put to press much above or below 80 deg. If too high, it is liable to taint in the center of a large cheese; if too low, the curd does not adhere together. The curing of a whole-milk cheese should be in an even temperature of about 70 deg.

"In order to show those present that acid develops after salting, Mr. Curtis had the curd salted before it would spin on the hot iron, and told the boys to go to dinner and they would find the acid on returning. After dinner the curd had the unmistakable acid smell, and Mr. Loomis' cheese-maker said the curd spun a full half inch on the hot iron.

"Mr. Curtis said the salt coagulated the albumen left in the curd and prevented it from rapidly decomposing and throwing the cheese off flavor. It also flavors the cheese and acts as a preservative of the caseine. Some one asked him what he did with bad milk. He laughingly answered, 'feed it to the hogs.'"

Butter-Making.

From an article in the *United States Dairyman* we select the following: The improved model method now in practice by the best butter-makers generally is to stop the churn as soon as the butter is collected in particles the size of a wheat kernel. Just before this, when the first signs of the separation of the butter are seen, the sides of the churn are washed down with cold water—usually below 60 deg., or about 50 deg., to not only prevent waste, but to harden the butter and make it easier to handle. When the granules are the size of wheat kernels, the buttermilk is drawn off, or the butter taken out of the buttermilk, as the case may be. If the butter is left in the churn, water is poured in to float the butter, which is then gently agitated a moment and the water drawn off. This operation is repeated until the water runs clear. Sometimes one of the washings is in brine, which coagulates the caseine into a soluble form and prepares it to be washed out afterward. In this way, it is believed, that purer, longer-keeping butter can be made. In some cases, however, butter-makers have customers who want a buttermilk flavor in their butter. They, therefore, do not wash the butter, or wash it very little. Such butter must be consumed at once, as it will not keep. By this method of retaining the butter in a granulated form, only sufficient working is required to evenly work in the salt. The less working the better.

The salt, after the butter is properly drained, can be carefully mixed with the butter by stirring. When thoroughly incorporated, barely pressing the butter together in a solid mass is all that is needed. If one does not want

butter very salty to the taste, it can be evenly and nicely salted by completely wetting it with saturated brine, then carefully pressing the granulated butter together and leaving in it as much of the strong brine as will remain. We have seen butter salted in this way, and it was very evenly and completely salted, having in it no undissolved grains of salt, but it was not as salt to the taste as some like. About an ounce to the pound is good salting, but more or less salt must be used to suit the taste of customers. None but refined salt should be put into butter. No salt is better for this purpose than the Higgin's "Eureka," which is honestly made and reliable. The principal office of the salt in butter is to impart an agreeable flavor, in conjunction with the natural aroma of fine butter; but it is a fact that too much salt injures good flavor, and it may, to some extent, be used to cover up or neutralize bad flavors. We do not recommend its use for this latter purpose, preferring that the natural flavor of butter from pure cream should be preserved.

Salt does very little to preserve butter. It retards the decomposition of the caseous and albuminous materials left in it; but if butter is properly made of cream not mixed with loppered milk, and is completely washed with pure water, it is a fair question if butter will not keep longer without salt than with it. There are instances on record where butter has kept sweet without salt for a long time. We half suspect that, though salt at first retards decomposition, the salt itself in time decomposes and becomes sodium and chlorine gas, or enters into new combinations with the constituents of the butter, and thus makes new compounds that do not in the least improve the flavor. We have no positive evidence of this, but have had this suspicion awakened by facts related about the keeping of butter and by a process of general reasoning. It is true that salt is one of the most staple compounds known, but we have proof that it can be resolved into its original elements when stronger affinities are presented for one or both of them to unite with. It would not, therefore, be strange if such decomposition sometimes follows when used in our food preparations.

Dairy Notes.

Much of the cheesy flavor present in bad butter is caused by allowing the cream to stand too long before it is churned.

In addition to the usual thickness of tarred paper in wooden silos a coating of hot tar on both thicknesses of boards is now proposed. This, it is claimed, will preserve the boards from rotting.

A churn should be scalded with boiling water, made alkaline with washing soda. Every particle of milk or cream should be removed. After being well washed, the churn should be rinsed by again using boiling water. The work can not be too carefully done.

Chopped clover keeps better than long, and it is found that allowing the clover to wilt on the ground before hauling to the silo is a great advantage. In fact, with any kind of crop, this wilting is beneficial. Clover ranks second as a silage crop, but corn is so far ahead on the list that the natural tendency is to make the clover into hay.

Overchurning is the cause to a very great extent of butter not keeping. Although ceasing to churn as soon as the butter has appeared in a granular form has been advocated for years by the best authorities, yet it is probable that three-fourths of the butter made in England is churned into a lump and the buttermilk thoroughly incorporated with it before the churning process is stayed.

Although the dairymen are gradually becoming educated to a knowledge of the advantages of pure-bred dairy stock, yet many of them require training in the art of making butter. To learn to make "gilt-

edged" butter is equivalent to learning a trade, and millions of dollars are annually lost to our dairymen through imperfect knowledge in making butter. In Europe schools of instruction are rapidly increasing, and there is a necessity for something of the kind in this country.

Dr. Wright, of the State of New York, an extensive dairyman and advocate of the Holstein cow for cheese-making, who will not keep a cow unless she makes 7,000 pounds of milk in a year, says: "I want them to run from that to 9,000 pounds, which my dairy will do. If we are breeding for butter, then the Jersey cow is the one to use; if we breed for cheese, the judgment of the great bulk of the farmers in Oneida county is that Holsteins are the best."

Baled silage must be the next product. In the powerful hay presses of the present day green grass could be pressed into such a compact mass that it would keep well. Chopped corn stalks can be pressed and packed into cakes and shipped, much as dates are now shipped. This green fodder would find a fine market in the cities. Something of the kind is now done in England. Edward Atkinson, some years since, shipped two sacks of silage safely to England. There is a good chance here for some enterprising man.

KANSAS FAIRS.

A complete list of the fairs to be held in Kansas this year:

Kansas State Fair Association—Topeka, September 17-22.
Western National Fair Association—Lawrence, September 3-8.
Anderson County Fair Association—Garnett, August 28-31.
Bourbon County Fair Association—Fort Scott, September 11-14.
Brown County Exposition Association—Hiawatha, September 4-7.
Caney Valley Fair Association—Grenola, September 26-29.
Chase County Agricultural Society—(Cottonwood Falls), Elmdale, September 26-28.
Cherokee County Agricultural and Stock Association—Columbus, October 11-14.
Cheyenne County Agricultural Association—Wano, September 15-18.
Clay County Fair Association—Clay Center, September 4-7.
Coffey County Fair Association—Burlington, September 10-14.
Crawley County Fair and Driving Park Association—Winfield, September 3-7.
Kansas Central Agricultural Society—Junction City, September 21-23.
Ellis County Agricultural Society—Hays City, October 2-4.
Franklin County Agricultural Society—Ottawa, September 17-21.
Harvey County Fair Association—Newton, September 11-14.
Jefferson County Agricultural and Mechanical Association—Oskaloosa, September 11-14.
Jewell County Agricultural and Industrial Society—Mankato, September 18-21.
LaCygne District Fair Association—LaCygne, September 4-7.
Linn County Fair Association—Mound City, September 17-21.
Pleasanton Fair Association—Pleasanton, September 18-21.
Marion County Agricultural Society—Peabody, September 5-7.
Montgomery County Agricultural Society—Independence, September 4-8.
Morris County Exposition Company—Council Grove, September 25-28.
Neosho Fair Association—Seneca, September 18-21.
Sabetha District Fair Association—Sabetha, August 28-31.
Osage County Fair Association—Burlingame, September 11-14.
Osborne County Fair Association—Osborne, September 11-14.
Ottawa County Fair Association and Mechanics' Institute—Minneapolis, September 25-28.
Phillips County Agricultural and Mechanical Association—Phillipsburg, September 18-21.
Pratt County Agricultural Society—Pratt City, September 4-7.
Hutchinson Fair Association—Hutchinson, October 2-5.
Blue and Kansas Valley Agricultural Society—Mantah, September 18-21.
Plainville Fair Association—Plainville, September 25-28.
Rush County Industrial Fair Association—LaCrosse, September 19-21.
Saline County Agricultural, Horticultural and Mechanical Association—Salina, September 11-14.
Smith County Agricultural Society—Smith Center, September 19-21.
Washington County Live Stock, Agricultural and Mechanical Association—Greenleaf, September 12-14.
Neosho Valley District Fair Association—Neosho Falls, September 24-28.

The work teams must be given plenty of grain at this time, for the reason that work is usually very pressing, and they must be kept steadily at work. At the same time, a good nip at the grass will be found beneficial.

Get a supply of good oil to use upon the machinery. It is very poor economy to use cheap oil. The saving of a few cents in the cost of the oil is a small item in comparison with what is saved by using good oil on machinery.

Juan A. Pizzini, editor and publisher of the *Catholic Visitor*, Richmond, Va., says: Having tried Shallenberger's Antidote for Malaria, we do not hesitate to say, from personal experience, that in our case it acted like a charm, and did all the Doctor claims for it, and we would assuredly have recourse to it again if exposed to Malaria. Sold by druggists.

Correspondence.

Water Supply For Kansas.

EDITOR KANSAS FARMER:—Permit me through your valuable columns to have a friendly talk with the farmers of the State regarding the water supply. For many years the importance and value of storing water on farms has been strongly impressed upon my mind. The economic value of a good pond of water is not altogether appreciated. It gives not only water in abundance at all seasons for the farm stock, saves lives of valuable animals in seasons of drouth, adds to the health and general condition and profitability of the horses, cattle and hogs at all times, also adds to the climatic influences which bring rain. A good pond of water of one acre or more on every farm in Kansas would do more to bring seasonable rains than any other influence. The farmer who stores a generous supply of water on his farm for winter and summer, not only adds to the comfort and profit of his stock, but adds more than double the cost of his pond to the value of his farm. An observation of more than twenty years in Kansas, convinces me that not one farm in ten in our State has an adequate supply of water for all seasons, that the cost of securing such a supply has been over estimated, that the benefits of such ponds have been under-estimated and that no investment that a farmer can make in Kansas to-day will return to him one-tenth as much profit in dollars and cents and as great satisfaction as making a pond for stock water. It is not uncommon to see cattle and other farm animals driven a mile or more every season, once or possibly twice per day for water. On many farms where there are ample arrangements for housing and feeding stock, good homes built, convenient barns and good fences, the important item of plenty of water has been overlooked.

There is scarcely 100 acres of land in Kansas that does not present in some part of it a suitable place for making a pond. The selection should be made with reference to convenience of pasture grounds or feeding lots, where the ponds will be free from the drainage from the residence and barns. There is no large expense attending the making of a pond. When the site has been selected that will give a half to an acre of water with a depth of four to six feet in the deepest part, the work of plowing and excavating can be easily done with a team, plow and an ordinary road scraper. I have seen excellent and durable ponds made across a short draw or depression, but often when the attempt is made to utilize a ravine, the result is that the current of water in a heavy rain is so swift as to wash out the head of the dam. The best ponds are to be found out in prairie fields where the water shed is sufficient to give a good supply of water and the location not subject to a swift current during storms. As a pond of water gives better returns for the money invested than any other spot on the farm, it will pay to select the best place the farm offers. During the past two years I have seen thirsty, suffering animals driven more than a mile a day, during the summer, from farms where fifty dollars worth of work would have furnished a splendid pond of stock water winter and summer. Animals will drink at least three times each day during hot weather if they have the opportunity, and the inhumanity as well as the monied loss of giving water but once a day ought to urge this subject upon the attention of every intelligent farmer. That plenty of water can be stored in ponds upon almost every farm in Kansas can scarcely be denied, and the influence of such bodies of water upon the atmosphere in securing more equable precipitation of moisture is a practical and plain proposition. The excavation for the pond may be commenced at once and carried on as rapidly as the general farm work will admit. It is particularly desirable that a sufficient depth be secured by damming and excavating to hold a large enough body of water to maintain its purity and that provision be made for the overflow at the head or lower portion of the pond. It is not the object of this article to point out the simple details of making a pond. The size and depth all vary with the necessities of the farm and the "lay" of the ground. It is a good plan to fence a pond to keep stock out of it, and convey the water

by a pipe into troughs, where they can drink. All these minor points may be enlarged upon or changed—the one point which I wish to make is to induce every farmer who has not a good supply of water to try the experiment of making a pond. It will pay big as an investment, and in the satisfaction every humane man feels in providing well for the dumb brutes in his care and it will pay as a contribution towards securing more frequent rains. The best time to begin making a pond is now.

J. K. HUDSON.

Topeka, Kas., June 19.

Two Truths to Be Learned.

EDITOR KANSAS FARMER:—If a man could realize these two truths he would never favor any tax direct or indirect on the articles of international trade: first, that money is not wealth to the nation at large, no matter what it is to an individual; second, that all commerce between nations or communities is merely the exchange of exports for imports, and to the nation is barter. You will see at once that your county cannot be long receiving commodities from beyond its borders unless it gives something in the shape of labor's products. Were you all ever so rich your money must come to an end. So indeed it is with all individuals, except those who live on interest. Now, although you can take a cargo of goods to Liverpool, get your letter of credit on some New York bank and come home, some other person will load that ship or some other vessel with a return cargo. So the average of all international commerce is only barter of imports for exports. That is now demonstrated to all who can reason. Now then, every tax that is put on an import slides off upon the things to be exported, and *vice versa*; put it on the export and it slides off upon the things to be imported. This will be demonstrated if you will imagine yourself to be at your counter trading. You are, suppose, the United States, and you have a bale of cotton or a ton of wheat. Up comes Belgium with a ton of steel rails and offers them for \$28. You have been trading heretofore on equal terms, and you gave your ton of wheat or bale of cotton for the ton of rails as prices had ruled. But a new tariff of just \$28 is on the rails, and Belgium, after paying the tax, lands his rails on your counter and asks \$56 for them. Can you put more on your articles? No. But you must now give two tons of wheat or two bales of cotton for the rails. In other words, and bear it in mind, the purchasing power of your cotton and wheat has been reduced one-half. So, if the tax had been put on your cotton or wheat you must have put it on their price and Belgium's ton of rails could only have taken from you one-half and left the remainder with you. By about 1871 the disturbing influence of the war on prices was much lessened and the operation of our tax on tobacco, spirits and imports was in full swing. From that day on there has been a steady decline on the average in the prices of all products. Why? Because about seven-eighths or more of them are our exports. Cotton from 25 cents on down to 9 or 10 (lowest prices); tobacco from 10 to 4; flour from \$7 to \$3.50 per barrel; hams from 17 to 7 cents; wheat from \$2 to 80 cents; wool from 45 to 20 cents; corn from 76 to 38 cents; pork from \$26 to \$7.80 per barrel; and so on, all New York prices. But these are about all our exports. Moreover, we raise no more tobacco than we did in 1850—400,000,000 pounds, and should raise 2,000,000,000; little more cotton—some 7,000,000 bales, when we should raise 20,000,000; Louisiana makes only half as much sugar as she did in 1853; when she should make over 2,000,000 hogsheads, only some 200,000 are made; and so on, according to our increase of population. Flour has increased and corn because our population has increased. We make steel rails because the great railroad systems own the mills and care not what the rails cost; we must pay for them. The blatherskite about our tax on rails cheapening the cost of their production—as if a tax could—as if a mere resolve of a few idle men in Congress could thus increase wealth and surpass man's effort as a laborer. Let them resolve us big crops and high prices. Inventions, use of black sand, Martin's furnace, etc., reduced cost of steel.

British manufacturers are doing all they can to make fools believe they want our tariff repealed. Years ago we heard of British

gold agitating against slavery. We now hear the same class talking about Cobden Clubs that once talked about Essex Hall. Moralists, philosophers, the world over, agitate their doctrines to make converts. British manufacturers know that our free trade treaty with Venezuela drove them out of her ports and filled Venezuela with our sewing machines, glassware, brooms, brushes, machinery, saw-mills, axes, fancy goods, crockery, nails, screws. Two years before that treaty we bought only a few hundred thousands of dollars worth of her for cash; now we take millions worth of her coffee and hides in exchange for manufactures. Our commerce ought to equal England's, that has half as many people; ought to be twelve times that of Belgium's with her 5,000,000 souls; ought to be sixty times more than New South Wales with her 1,000,000 persons; yet it is not half as much as England's (hers is three and a half billions per year); only as much again as little Belgium's or Holland's; and but seven times more than New South Wales, though we have sixty times more people.

Our commerce stands with Russia's, little better than Turkey's or Mexico's (*pro rata*) and other ill-governed lands that have few internal improvements. Truly, with our grand rivers, our scattered population and splendid prairie regions, our vast numbers, too, and our railways, lakes, bays, ports, etc., our commerce with the world ought to at least equal New Zealand's or the colony of New South Wales, and in its sum amount to over \$10,000,000,000, instead of as it is, being little over \$1,000,000,000. Manufactures, like the glucose, cottonseed oil, and others, should be more than quintupled. Millions of our people now idle or unprofitably employed raising corn and wheat only, ought to be active in cotton, tobacco, hemp, or builders, suppliers and sellers of ships. In their place we have some few steel rail mills and other factories that confessedly don't pay without protection on one hand and crushing the life out of our freedom on the other by laws and by teachings as misleading as were those against free soil a few years ago. Then they abhorred free soil, freedom shirkers; now they abhor free trade. Good Lord, that ever an American could have been learned to hate freedom. "Give me liberty or give me death." And of all the most glorious things of life, freedom to trade is the sweetest, next to freedom to move.

CLARKE IRVINE.

Oregon, Mo.

Farmers and Protective Tariff.

EDITOR KANSAS FARMER:—In your issue of May 17, 1888, I find an article on tariff protection, which it is the interest of every farmer to have answered in a candid, impartial way. Looking over the KANSAS FARMER carefully it leaves with me the impression that you, Mr. Editor, are endeavoring (and succeeding in your endeavor) to make your paper a good farmer's paper, a claim that few of our so-called farmer and agricultural papers can justly make. Now, sir, the question of tariff is to-day one of vital importance to the farmer, above any other class of citizens. As a producer he is the most important, as a laborer the chief worker.

The gentleman writing the article, Mr. Henry Butler, is undoubtedly sincere, but he has not studied the question. What England or any other nation does or wishes to do, has not the slightest bearing on the question. All the pauper labor countries of Europe, the countries where I have seen the farmer a perfect slave to the monied and industrial manufacturing countries—Russia, France, Portugal, Spain, Italy and Austria, are all high tariff countries. In England, a free trade country, the farmer is a very different man; whether a cereal and vegetable raiser, cattle or horse breeder, he is generally well-to-do and comfortable, even as a tenant. This is the truth; against this, the imagination of our high tariff friends, not facts that can interest the farmer.

Let me go further. England, says Mr. Blaine, in his "Twenty Years of Congress," page 208, Vol. 1, did away with protective tariff as soon as her manufactures could take care of themselves. Let me quote his exact words: "When by long experiment and persistent effort England had carried her fabrics to perfection; when by the large accumulation of wealth and the force of reserved capital she could command facilities which poorer nations could not rival; when

by the talent of her inventors, developed under the stimulus of large reward, she had surpassed all other countries in the magnitude and effectiveness of her machinery, she proclaimed free trade and persuasively urged it upon all lands with which she had commercial intercourse."

As long as England was made the lever of Mr. Butler's article, I feel free to partly answer him with England. Beginning, let me say that our machinery is as perfect as England's, and more perfect; for, by our statistics of exports, the farmer will see that we have been exporting large quantities of it to be used in English mills and factories. English manufacturers have no more capital or wealth than ours, and the wages paid in English mills and factories in 1886-87 were: Average female work, 37.6 cents per day; average male work, 89.3 cents per day. In the United States: Average female work, 37.43 cents per day; average male work, 88.8 cents per day. The gentleman has taken for granted what he has been told by our protectionists, without looking into it himself. Wages in mills and factories in England is not lower than in the United States. (See Gotha's labor statistics 1887, page 91.) Let us be candid in this matter and in a farmer's paper argue with the good of the farmer in view. I feel sure, Mr. Editor, that this is your desire.

The high tariff is taxing the farmer on everything that he uses, from his bridle for the horse to the cast-off shirt of flimsy material, due to protective high tariff. He, as the principal consumer of manufactured goods, pays not only the greater part of the \$240,000,000 that, as import duties, go into the United States Treasury, but twice as much as that again that the manufacturer is enabled to put on or add to the price of home-made goods, by virtue of that tariff. Can the farmer stand it any longer? Is it just to him? The mills, factories and shops of the country employ 3,000,000 people, these are consumers of farmer's products, admitted. There are 1,800,000 more employed in trade and transportation, also consumers of farm products, admitted. But there are, every year, deceived by the tariff promises to labor, 800,000 immigrants coming to this country; these either compete with the mill and factory hands, bring down their wages and bring on the strike, or enter in competition with the farmer.

Again, there is already a surplus of wheat and other grain produced in this country, and the poor farmer does have the price made in Liverpool and not here, except by gambling grain rings. He has to pay the heavy tariff tax, but has no protection for himself, and is not allowed even to put the price on what he produces. When Mr. Butler, whom I judge to be a young gentleman, grows older, puts aside any political influences and judges from facts, he will discover that his plea in regard to protection and high tariff is not based on any "indisputable fact."

In Great Britain there are more than 38,000,000 of people living on less ground than the States of Illinois and Missouri contain. Of course there is poverty when half the land there is owned by a few, who obtained it during the high tariff times up to 1846. In the United States the same is happening. The farmer every year is sending East an average of \$5.00 for every man, woman and child as a protective indirect tax to the manufacturing capitalist. The capitalist sends it back as a loan at high interest on the farmer's land, and the farmer eventually loses the land. No, Mr. Butler, protection of high tariff is death to our farmers.

J. E. FERREIRA.

Odin, Ill., June 2, 1888.

Shingles--Roofing--Harrowing.

EDITOR KANSAS FARMER:—Very often one wants to save the shingles for future use when changing a roof. The best way I know of is to take a spade and commence at the top, and shove the spade up under square with the shingles and pry them off; then take a hammer and draw all the nails you can, going through course by course. After a little practice, one can get them off, and if not too old can relay them. The first roof I ever tried was 16x26, had been laid eleven years; two of us were only a few hours in taking them off and packing them, and the most of them were saved, making a fair roof. Care should be taken not to lay them too close, or they will warp when wet. To shingle a roof is easy, but to new

hands some ways are better than others. My present way is to take a straight-edge board 6 inches wide, the length of the roof if not too long, if long, take two; for each board take two pieces 1x2 inches and 3 1/4 feet long, nail a little block on one side at end. To commence to shingle a roof, take your sticks and lay on roof with block end down and up, then lay on your straight-edge board low enough so that the upper edge will be low enough for first course of shingles to lay against; by so doing you will have your eaves straight without sawing.

After first course, move up board four and one half inches, and turn over your sticks with little blocks under; that will hold your straight-edge in place for the next course; after it is laid, make the straight-edge boards four and one-half inches wide and 2 feet long take one and lay against your long board, that will give you a chance to lay another course by moving it along as fast as you shingle. As you go along put No. 2 board above it and you have a chance to lay another course; by doing it right three courses can be laid every time you move your long board. Nail your sticks to roof as near upper end as possible; by so doing you will have a roof free from nail-holes. New hands by a little practice will put on a plain roof nearly as fast and well as old mechanics.

To save room in a story-and-a-half house, upper joists are generally only 2x6; if over 10 feet long they will spring. To strengthen them, put another joist on opposite against studding; then put a two-luch block between them in centre and spike; that will make them better to bridge as they will be only about 10 inches apart. The cost is small and it stops all of the springing, after the floor is laid.

From two years' experience I am satisfied that a loose, slanting tooth harrow is superior to any other I have ever used for thorough work and ease of draft; I tried ours on new breaking last fall, and was surprised how easy two horses would take it along and the good work it did.

E. W. BROWN.

Vining, Clay Co., Kas.

Shocking Up.

EDITOR KANSAS FARMER:—Under ordinary circumstances grain should not be allowed to remain lying on the ground for any considerable length of time. In other words, the shocking should be kept up reasonably close to the binding. While occasionally it may answer to let bound grain remain on the ground a day or two without shocking up, there is considerable risk and the safest plan will be to avoid it. If properly shocked up and carefully capped the grain can be left some time in the shock without serious damage. One mistake that is very often made is that the shocks are made too large; if not properly set up they gradually twist down. Not more than fifteen bundles of wheat or twelve of oats should be put up in one shock. Set the bundles down firmly, all leaning slightly toward the center. One advantage with the self-binders is that the bundles are of a uniform size and can be shocked up in much better shape than when some are large and others small. The heads should all be drawn together before capping. Care should be taken to have the outside of the shock snug and tight, so that the wind will not blow in too much rain. If the bundles are reasonably small and they are carefully drawn together at the top, a good bundle is all that will be necessary to cap. When only one bundle is used the band should be slipped back reasonably close to the butt of the bundle, and then break the straw as evenly as possible out all around. Let the butt of the bundle stand up. I prefer this plan with a small shock to putting on two bundles and laying them on flat. But with good sized bundles a dozen or fifteen ought to make a shock large enough for two bundles to be used as caps. Oats will cure thoroughly in a good shock and can be left several days if necessary. Every farmer understands that as far as possible it is not good economy to allow grain, especially wheat, rye, oats or barley to remain out too long, or rather, any longer than can be avoided; yet at the same time there are so many causes that will arise that may render this necessary that I have always found it a good plan to take pains to shock up carefully; the longer time required to do the work properly is comparatively a small item

in comparison with the risks incurred. My rule always has been to take considerable pains to harvest and store a crop after it is raised, and with small grain shocking up is quite an item in saving in a good condition.

N. J. SHEPHERD.

Eldon, Miller Co., Mo.

Burlington Insurance Co. -- Its Prompt Payment of Losses.

We find the following testimonials in the Fort Madison (Iowa) DEMOCRAT, and reprint them for the benefit of our readers, as the Burlington does a large business in this State and has an enviable reputation for prompt and satisfactory settlement of its losses. The company is now in the twenty-eighth year of an honorable business career, is solid financially and ably managed and on these important grounds is justly a favorite with our people.

\$1,451.50.

FORT MADISON, IOWA, May 10, 1888.

To the Public: My property, which was destroyed by fire on May 15th inst., was insured in the Burlington Insurance Co. My loss, including seven head of horses and three colts, amounted to \$1,051.50. The insurance on my mother's barn, which was also destroyed in that fire, was \$400. The agent notified the company of my loss, stating that all of my horses were burned up and that I would like to have that loss adjusted as soon as possible, so that I could buy other horses, to cultivate my farm. The company received his notice yesterday, the 18th of May. I had prepared a schedule of my loss which amounted to \$1,051.50, which the company accepted, as well as the \$400 on my mother's barn, and to-day (the day after the company received the notice), the adjuster called and gave me two drafts amounting to \$1,451.50 without a single cent of discount. A company that will pay its losses so promptly and in full without reduction or discount and consider the inconvenience of a farmer at this time of the year, who is thrown out of the use of his horses, deserves the patronage of all farmers, and I would highly recommend the "Old Burlington."

J. G. MORRISON.

\$603.00.

FORT MADISON, IOWA, May 10, 1888.

To the Public: We have to-day received from the Burlington Insurance company \$603.00, without discount, in full for our barn and contents, which was destroyed by fire and we herewith express our satisfaction of the settlement. We have always heard that the "Burlington" pays its losses promptly and on the square and always deals honorably with its patrons. We know no better company than the Old Burlington.

J. J. STORMS.

B. S. STORMS.

KANSAS WEEKLY WEATHER REPORT.

Furnished by the Kansas Weather Service.

Abstract for the week ending Thursday, June 14, 1888:

PREFACE.

No reports received up to and including the 17th from the following counties, viz.: Cheyenne, Rawlins, Decatur, Norton, Phillips, Graham, Sheridan, Thomas, Sherman, Wallace, Logan, Gove, Trego, Ellis, Republic, Washington, Marshall, Nemaha and Brown, hence the following bulletin does not refer to said counties. It is hoped the observers will endeavor to mail their reports on Friday mornings always.

Rainfall.—There has been an excess of rain in Chautauqua, Cowley, the contiguous portions of Butler, Sedgwick and Sumner, in Doniphan, Atchison, Jefferson and Douglas. A deficiency in the southwestern and southeastern counties. Elsewhere an average rainfall.

Temperature and sunshine.—The temperature has ranged from normal to slightly above normal, while sunshine has been the prevailing condition.

Results.—Wheat harvest is now in progress as far north as the Kaw and Smoky Hill valleys, yet there are many fields even in the southern counties that will not be entered for a week yet. A better quality and larger yield than ever is generally promised. Rye has made a good crop and is being harvested. Corn is in good color and fine condition all over the State. Oats are in excellent condition; the straw will be short because so much of it has gone to head. The hay crop will be light except in the northwestern and extreme southern counties.

In Woodson, where the chinch bugs were so numerous, they have disappeared so rapidly as to excite comment, while in Johnson the young are hatching out in abundance.

The dry hot winds are, in a measure, straining garden vegetation in the southwestern counties.

The web worm is at work in Kingman and Harper, but so far confines himself to the "tumble" weeds; he is also numerous in Cowley and Chautauqua, where sweet potato plants and gardens are his victims.

TOPEKA REPORT.

For the week ending Saturday, June 16, 1888: **Temperature.**—Highest at 2 p. m., 93° on the 14th, 15th and 16th; lowest at same hour, 78° Sunday the 10th. Highest recorded during the week, 90° on Saturday the 16th; lowest, 48° Monday the 11th.

Rainfall.—Rain fell on the 14th and 15th—in all, 61-100 of an inch.

WEATHER PREDICTIONS.

By Prof. C. C. Blake, Topeka.

[Correspondence and remittances for the KANSAS FARMER on account of this Weather Department should be directed to C. C. Blake, Topeka, Kas. See advertisement of Blake's Almanac on another page.]

RAINFALL FOR WEEK ENDING JUNE 30.

In Quebec, New Brunswick and the State of Maine there will be a fair amount of rain; but a deficiency in the rest of New England, New York, Pennsylvania and New Jersey; with a little more in Delaware, Maryland, Virginia, West Virginia and western North Carolina; and about an average amount in the rest of the South Atlantic States, though there will be some deficient spots. There will be excess in Alabama, Mississippi, Louisiana, Texas, Kentucky and Tennessee. It will be about normal in Arkansas, with less in the Indian Territory and northwestern Texas. In Ohio, Indiana and Illinois most places will have rain, though the showers will be streaked; but Wisconsin and Michigan will not have quite so much. Ontario will have fair rains, with less in Manitoba and northern Minnesota. Iowa, southern Minnesota, eastern Nebraska and southeastern Dakota will have an excess and in spots a decided excess. Missouri will have an average amount with rather more in the northern than the southern part. In Kansas the rainfall will average about normal and we think that there will be few places that will not have some rain during the week and few that will have much excess. The total amount of rain in Kansas for June if distributed evenly over the whole State will amount to about three and one-half inches. Western Nebraska will not have much rain, but in the center of the State there will be more. Southwestern Dakota will have a fair amount, with less in the northern part. Montana, Wyoming and Colorado will be about normal, with a little excess in parts of New Mexico. On the Pacific coast there will be very little rain during the week. The temperature in most of the eastern and southern States will average warmer than usual; but in most of the western States it will not be quite so warm, except in Minnesota, Dakota and Montana.

We think that during the last week in June a storm will extend from the West Indies to Newfoundland off the Atlantic coast, and being unable to calculate the exact path of this ocean storm, we cannot tell just how far west it will swing; hence it leaves an element of doubt as to the amount of precipitation in the Atlantic States for the week. We think the rainfall in the Western States for the week will be fully as much as we have indicated, though the distribution we have assigned it may not be mathematically correct.

THE CORN CROP.

In our Almanac and in the KANSAS FARMER of May 24, we advised farmers in the latitude of Kansas to plant all their spare land in corn till the first of July. We notice in our exchanges that many of them have taken our advice and are planting corn with the lister in the wheat stubble as soon as the wheat is cut. We now urge them to continue this policy vigorously till the first of July in all parts of Kansas, even to the extreme western line of the State. By having the shocks of wheat and oats set in straight rows, the field can be planted with a lister as fast as the grain is cut, and by having the corn rows a little wider next to the shock rows the teams can drive straddle of a corn row while stacking the wheat, which should be done the first day that it is dry enough, as there will be no long dry spells after wheat harvest, though there will be dry weather enough for stacking if it is done promptly. It will be remembered that for the past two years we have been making doleful predictions on account of the expected drouths, and repeatedly stated that business could not continue successfully with crop failures; but now the situation is changed, as the causes which produced the drouths no longer exist, and we shall have plenty of rain for the corn throughout the season, except that some small spots may be missed for short spells. The old crop is all used up and the new crop will command good prices; hence this is a matter which vitally affects the pocket of every farmer. A little extra effort now will pay better than twice the amount of effort at another time, and especially is this true from the fact that, as stated in our

The Old Doctors

Drew blood, modern doctors cleanse it; hence the increased demand for Alteratives. It is now well known that most diseases are due, not to over-abundance, but to impurity, of the Blood; and it is equally well attested that no blood medicine is so efficacious as Ayer's Sarsaparilla.

"One of my children had a large sore break out on the leg. We applied simple remedies, for a while, thinking the sore would shortly heal. But it grew worse. We sought medical advice, and were told that an alterative medicine was necessary. Ayer's Sarsaparilla being

Recommended

above all others, we used it with marvelous results. The sore healed and health and strength rapidly returned."—J. J. Armstrong, Weimar, Texas.

"I find Ayer's Sarsaparilla to be an admirable remedy for the cure of blood diseases. I prescribe it, and it does the work every time."—E. L. Pater, M. D., Manhattan, Kansas.

"We have sold Ayer's Sarsaparilla here for over thirty years and always recommend it when asked to name the best blood-purifier."—W. T. McLean, Druggist, Augusta, Ohio.

"Ayer's medicines continue to be the standard remedies in spite of all competition."—T. W. Richmond, Bear Lake, Mich.

Ayer's Sarsaparilla,

PREPARED BY

Dr. J. C. Ayer & Co., Lowell, Mass.
Price \$1; six bottles, \$5. Worth \$5 a bottle.

Almanac, many sections will suffer this fall on account of early frosts. But in the latitude of Kansas, especially in the Western States, we do not expect any frost that will injure corn till very late, probably not till the middle of October, by which time corn planted now will have matured, as the hot moist weather will force it forward very rapidly. We think corn planted now in Kansas will make heavy merchantable corn; but even if some of it should be touched with frost it can be fed to stock; and thus the earlier planted can be saved for sale. The lister makes possible now what would not be if farmers had to wait till the wheat is stacked, and then had to plow the field and plant in the old way. Then again this would not be practicable in many years, as we frequently have so much dry weather in July and August that the corn would not come up or would soon wither; but now the ground is moist and warm and listed corn will do well, as showers will generally be plentiful yet not heavy enough to wash it out. It may be objected by some that this will not leave ground for fall wheat, but "a bird in the hand is worth two in the bush"—corn planted now will surely make a paying crop, but such is not always the case with wheat. Then we think wheat will do better if sown among the corn this fall, or if sown after the early-planted corn has been cut up. A field kept constantly in wheat does not do well—it is better to change to corn ground frequently. If this matter is pushed vigorously, Kansas farmers will generally be out of debt within the next twelve months.

The tornado on May 26th, in northern Kansas, did immense damage to property. Over one hundred losses from that and the storms succeeding it have been reported to the Burlington Insurance Company, alone, and this old, reliable company now has several adjusters at work in the territory, who are settling with the policy holders as fast as they can get around.

There was a shower of stones near Delores, in the volcanic region of the Argentine Republic, a few weeks ago, that lasted for more than a minute. The stones fell as thick as hail, and varied in size from a pebble to a very respectable boulder. Great damage was done to trees, while barns and outhouses were demolished, many domestic animals killed, and large numbers of wild geese and hawks on the wing.

Teachers during vacation, farmers' sons when work is slack on the farm, and any others not fully and profitably employed, can learn something to their advantage by applying to B. F. Johnson & Co., 1009 Main street, Richmond, Va.

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.

My Prairie Castle.

[A friend of the KANSAS FARMER sends us the following excellent poem.]

My prairie castle has no dome
To pierce the skies;
No learned tourists hither come,
Admiring rapturously, or dumb
With calm surprise.

Before my prairie castle stand
Two wardens strong,
And when the north wind sweeps the land
They bow their tops serene and grand,
And chant a song.

A wild, weird song—a song of night;
They seem to say:
"Though deep the thunder, dark the night—
As through all wrong shall rise the right,
So comes the day."

No lights of gas the street requires,
But when the din
And bustle of the day expires,
We watch the wild, bright prairie fires
Which hedge us in.

A painting hedge no prince could buy
Each window holds;
The tasseled corn, the nodding rye,
The billowy fields of wheat which lie
In verdant folds.

The plowman's horses, watchful, eye
The sunset glow;
The herd-boy whistles, strong and high,
Some square old-fashioned melody
Of long ago.

And when the night falls on the glade,
The men repeat—
Gathered together in the shade—
The district gossip, neighbors' trade,
Or price of wheat.

And down the little starbeams flit,
And guard the whole;
I drop my knitting as I sit—
The undisturbed content of it
So fills my soul.

A Song of Rest.

O, weary Hands! that, all the day,
Were set to labor hard and long,
Now softly fall the shadows long,
The bells are rung for even song.
An hour ago the golden sun
Sank slowly down into the west;
Poor, weary Hands, your toil is done;
'Tis time for rest!—'tis time for rest!

O, weary Feet! that many a mile
Have trudged along a stony way,
At last ye reach the trusting stile;
No longer fear to go astray.
The gently-bending, rustling trees,
Rock the young birds within the nest,
And softly sings the quiet breeze:
'Tis time for rest!—'tis time for rest!

O, weary Eyes! from which the tears
Fell many a time like thunder rain—
O, weary Heart! that through the years
Beat with such bitter, restless pain,
To-night forget the stormy strife,
And know, what heaven shall send, is best;
Lay down the tangled web of life;
'Tis time for rest!—'tis time for rest!
—Chambers' Magazine.

Your Servant.

When the Lord suggested that the greatest should be the servant, he couldn't have meant only to reduce the "greatest" to a proper state of humility, although when a human being has found his greatest delight in helping his fellow beings, he has arrived at his highest estate; he has found a most becoming setting for himself; and if his greatness had not been apparent before, he is now appropriately called great.

This serving others extends from the little things which are waiting to be done—the house work and the farm work—to the large interests which are included in the needed reforms and the like. It seems to me wrong to call any of the things necessary to be done little, when one part goes to make up a whole as well as another; the man and woman who appreciate the equal dignity of all kinds of labor soonest claim greatness, because they have intelligently found the worth of serving.

The young man or young woman who has to work for a living, too often shrinks from the title of "servant," and prefers the more ambiguous expression "hired man" or "hired girl." If the hired man and hired girl have a fair amount of moral and intellectual culture, the name will matter not, for the serving will be of a better quality; but if "working out" only means a durance with just enough work to keep the place, the name servant is not deserved.

Yes, let the greatest be the servant. He who has become intelligently careful, exact and skillful will serve best and fill his place

so well that he cannot be spared from it. His services will be sought, and he can name his own recompense. He will rise in the respect of his employer, and what is more, his self-respect will increase his manly dignity; and as I observed, if he was not "great" before, his "serving" has made him so.

The greater number of farmers and housekeepers who read the KANSAS FARMER are able to supply illustrations to the foregoing abstract principles from their own fortunate and unfortunate experiences with hired help. The man who is intelligently helpful is rare. Yet there is occasionally a man who makes your interests his own, and takes pride in keeping all parts of the farm work running smoothly. He makes an intelligent survey of what needs to be done, and enters into the work steadily, and keeps up the same motion to the end.

There are many more who surprise you the first day or two by the vast amount of work they are able to accomplish; an unwary employer bases the wages of his new "man" on such facts. Some housewives have been similarly unwary; but that is a tender point of which little need be said at present. A contrast is under my observation at the present writing: A bright, well-bred farmer's daughter, who "doesn't have to," but is willing to be of some assistance in smoothing over some of the rough places of life, is a being for whom I am entertaining the utmost respect. I don't know what to think of some of the girls who are above "working out," and calmly and unsympathetically answer your request for a little timely help by informing you that they are not obliged to work for a living, or words to that effect. I only wonder in a vague way when an advanced wisdom and culture will make such girls see the greatness in serving others. The girl who is willing to be helpful and has gone beyond the state of false pride which prohibits her from serving me, is my friend, and if our tastes and aspirations are similar, I can accept her friendship as that of an equal.

A better civilization, a more thorough culture will teach that it is not the work of serving which degrades, but the petty aims and unworthy aspirations of the servant which makes him less the equal of his employer.

—PIEBE PARMALEE.

Around the House.

EDITOR KANSAS FARMER:—To a considerable extent the surroundings of the farm house may be properly construed as indicating the tastes and habits of the inmates. With the advantages now afforded it is so easy to make the home surroundings such as they should be, that a failure to do this is almost a sure indication of a lack of will. There is no necessity for incurring a heavy expense; in fact, good judgment would be against such a plan, and especially when the farmer is not so situated as to be perfectly able to do whatever his taste might consider necessary. But the yard can be kept clean, the fence in good repair, the yard well seeded down to good grass, and this of itself will add considerably to the neat appearance of the home. Even if it is not possible to have a full supply of evergreen and ornamental trees, shrubs and flowers, a good growth of grass will of itself be no inconsiderable item.

Too often the mistake is made of doing too much rather than just enough; while not quite as bad as barrenness, overcrowding is to be avoided. I consider a good even stand of grass in the yard as one of the essentials, and with these as a start or a foundation, a very few trees or shrubs or a flower bed or two will add very much to the beauty of the home. There is more in the care taken to keep neat and clean than in the amount of things growing, and this you can give at a very small expense, as a little work given at odd times will cost little. And it is because it costs so little that a failure to give it shows a lack of appreciation of having the home surroundings neat and pleasant.

N. J. SHEPHERD.

Eldon, Miller Co., Mo.

"My father, at about the age of 50, lost all the hair from the top of his head. After one month's trial of Ayer's Hair Vigor, the hair began coming, and, in three months, he had a fine growth of hair of the natural color."—P. J. Cullen, Saratoga Springs, N. Y.

The first edition of Webster's Dictionary was published in 1828.

The Course of Material Progress.

Finally, a comprehensive review of the economic changes of the last quarter of a century, and a careful balancing of what seems to have been good and what seems to have been evil in respect to results, would seem to warrant the following conclusions: That the immense material progress that these changes have entailed has been for mankind in general, movement upward, and not downward; for the better and not for the worse; and that the epoch of time under consideration will hereafter rank in history as one that has had no parallel, but which corresponds in importance with the periods that successively followed the crusades, the invention of gunpowder, the emancipation of thought through the reformation and the invention of the steam engine; when the whole plane of civilization and humanity rose to a higher level; each great movement being accompanied by social disturbances of great magnitude and serious import, but which experience proved were but temporary in their nature and infinitesimal in their influence for evil in comparison with the good that followed. And what the watchman standing on this higher eminence can now see is, that the time has come when the population of the world commands the means of a comfortable subsistence in a greater degree and with less of effort than ever before; and what he may reasonably expect to see at no very remote period is, the dawn of a day when human poverty will mean more distinctly than ever physical disability, mental incapacity, or unpardonable viciousness or laziness.—Hon. David A. Wells, in *Popular Science Monthly*.

Prepare for Poisons.

It is well to foster the common dread for deadly poisons. Familiarity with them should never be permitted to "breed contempt." The effect of some of the poisons used in killing insects is deadly and sure. Substances containing arsenic are most to be dreaded, because they are most numerous. Every one should know what to do in case some human being is unfortunate enough to swallow a poisonous dose. Such a case may not occur once in a dozen years, yet it is worth while to be prepared for that one case. The symptoms of arsenical poisoning are sickness of the stomach, vomiting of bloody matter and difficult breathing, a cold feeling in the feet, and low, hard, quick pulse, with the most insatiable thirst. There will be stains about the mouth. Vomiting should be encouraged in the usual way by giving salt or mustard and lukewarm water, lime water, soap and water, or ipecac. Prevent the poison from attacking the lining membrane of the stomach. For this purpose magnesia and chalk, with water, sugar and linseed, or sweet oil should be swallowed. The best antidote is the hydrated sesquioxide of iron. (In some of the prepared arsenical insecticides this is added to the preparation to neutralize the poisonous effect of the arsenic.) It may be purchased at any drug store, but should be obtained as fresh as possible, as it soon loses its efficacy. If the dose of poison is a small one, the violent symptoms will soon subside, and all that will be required is the usual care as to diet, etc., remembering that the inflammation of the stomach is very severe, and that there is very great danger of chronic inflammation or permanent paralysis. It cannot be too often reiterated that the different forms of arsenic are the most horrible and deadly of poisons, and with them an ounce of prevention is worth many pounds of cure. If you use that which may cause death, it is no more than right that you should also use that which may hold death at bay.—Ex.

A Hint to the Housewife.

Stewed apples, pears and plums are favorite articles of diet. For breakfast or luncheon, in the dining-room or in the nursery, there are few table dishes more wholesome and more delicious than well-stewed fruit served up with cream or custard. There are many persons, however, who cannot eat it on account either of the acidity of the fruit or the excess of sugar necessary to make it palatable. Sugar does not, of course, counteract acidity, it only disguises it, and its use in large quantities is calculated to retard digestion. The housewife may, therefore, be grateful for the reminder that a pinch—a very small pinch—of bicarbonate of soda, sprinkled over the fruit previously to cook-

ing, will save sugar, and will render the dish at once more palatable and more wholesome.—*British Medical Journal*.

Care of the Eyes.

A paper was read not long ago at a sanitary convention, held at Ann Arbor, Mich., on "Hygiene in Relation to the Eye," in which the author, Dr. C. J. Lundy, of Detroit, laid down the following rules for the care of the eyes:

1. Avoid reading and studying by poor light.
2. Light should come from the side, and not from the back or from the front.
3. Do not read or study while suffering great bodily fatigue or during recovery from illness.
4. Do not read while lying down.
5. Do not use the eyes too long at a time for near work, but give them occasional periods of rest.
6. Reading and study should be done systematically.
7. During study avoid the stooping position, or whatever tends to produce congestion of the head and face.
8. Select well-printed books.
9. Correct errors of refraction with proper glasses.
10. Avoid bad hygienic conditions and the use of alcohol and tobacco.
11. Take sufficient exercise in the open air.
12. Let the physical keep pace with the mental culture, for asthenopia is most usually observed in those who are lacking in physical development.

Fashion Notes.

Colored straw bonnets are much worn.

The small poke is the bonnet of the day, the hour, and the season.

Never were ribbons so much utilized in dress decorations as at present.

Cream, yellow, white and golden green will be the favorite color for sashes this summer.

The list of new open-work dress materials is endless and seems to receive accessions every day.

The new features in dresses this summer are shown more in the bodices and sleeves than in the skirts.

There is no end to the accessories of the toilet in the way of lace, lisse and tulle fichus, plastrons, collars, collarettes, capes, jabots and detachable waistcoats.

Among the many shades of green worn is one called willow that is exceedingly becoming to blondes, brunettes, old and young women, and it can be worn with almost any bright shade of yellow, blue, red or pink, or a darker green.

Two big buttons or one at the throat of a loose front cutaway jacket, falling off from a waistcoat fastened with a closely set line of small gold, silver, or cat's-eye buttons, assist in the make-up of a pretty and becoming bodice for a little woman or one of medium height.

Many of the natty tailor gowns of serge, French camels' hair, silk warp Henrietta cloth, or Thibet, show in negligé fashion a masculine-looking shirt waist of surah or foulard, and below this a girle of velvet or kid daintily embroidered. Others have ample vests of corded silk trimmed with narrow rows of white and gold gimp set on in straight rows, the vest fastened with small gilt buttons. There are wide pocket flaps on the hips corded with gold, and a diminutive pocket on the left side of the chest holds the dainty mouchoir.

ROYAL

BAKING POWDER
Absolutely Pure.

This powder never varies. A marvel of purity, strength and wholesomeness. More economical than the ordinary kinds, and cannot be sold in competition with the multitude of low-test, short-weight alum or phosphate powders. Sold only in cans. ROYAL BAKING POWDER CO., 106 Wall street, New York.

The Young Folks.

"Face the Other Way, Boys!"

[General Sheridan's sickness recalls his great military achievements. The following poem, by Rose E. Angel, recalls the battle of Winchester. Sheridan, twenty miles away, heard the Union soldiers were retreating from the enemy. He rushed to the scene and meeting the men, called everywhere as he rode among them—"Face the other way, boys, we're going back!" And they obeyed.]

Whence this fear-filled army, flying from the field?
What strong foe has met them, forced them thus to yield?
See the star-hung banner dragged 'neath their feet
In the shame and terror of their wild retreat!
Hark! The voice of Sheridan o'er the wreck-stricken track,
"Face the other way, boys, we are going back!"

O, they knew their Leader, gallant soldier, he,
Not a man but knew he led back to victory!
Royally they rallied, those weary men in blue,
Royally they honored him, their Leader tried and true!
Clear and sharp his call rang out across his army's track,
"Face the other way, boys, we are going back!"

Back to win the battle—where is all their fear?
O, faint-hearted soldier, shout that voice to hear!
Loyally obeying, as soldiers and as men,
Back they marched with Sheridan, to take the field again!
Not a man among them could hope or courage lack,
"Face the other way, boys, we are going back!"

The spirit of man,
Which God inspired, cannot together perish
With this corporeal clod. —Milton.

Better to dwell in Freedom's hall,
With a cold, damp floor and mouldering wall,
Than bow the head and bend the knee
In the proudest palace of slavery. —Moore.

If you're idle you're destroy'd;
All his force on you he tries;
Be but watchful and employ'd,
Soon the baffled tempter flies. —Matteux.

Happy the man, and happy he alone,
He who can call to-day his own;
He who secure within can say,
To-morrow do thy worst, for I have lived to-day. —Dryden.

Grit and Independences of Africa's Sons.

When Great Britain annexed the Transvaal in 1877 many of the sturdy Boer farmers declared that they would never consent to British rule. Their fathers, they said, had left their old homes in Cape Colony to escape British domination, and now they in turn were ready to abandon their farms and bury themselves in some region far northward, even among savage tribes, if they might thus maintain their independence. So it happened that some time before their brethren set up the South African republic and went to war for their independence 700 Boers, men, women and children, yoked their oxen to big wagons, that were piled high with all their movable property, and set out across the Kalahari desert to find new homes in the depths of Africa.

We have already told something of their terrible sufferings in the parched Kalahari region and of their toilsome two years' pilgrimage, during which many of them perished, before they reached the verdant and salubrious plateau where they at last planted their future homes. They had traveled over 1,000 miles to gain Humpata, the site of their new settlement, which is almost directly west of the Portuguese town of Mossamedes and about 150 miles from the Atlantic ocean. The German explorer Denwitz recently visited them, and brought back some interesting news of this remarkable colony.

There they are, blue-eyed men and women of European ancestry, in the midst of wild tribes who are not always friendly. A while ago Chief Jau attacked the village, but the Boers had plenty of powder and ball and taught his tribe a lesson they will not soon forget. They have reared their houses, built of wood and clay and covered with thatch, upon a rolling plain, through which runs a river. There are usually two rooms in the little cottages. Their furniture is very primitive. They cannot easily renew many of the household articles they brought from the Transvaal, and so they pack them away and bring them out only on festive occasions. The largest building in the place is the little church, where the head of the colony conducts divine services on Sundays. The colonists are Protestants. About the only book they have is the Bible, and the children are taught to read from its pages.

The Boers till no more ground than is necessary to provide them with grain and vegetables; but the country is full of game, and

the men and boys spend a great deal of their time hunting. They kill many elephants and hippopotami. When they first went to Humpata they could not descend from the mountainous border of the plateau to the coast region except along a narrow footpath. They used to drive their oxen down, carry their wagons in pieces down the declivity, and then put them together and haul their ivory and hides to the coast. With the help of the Portuguese they have built a good wagon road through the mountains. Now every month they send a little caravan to Mossamedes to sell the products of the chase, and carry back to their home in the great wilderness such wares of Europe as they require.

The young girls are trained by their mothers in all household cares, and many of them since reaching their new homes have been wedded to young men in the colony. The men take the greatest pride in their guns and cattle. Their herd suffered terribly on the long march from the Transvaal, but from the survivors they have reared a plentiful supply of stock.

Here these white people are living, voluntarily exiled from all signs of civilization except such as they have produced in their little village; and yet they think their solitude and independence are not so complete as they ought to be. The thought troubles them that Portugal claims sovereignty over their territory. Portugal has not attempted in any way to interfere in their affairs. They form a little republic, and the voice of the majority rules. Still, to many of them, the idea is insupportable that they live in territory that is claimed by any European power. So they are seriously thinking of pulling up stakes and getting outside even of the nominal jurisdiction of the Portuguese.

A number of the men have been sent by the colony to explore that part of the Bihe country northeast of Humpata which is not included in Portuguese territory. It is this plateau that Cameron said some years ago was well adapted for European occupancy. If the delegation reports that the country is fitted for the establishment of a colony, there is every probability that the Boers will take up their march again. In the land they hope to enter they will be about twice as far from the sea as they now are, and the nearest port will be Benguela, in Angola. These 700 Boers cut a unique figure in African colonization. They have shown that it is possible for a large party of whites to make their way into the depths of Africa, several hundred miles within the tropics, and to live there in comparative comfort. It is likely that they are the only white people who are competent to achieve success in such an undertaking. —New York Sun.

Shoe Buckles.

Shoe buckles are said to have been first worn in England at the close of the Seventeenth century. They were adopted by fashionable young men, but were much disliked by their elders. In 1693 the clergy and others denounced these ornaments, but in spite of their opposition, the buckles held their ground and were worn for nearly 100 years. At the end of that period the old-fashioned shoe strings were restored to favor. This threw the buckle-makers out of employment and they implored the Prince of Wales to take pity on them. He kindly listened to their petition and forbade any member of the household from appearing in shoes tied with strings. But his attempt to struggle with fashion proved ineffectual, and the buckle-makers were forced to find other means of gaining a livelihood.

Glass Made From Paper.

Paper window glass is now an assured fact, says *Golden Days*. A window pane is made of white paper, manufactured from cotton or linen, and modified by chemical action. Afterward the paper is dipped into a preparation of camphor and alcohol, which makes it like parchment. From this point it can be molded and cut into remarkable tough sheets, entirely transparent, and it can be dyed with almost any of the aniline colors, the result being a transparent sheet, showing far more vivid hues than the best glass exhibits.

The benefits of vacation season may be greatly enhanced, if, at the same time, the blood is being cleansed and vitalized by the use of Ayer's Sarsaparilla. A good appetite, fresh vigor, and buoyant spirits attend the use of this wonderful medicine.

"Luck" on the Railroad.

Upon one of Chicago's great railways there is one locomotive which is profoundly respected because no bad spirit has ever got into any part of it, boiler, furnace, crank or whistle. In fifteen years it has never been off the track; has never harmed anybody; has never failed to bring in its train. Its record is as pure as was that of George Washington before the cherry tree episode. The engineers all like this one machine because the devils, great and small, all keep away from it. Whether one good priest flung some holy water on the bell in the night is not known, but the black imps keep away from engine 69.

According to the account given by an employe upon the same railway, the company has four new dining cars, of which one was unlucky for three months, and then its bad luck left it. It got off the track often, its tables stood deserted, its food uneaten, until in three months its losses reached \$800. The other three cars, meanwhile, behaved well and made plenty of money. At last the bad car took fire from its kitchen and burned out that department, and when it was repaired and sent back to work it began to do well and has made money "right along." "It seemed," said the workman, "as though the bad luck was all burned out of her." —Cor. Chicago Journal.

Beware of Scrofula

Scrofula is probably more general than any other disease. It is insidious in character, and manifests itself in running sores, pustular eruptions, boils, swellings, enlarged joints, abscesses, sore eyes, etc. Hood's Sarsaparilla expels all trace of scrofula from the blood, leaving it pure, enriched, and healthy.

"I was severely afflicted with scrofula, and over a year had two running sores on my neck. Took five bottles Hood's Sarsaparilla, and am cured." C. E. LOVEJOY, Lowell, Mass.

C. A. Arnold, Arnold, Me., had scrofulous sores for seven years, spring and fall. Hood's Sarsaparilla cured him.

Salt Rheum

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William Spies, Elyria, O., suffered greatly from erysipelas and salt rheum, caused by handling tobacco. At times his hands would crack open and bleed. He tried various preparations without aid; finally took Hood's Sarsaparilla, and now says: "I am entirely well."

"My son had salt rheum on his hands and on the calves of his legs. He took Hood's Sarsaparilla and is entirely cured." J. B. Stanton, Mt. Vernon, Ohio.

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J. B. McAFEE, GENERAL AGENT.
H. A. HEATH, BUSINESS MANAGER.
W. A. PFEFFER, MANAGING EDITOR.

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	One inch.	Two inches.	Quarter column.	Half column.	One column.
1 week . . .	\$ 2 00	\$ 3 50	\$ 6 50	\$ 12 00	\$ 20 00
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3 months . .	14 00	25 00	40 00	75 00	125 00
6 months . .	25 00	45 00	75 00	135 00	225 00
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Electrons must have metal base.
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.

To insure prompt publication of an advertisement send the cash with the order, however monthly or quarterly payments may be arranged by parties who are well known to the publishers or when acceptable references are given.

Every advertiser will receive a copy of the paper free during the publication of the advertisement.
Address all orders,
KANSAS FARMER CO.,
Topeka, Kas.

Senator Stewart, of Nevada, favored this office last week with some useful public documents.

Senator Plumb's hand is seen in the Senate amendment appropriating \$100,000 to continue experiments in the manufacture of sorghum sugar.

The State Horticultural Society was in session yesterday at Holton, Jackson county. "Horace" is reporting the proceedings for the KANSAS FARMER of next week.

In our notice of the Tonganoxie Dairy Association, it is printed that the meeting was held in a grove nine miles out from Shawnee, when the manuscript read nine miles out from Lawrence.

The candidates of the United Labor party for President and Vice President Robert H. Cowdry, of Illinois, and W. H. T. Wakefield, of Kansas. Mr. Wakefield is editor of the *Anti-Monopolist*.

The train which left Wichita last Sunday morning for Chicago, carried sheaves of ripe wheat and samples of headed oats, with corn stalks that would have tasseled in a few days had they been left in the ground.

Don't fail to read what Prof. Blake says this week about planting corn in wheat fields as soon as the wheat is cut. No man will lose by following his advice in this matter, though many may lose by not doing so. A stitch in time, you know.

We observe that our neighbor and friend R. B. Welsh is a candidate for the office of county attorney in this, Shawnee county. Mr. Welsh is a first-class man every way, and will not disappoint the people. He is a good lawyer, and his daily walk among his fellow men is honorable and clean. In the hands of such a man no public or private interest would suffer.

FISK AND BROOKS.

These are the candidates of the Prohibition party for President and Vice President. The following brief sketch of them will be of interest:

General Clinton B. Fisk, of New Jersey, who has been nominated for President of the United States by the Prohibitionists, was born in York, Livingston county, N. Y., in 1828. His father emigrated soon after to Michigan. The boy labored hard in preparing himself for the University of Michigan at Ann Arbor, earning a part of his living during the time; but he was not destined to secure a University education, and entered upon a mercantile career. He was very successful as merchant, miller and banker.

In 1859 he removed to St. Louis, and here, two years later, when the war broke out, he entered the military service of the United States and became Colonel of the Thirty-third Missouri Infantry. He was promoted to be Brigadier General in 1862 and breveted Major General in 1865, having served with Grant at Vicksburg.

After the war General Fisk was engaged with General O. O. Howard in the management of the Freedmen's Bureau in Tennessee and Kentucky, and was active in establishing the Fisk University in Nashville, which was named for him. After his removal to New Jersey he became prominent in educational and other fields. He is a trustee of Dickinson college, of Drew Theological seminary and Pennington seminary, New Jersey, and of Albion college, Michigan. He is of the Methodist faith, and has long been prominent from his success as a church worker. Since 1874 he has been President of the Board of Indian Commissioners. He has long been prominently identified with the cause of temperance, and was Prohibition candidate for Governor of New Jersey in 1886.

Dr. John A. Brooks, of Missouri, who has been nominated on the ticket for Vice President, has done good service in the Prohibition cause in his State and in the Southwest. He is a forcible speaker. As agent of the National Prohibition Bureau he has canvassed several States of the Southwest, and as chairman of the State Prohibition committee had done a great deal to build up his party in that region. Dr. Brooks was once a Democrat.

THE STATE FAIR.

The premium list for the Kansas State Fair to be held at Topeka September 17 to 22, is now out. It is an interesting book of 104 pages containing a good deal of matter which will interest all classes of people in Kansas. Secretary Moon is doing a great deal of hard work, he wants to see a grand outpouring of Kansas people and Kansas products at the fair, and acting under a Kansas inspiration he is working up details and interesting many persons who were never so much wrought up before about the fair.

This premium list contains an unusually long list of general premiums besides a great many special premiums, some of which were published in the KANSAS FARMER last week, besides some new ones offered since. Geo. H. Hughes, poultry-breeder, offers \$5 for best display of fancy pigeons exhibited by a resident of Kansas, for second best, one hundred pounds of granulated sea shell; for third best, pair of close performing tumbler pigeons. Also, for best exhibition of white-faced Spanish fowls, one pair White Leghorns, valued at \$8.

John Haman, breeder of rabbits, offers a pair of white English rabbits for the largest and best display of rabbits. Geo. W. Watson, real estate dealer,

Topeka, offers a first premium of \$10 for largest and best specimen pumpkin; second, \$2. The pumpkins for which the premiums are awarded to become the property of Mr. Watson.

Send for a copy of the list. Let us have a rousing fair—one that will do to brag on.

A CHAPTER ON SMALL FARMS.

The average size of American farms is less now than it was formerly, as the census reports show, and the fact is as appropriate as it is natural. In a country where the land belongs to a few persons, growth of population does not affect the size of farms except as to renters; but with us where the farmers mostly own the land they till, as settlement spreads and population increases, farms multiply, increasing in number from two sources, the taking up of new lands and the division of old farms. New homes are opened on the public lands, and increasing population in old communities, with its increasing trade, increases the price of lands and makes smaller farms desirable. Fifty acres is now worth as much as a hundred acres was twenty-five or thirty years ago in many parts of the country; and this value is not mere matter of show on the tax rolls, the land is made that much more valuable for purposes of comfort and profit.

With the growth of population, trade increases; new towns are built, old towns grow larger and richer, new railways are constructed, manufactures are established, more consumers are appearing every day, and all these things create new demands for products which can be grown on less acres of land. The new farmer on the frontier or beyond raises corn, chiefly, in the way of grain, and not very much of that, because he is so far away from market; he lives in primitive style because he is outside of "civilization;" his wants are few and easily supplied, because "Society" makes no demands upon him. But as settlement advances, and civilizing agencies appear, all things become new; he changes his personal habits, he changes his methods of farming, he raises a greater variety of crops, and he cultivates his land better, and when the new depot or the new town without a depot, is started near him, it brings him facilities for disposing of products which, before, he did not pretend to raise at all, and because he could not raise them profitably. And then, with the density of population, and with the increase of trade facilities, the market gets closer and closer to him, so that he sells milk, butter, cheese, eggs, beef, pork, mutton, etc., making more profit and enjoying more comforts on a little farm, surrounded by busy neighbors, than he did when he was alone on the open prairie.

This illustrates a principle which farmers in Kansas need to study. It is applicable in every community, and the lesson to be learned from it ought to be applied in practice everywhere. Why use twenty acres of ground for any purpose when ten acres can be made to do as well? Or, if the suggestion will be more forcible, why does or why can a farmer raise more valuable produce from a half-acre or quarter-acre garden than he does on five times as much ground in any other part of the farm? As soon as a farmer is so situated that strawberries, or cabbage, or celery or turnips, can be grown profitably, then grow those crops in place of corn and wheat, and one acre will produce more profit than ten acres under the old dispensation. The small farmers about great cities often realize \$500 profit on a single acre of ground.

All farmers are not so well situated as that, but the principle involved is applicable to all. Kansas farmers,

speaking generally, waste a great deal of time and labor, and they do actually throw away, or let blow away, or they burn or otherwise destroy much very valuable material every year, material which if saved and properly used would pay for the time and labor devoted to it many times. Every acre of land used for tillage, or for the growth of grass or fruit, needs fertilizing frequently. No land is too rich, though much is too poor. The manure which is wasted or destroyed on an average Kansas farm would show its value on the best land on the farm if only put on and in it where it could become decomposed and mixed with the soil for plant food.

Without going into details now, the point we make is that the time has come in Kansas for the farmers to begin changing their methods of farming, raising less (to the individual) wheat and corn, and more beef, pork, mutton, eggs, milk, butter, cheese, fruits, vegetables, etc. To do this will require the use of less land, resulting in increased profits. In cases where, under the more concentrated methods, there would be land to spare, let it be made into separate farms under new owners.

The subject will be referred to in future articles and viewed from different standpoints.

Another Case of Technical Nonsense.

The Michigan Legislature, at the last session, passed a local option law under which thirty odd counties since voted against licensing dramshops. As usual, the rum-sellers fought the law, and the Supreme court decided it to be unconstitutional on the grounds that the title of the law is, "An act to regulate the sale and manufacture of liquor," while the constitution provides that the title of a law shall include only one subject.

The *Western Rural*, commenting on the decision, expresses the honest opinion of a great many people. It says: "The decision is probably as technical as any ever delivered by a Supreme court. It may be law, but it is nonsense. The purpose of the constitutional provision is to prevent the enactment of law under such a title as might be apt to mislead the public. But there is nothing in the heading of this law to mislead anybody, and it is drawing things pretty fine for a court to hatch out such a decision. We should think, without knowing anything about it, that the court was composed of prohibitionists, who were determined to give a bold strike in the interest of prohibition. Whether that is the case or not, that will be the result. No people will quietly submit to such an opposition to their will. If the people cannot have what they want in one way, they will have it in another. Those thirty counties say that they do not want rum, and they are entitled to what they want. The rum business is the only business in the world that has the audacity to ride rough-shod over the popular will, and the miserable traffic will do that sort of thing once too often one of these days."

Patents to Kansas People.

The following list is prepared for the week ending Saturday, June 16, 1888, from the official records of the Patent office by Washington correspondent. A printed copy of any patent here named can be had for 25 cents.

Liquid meter—John C. McNamee, Hope.
Electric winding attachment for clocks—Andrew J. Reams, Augusta.
Grain drill—Daniel B. Bearden, Wilson.
Washing machine—Doub & Robbins, Walnut.

It is reported from some of the cities in Pennsylvania, that brewers have undertaken to defeat the operation of the high license law by running pipes from the breweries to the dwellings of their customers.

Emperor Frederick of Germany, died the 15th inst. at Berlin. His death had been expected almost daily during the last six months. His ailment was cancer, somewhat in the form which killed General Grant. His son, a healthy, vigorous man, succeeds him as Emperor William II.

Farmers should be on their guard during the harvest time and not let showers spoil any grain. Shocking should follow the binding as close as possible, and the shocks should be well placed so they will stand both wind and rain, and then well hooded with one "umbrella" sheaf, or with two sheaves broken in the middle.

A commercial house, reporting on the business situation last week, says the business failures occurring throughout the country during the last seven days number for the United States 209, and for Canada 23, or a total of 232 as compared with 250 last, and 205 the week previous. The corresponding week last year the figures were 213, made up of 193 in the United States and 20 in Canada. Failures are still unusually numerous on the Pacific coast, the number from that section this week being 42.

Among the subjects selected for four-minute addresses by the graduating class of the Agricultural college this year we note "The Self-made Man;" "Where Does the Farmer Come In?" "Capital in Brains;" "Training for Citizenship;" "The Farmer in Politics;" "Monopolies;" "Our Kitchen;" "Woman's Right;" "Higher Education;" "Dignity of Labor;" "Cost of Progress;" "The Home Acre." This is a wide range of subjects, all of them having relation to the greatest and best line of life—that on the farm.

Answering an inquiry about cutting ensilage corn, the editor of *Country Gentleman* says: "For so large a quantity as 200 tons, to be carried eighteen feet after cutting, a single horse tread-power would hardly be sufficient, and would not be satisfactory; although the difficulty would be lessened with a very heavy horse, and with a steep inclination of the moving platform. With a good two-horse power, you may put in twelve or fifteen tons a day, varying, however, very much with the attendance and other facilities, and in having the uncut fodder delivered close at hand. Even with two horses the 200 tons would require nearly a month, unless you have provided unusual facilities controlled with executive ability."

Mr. Whitehead, Lecturer of the National Grange, sends us a good deal of interesting matter which often comes handy in the expression of an idea. Recently, writing about the work which the Grange is doing, he says that while it is in nowise a party organization, and the discussion of partisan politics and sectarian religion is prohibited in its meetings, yet it is doing a great work in bringing about a purer atmosphere in the politics of our country. It does not try to make every member a Democrat or every member a Republican, but it does make better Democrats and better Republicans. It teaches the farmer to "affiliate with any party that will best carry out his interests," to "see that none but faithful, honest and competent men are nominated for all positions of trust, men who will unflinchingly stand by our industrial interests." And further, it encourages each member to do "all he can in his own party to put down bribery, corruption and trickery." Better men are being nominated in all parties.

Shall the Internal Revenue Tax be Abolished?

A friend sends us a printed article with request for publication of part of it if it meets with our views. We care nothing about whether other people's opinions and our own are alike. We are ready to publish a respectful communication at any time if it have relation to some matter of general interest or of special interest to farmers, without reference to the opinions expressed. Readers know where to find our opinions—in editorial articles and comments. We agree in principle with the writer of the particular article, but as he knows, for practical reasons we believe it would be better to remove the tax from tobacco except in the manufactured forms, as cigars, cigarettes, snuff, etc. The article was prepared by Mr. C. Coleman, Sabetha, Nemaha county, Kas., and published in the *American*, Washington, D. C. Below we quote the portion desired:

"I have noticed that a certain class of prohibitionists desire the reduction of the surplus revenue by the abolition of the internal tax on liquors and tobacco. They tell us that by the special tax on liquors, the government becomes a partner in crime, gives the business its moral support, and makes it respectable. A special tax does not make the government a partner in a business, or give it moral support and respectability any more than an ordinary tax. A few years ago there was special tax on matches, patent medicines, nearly all legal documents, and on the income of all persons who had an income of more than \$600 per annum. Was the government in partnership with all who paid these special taxes? Did it give them respectability and moral support? The proposition is absurd. They say that the tax does not lessen the consumption. That is an assertion which cannot be proved. Admitting for the sake of argument, that there has been a steady increase in the consumption of alcoholic liquors under a special tax, it can not be proved that it would not have been greater if the cost had been reduced 50 per cent. It is an axiom that increasing the cost of an article, even a necessity, decreases its consumption. I have not the statistics at hand, and do not know whether the consumption of alcoholic liquors has increased at a greater rate than the increase of the population or not. Considering the large and constantly increasing foreign element in our population, an increase in consumption would not be surprising. Among the white Americans, there has been a marked decrease, during the past twenty-five years, in the use of alcoholic liquors as a beverage.

Tobacco is almost universally acknowledged to be a useless, harmful luxury. Its effects are especially pernicious upon the young. Recognizing this fact the government has prohibited its use by the students at West Point and Annapolis. Decreasing the cost of an article increases its consumption. It looks as though the statesmen (?) who desire the repeal of the internal tax would like to make tobacco so cheap that a school boy could buy a bunch of cigarettes for a penny, and a drink of whisky for the same."

Judges for Herefords at the Fairs.

By order of special committee appointed by the Hereford association, the following named persons are respectfully suggested to the fair managers as competent to fill the position of "Expert Judges" in the Hereford classes, and sweepstakes, at the fairs this fall:

East of Mississippi River:—J. S. Carlyle, 328 W. Madison St., Chicago; J. G.

Imboden, Decatur, Ill.; Wm. Stocking, Rochelle, Ill.; W. H. Leonard, Louisville, Ky.; Jas. Soper, 472 W. Madison St., Chicago; John Searle, Buchanan, Mich.; Leo. Phillips, Mt. Carroll, Ill.; Geo. W. Shannon, Room 127 Exchange Building, Union Stock Yards, Chicago; Wm. Wick, 374 West Indiana St., Chicago; Thos. Smith, Crete, Ill.

West of Mississippi River:—John Gosling, Rockford, Ill.; Thos. Clark, Beecher, Ill.; Thos. Lewis, Beecher, Ill.; Geo. Waters, care of F. B. Crane, Topeka, Kas.; Wm. Watson, Turlington, Neb.; T. A. Simpson, Independence, Mo.; C. B. Stuart, La Fayette, Ind.; W. S. Vannatta, Fowler, Ind.; C. D. Hudson, Marshall, Mo.

It is earnestly requested by Hereford breeders that all judging shall be done by single judges, and that the selections shall be made from the above lists if possible.

The Business Situation.

Messrs. R. G. Dun & Co., in their report closing Friday last, say the moderate improvement in trade noticed a week ago does not yet seem to be more than the slight reaction which occasionally breaks a period of uncertainty and comparative inactivity. The signs of a lasting improvement in trade do not yet appear. Uncertainty still pervades and buyers are conservative, confining their transactions to immediate wants in most branches of business. In some, moreover, the cold and wet spring has so far curtailed trade that retailers are carrying over stocks larger than usual. There is uncertainty about the tariff and its effect upon many branches of manufacture; about the crops and the foreign demand for exportable products; about transportation rates in the near future, and about financial prospects. Want of confidence in the near future is the prevailing tone in all markets. This cannot be attributed to financial influences, for money is overabundant and quoted at 1 per cent., notwithstanding the renewal of gold exports.

The iron trade manifests no improvement, though sales of 39,000 tons of steel rails are reported for \$30 at mill, and the allotment is said to be disregarded by some Eastern makers. Southern pig iron is quoted at \$17 for No. 1, but the quality is not in all cases found satisfactory.

In the dry goods business there is a lack of activity, and yet in cotton goods a more confident feeling, with print cloths higher at 3.87 and low grades of bleached goods very firm. Woolens are still dull with very good transactions for men's goods, and wool is quoted lower at Chicago. Speculators have bought considerable quantities of Southern wool in the belief that there will be no change of duties, and hold at prices above the market. The spring trade in wholesale clothing does not appear to have been very satisfactory, and it is believed that retailers carry over unusually large stocks, though prices have been remarkably low.

Fourth of July—Half Rates.

For the Fourth of July, the Kansas City, Fort Scott & Memphis and Kansas City, Clinton & Springfield railroad companies will sell round trip excursion tickets to and from all stations on those lines at half rates, except that such tickets will not be sold at less rate than 25 cents. Tickets will be sold on July 3 and 4, good to return on the 5th.

Prof. Budd recommends the cutting of timber in summer when it is to be used for posts, ties, sills, etc. He says his attention was first directed to it by observing the extreme durability of poles cut in summer and used by the

early settlers of the prairies in making straw sheds and stables.

This is Not a Party Organ.

A few days ago the *Commonwealth* of this city had an editorial article beginning thus:

In the early part of the winter the *Capital*, the *KANSAS FARMER*, and the *Champion*, with one voice, informed the people of the State that the farmers of the State with one accord were demanding the nomination of a farmer for Governor, and that with equal unanimity they had agreed that A. W. Smith was the man, and hence followed the cry for "Farmer Smith" as the "peoples" man.

This is not a party organ, and we refer to the *Commonwealth's* article only to correct what seems to be an oversight on the part of our neighbor. The *KANSAS FARMER* was authorized to make the announcement of Mr. Smith's candidacy, which was done with pleasure, not however, as a partisan or from a partisan standpoint, and we availed ourselves of the opportunity to recommend him to his party as a man in every way fit for the office, and we urged specially the fact of his being a farmer actually and in his own proper person engaged in tilling the soil. The *KANSAS FARMER* did not make any fuss over Mr. Smith's candidacy as the *Commonwealth* seems to think we did, but our judgment then was, and it has not been modified in the least that the party would do well to place at the head of its ticket a man who in addition to every other needed qualification, is the only farmer among the list of candidates for governor.

It is folly to say that the "farmer racket," as the slang is, is out of place. Farmers have made Kansas all that it is to-day, and at this hour they constitute 75 per cent. of our population. Farmers are entitled to recognition in all parties. It will be a sad day for this country when to be a farmer is a disqualification for any office. We would be glad to see an intelligent, clever farmer at the head of every State ticket in Kansas this year.

State Veterinary Medical Association.

This is a much more useful body of men than they get credit for. They are really pioneers in a great field. Kansas is to be one of the great stock-raising regions of earth. As our farms increase in numbers so will domestic animals be multiplied, and under the new processes of agriculture, veterinarians are useful helpers.

This association held one of its regular meetings in Topeka last week. The first session was principally devoted to a discussion of needed legislation to protect the stock-owners of Kansas against the practice of veterinary charlatans. It was decided to draft a bill having this object in view, to be presented to the Legislature at its next session, and in order to have a full expression as to what should be embodied in such bill, it was decided to urge upon all members of the association the necessity for their presence at the next quarterly meeting, to be held in this city during fair week in September next.

The meeting will be open to stock-owners and others interested in this subject, and a cordial invitation is extended to all such to be present.

At the evening meeting papers were read as follows:

"The Therapeutics of Catarrhal Fever," by Dr. Epperson, of Ottawa. "The Clinical Therapeutics of Catarrh," by Dr. E. R. Allen, of Kansas City, cattle inspector for Kansas at the Kansas City stock yards. "Parturient Apoplexy," by Dr. Epperson.

This latter paper, as its title indicates, treats of a disease that follows calving, and is therefore of wide interest. It will be given to the readers of the *KANSAS FARMER* soon.

There was a general discussion of the papers read, and various cases occurring in the practice of the members were presented and discussed.

Horticulture.

DO FORESTS AFFECT RAINFALL?

At a meeting of farmers in Boston, recently, as reported in the *Massachusetts Ploughman*, Hon. John D. Lyman, of New Hampshire, an old and experienced man, delivered an address on the relation between forests and rainfall. We copy a few paragraphs.

I hardly know what particular subject to speak on, but I will speak of what I was taught and afterwards found was not true.

In my boyhood I believed that firewood would some time become scarce. But I have lived to be gray-headed, and yet find wood about as cheap in price as when I was a boy. I have heard it constantly talked that timber was about all gone and would last but a little while longer, and I have become gray-headed and there is as much timber as there was when I was a boy. I have an uncle more than 80 years of age who brings the wood to furnish the school, and he was careful to pick up all the hard wood and cut down dead trees, using this economy, expecting the firewood would soon be exhausted; but the supply is as great now as then. Now I own the land where my father some fifty-five years ago gave \$1 a cord for the wood standing on the stump. I should be very glad to sell the wood to-day at \$1 a cord standing. In those days there were no railroads in that section. Now, there is one within two miles; also one or two manufactories established within two miles. So I have no faith whatever that there is any likelihood that we or our children shall freeze to death for want of wood for fires. Neither have I any idea that timber will be so scarce that we shall have to do as they tell us our ancestors did—dig holes in the ground to live in. I have no doubt that there will be plenty of timber for years to come.

Neither do I believe that you can cut off trees and prevent rain from falling. A gentleman, declaring to me that he could do that, I asked if he could stop the evaporation of water. He said, no. Then, I said, when you have cut down all the trees and won't let the water come down, and it has all accumulated overhead, the oceans will all be dry and all the water will be in the sky. I do not agree with that theory. I do not say that very extensive rainfalls will not very slightly modify the climate. I do not say that very extensive forests do not affect the rainfall. If a man stamps on the earth and shakes the sun, it is not perceptible, but I do say you cannot measure it.

I do say that in cutting off the forests, the effect upon the rainfall is very little, not enough to be measured. Now, I presume on no other portion of the earth was there so large a forest, as within two or three years ago, there was in this country, and yet we have no record so far as I understand, to show there has been any perceptible change in the rainfall. At the Smithsonian Institute at Washington a record of the temperature and rainfall has been kept for forty-five years. The rainfall has been not a drop more or less for years. At Lowell I am informed that the record has been kept for sixty years, and their measurements do not indicate that the rainfall has increased or diminished in that time. At Albany, New York, the record has been kept 125 years, and this long record does not indicate that the rainfall has increased or diminished in that time. I was surprised with the facts when I went out West a few years ago thinking that the rainfall had increased. They had kept the account of the rainfall in Kansas since its first settlement, during the entire period; and the figures do not show that the rainfall has increased

since trees have been set out. I didn't think that a space as large as Kansas, about as large as England, could avoid being affected. I did think that changing that country from one vast field as it was with one little narrow line of trees along the stream, covered with buffalo grass, the buffalo grass growing five or six inches high and dying in the latter part of the summer and lying upon the ground dry, the ground retains the moisture falling upon it and running off almost like ledgy earth, and that grass and dry earth reflecting the sun so as to hold the moisture rather than to receive it; I did think that changing that whole country to one of productiveness, so that it produces twenty-five tons of corn to the acre a year; (it is wonderful in its productiveness;) I did think that changing that whole vast country to one of great productiveness would undoubtedly alter the temperature during the summer 10 degrees. With increased moisture and perhaps a shower, where in the state of moisture showers would not have occurred. A tree is a plant, and so is a spear of grass, and I take it that the same law governs both, and I believe again that if all that Kansas has produced in a given year could be collected in a mass in autumn—I mean all the vegetable and animal kingdoms have produced could be collected and set on fire, that the heat returned to the atmosphere would be no greater than the heat taken from the atmosphere in the production of that crop.

When Kansas grows three hundred pounds to the acre, there must be a great deal more heat taken than in the natural state of cultivation. Now in the same manner forests modify the climate to a certain extent. Now again is it a fact that forests have a great deal of influence in making the streams uniform?

I thought they did for I was taught so. To-day I rather think upon the whole, I don't believe it. If they do add to the uniformity of the streams it is so small an extent that it is not noticed. Mr. Roberts, the civil engineer, wrote in *Science*; he was employed on the rivers of the United States examining the coast system for a good many years. He said regarding the rivers: Rivers where the forests have been cut off and rivers where the forests still remain, rivers running through lands where never have been forests and where forests have always grown, and from his figures the inference is that the effect of forests upon streams has been insufficient to be determined by nature, so far as the river is concerned.

The river in which I fished from early boyhood to manhood, the greatest freshets upon it were over before my remembrance, according to the statement of old people. I see that it is said that certain rivers have diminished. I see the statement in one of our daily papers that the valley of the Housatonic has diminished very much within late years. I want to ask you—(because I am asking questions)—suppose the valley of the Housatonic should be made to produce as an entirety over two tons to the acre?

I ask you if that would not use up all the rainfall that fell while the grass was growing, so that there would be no surplus moisture? I want to ask another question. If, in the valley of the Merrimac every acre should grow two tons of hay, would it not use up the water in the stream within the next three months, so that there would be no water there? It is well known that the Nile is not so large at the mouth as back an hundred miles; that the water is used up by irrigation.

Now come to Massachusetts. How much water is there used up by a grow-

ing tree during its period of growth? If you can tell me this you can tell me what no one else has been able to do. I have asked many people; have questioned the Agricultural Department at Washington, the Smithsonian Institution, without answer sufficiently minute to amount to anything. My impressions are that trees during their period of active growth throw off very much more water than would have evaporated from the ground from which it came. If that be so another fundamental fact is not true. When trees are filled in summer time I find the ground drier than an ash heap. I wonder why it is dry. Then I reflect that Hall found out that the cabbage threw off from 30 to 50 per cent. of its weight in water. I went and studied up that fact. I also noticed this fact, and it is of importance. If you cut down a tree in the month of its growth, if you cut it right off at the butt and not trim it out any, in a few days that tree will be seasoned. If you don't believe it go right home from this meeting and cut down a tree and in two or three weeks if you don't have seasoned wood then my statement may be doubted. I do that when we cut oak timber and leave the limbs on. When it is cut in June, we find it seasoned when in December we go to take up the winter's firewood. We find if it is cut when the sap is out of the wood that it soon becomes sap-rotten. If you cut beech, poplar or birch for rails or posts cut them in June or July and let them lie with their limbs on. You will have wood then that is not rotten. You will have fine poles out of the birches or poplars, for they will be seasoned.

In relation to drouths. Now, as I understand it in this good little State of Massachusetts, the people settled down in Plymouth, with almost an endless forest, hundreds of miles in extent, and they were almost dried to death in the third or fourth years after settlement, I have forgotten which; so that they set apart a day for fasting and prayer that the Lord would send rain. Now they were settled on the edge of the biggest piece of woods on the globe. I presume there was a continuity of woods extending eight thousand miles in length with some cleared places, and yet, notwithstanding this vast amount of forests, notwithstanding the ocean right in front of them, from which evaporation was constantly going on, they had such a severe drouth as to occasion the selecting of a day of fasting and prayer. Twenty-three times during that first century they suffered drouth, making a period of drouth about as often as once in four years. It does not seem to me seasons of drouth are any more frequent now than then. My conviction is that the Creator has not placed it in our hands to frustrate His designs for making the earth for man's abode. In North America, if it were true, the early settlers of this section, by cutting off the trees, would have it in their power to render quite a portion of the globe uninhabitable.

Culture and Care of Trees and Plants.

This circular is intended to aid the purchaser in planting and taking care of the tree after planting. All roots must be excluded from sun and air. Immediately on return home, either plant at once or heel in, being careful to separate the roots. Never heel in bundles. Have fine ground, well packed around the roots, with a liberal supply of water.

Planting.—The ground must be well plowed and thoroughly pulverized, place tree or plant in tub or barrel of water, sufficient to cover roots, take trees along row, by horse or otherwise, have your holes sufficiently large to admit of all roots without cramping, put no

water in hole, plant but very little if any deeper, than they were in nursery. See that no cavity or air chambers exist around the roots. Hold the tree with one hand and with spade sift only fine ground around and among the roots, packing ground among roots with your hand and when nearly full to surface, tramp very firm, afterwards mound up with fine soil.

Management.—From first of May wash and rub well with a very strong solution of soapsuds, immediately after which, to prevent sun-scald and borers, tie up carefully with slough grass, wrapping firm with wrapping yarn, this will also protect your trees the following winter from rabbits. The following spring this should be removed and trees thoroughly washed again with the above solution, replacing the grass as before.

Cultivation.—I cannot too strongly urge thorough cultivation both ways, which is positively essential to the life and growth of your trees, a large majority of the best horticulturists of this and other States strongly recommend the planting of corn among the trees, not closer than five feet, thus the corn protects the trees from the severe winds and catches snow in winter, which is beneficial to the soil. No grass or weeds should be permitted to grow.

Cutting Back.—This should be done either the first or second spring, we prefer the second spring, giving a better chance to shape the head of your tree, this however we leave to your own judgment.

Pruning.—The trees must be well pruned to produce fine fruit. The grower should inform himself from good authority as to how and when the pruning should be done.

Standard Pears.—Notching or slipping the bark of the roots at intervals for the purpose of creating fibrous roots, thus helping to sustain life and adding growth to the tree, is recommended.

Dwarf Pears.—Trees should be planted on the heaviest land, avoiding extreme sandy soil; heavy or clay land is best for the dwarf pear. Coal ashes and salt together, with old iron or iron shavings, applied to all pear trees, is recommended. Notch the tree at short intervals, at the connection of graft, with a sharp knife, and by so doing roots will form, generally making a half standard, thus obtaining the advantage of both dwarf and standard. We prefer doing this the second spring. Keep well banked up. Fruit worth \$5 per bushel is worth a good deal of extra labor.

Plums.—Should be planted in clusters and different varieties together to make them productive. Chickens and pigs should by all means have free access to the plum grove, or the garing process must be resorted to, thus protecting the fruit from the curculio; that being accomplished the plum is the finest fruit grown and very profitable. The treatment of the plum will be applicable to the cherry to a great extent. Quince similar to the dwarf pear.

Blackberries and Raspberries.—Will do well if thorough culture be given and the canes kept well cut back after fruiting, two or three times, to harden up the wood for winter and insure a crop the coming year.

Apricots.—Should be cut back in September to avoid winter-killing.

Strawberries.—Should be trained in the matted row system, good cultivation, and all runners kept cut off; you will then obtain abundance of the most delicious fruit known.

Grapes.—Clean culture and the vine properly pruned in February, will always insure an abundant crop of that much-craved and most profitable fruit.

Evergreens.—Evergreens on light sandy soil should be supplied at planting with a liberal supply of clay or heavy soil, well mixed, deep in proximity to the roots, and in case of drouth, three holes encircling the tree at a distance of about three feet, holding a bucket or more and a liberal supply of neutralized water furnished.

Roses.—Should have very rich deep soil, and either mulched or cultivated. With water treatment as above if required.—*J. E. White's Circular.*

The Poultry Yard.

Malay and Indian Game.

"Every good breed is a valuable acquisition to our stock," is an axiom among liberal-minded fanciers. The advent of the Indian Game (Cornish) and English Redcap to our country will doubtless keep the "boom" a booming for some time to come; and while many will be impressed with the valuable table qualities of the Indian Game, there may be others who will look upon them as the old Malay worked over for American customers. To set this matter right in advance of the breeding and showing of the Indian Game, we will give the readers of the *Monthly* a description of both breeds, so they can see and judge for themselves.

The Malays are the best known of the southern Asiatic fowls, and the first mammoth breed introduced into Europe from the Indian Archipelago. At first they were supposed to be pure game from their cruel look and combative propensities. Scores of this breed landed at Falmouth, England, in the first half of the present century. Army officers and civilians of the British services in India were continually sending specimens home, some being mistaken for the purer games of India, such as the Aseel, Ayam Jallak, Kurnool and Pulligar breeds, but in the hands of the English cockers they proved unworthy of the name Game.

The Malays are found pure and mixed in all the Malaysian Islands. Doubtless, they originally came with the Malay race from Continental Asia. The origin of the breed is not known, but judging from the contour, bared throat, skinny face, low flat comb, pearly-edged eyes, projecting eyebrows, slanting back, hard plumage, long legs, scant and drooping tail and vicious character, are descended from the gigantic Khun breed of Malibar, and some of the native game. They are exceedingly tall rather than large, have remarkably long yellow legs, large bones, angular in outline, erect and stilted in form, carriage clumsy and awkward, plumage scant, hard and narrow, the breast and points of shoulders bare; cock's tail short, scanty and drooping; wings carried high and projecting from the shoulders vulture-like; eyes usually yellow, peared around the edges, and sunk beneath projecting eyebrows; face naked and skinny; throat bare; comb, peculiar to the breed, resembling in shape half an oval walnut; beak, hawk-like; crow of the cock not different from an ordinary farmyard bird; moderate layers of deep-tinted eggs; flesh yellow, coarse and stringy; color varying through shades of gray, brown, cinnamon and buff; weight from eight to nine and a half pounds for cocks, and from six to seven pounds for hens.

Our readers will understand from the foregoing description, that this applies to the Malay pure and simple. The modified Malay as now bred in England and this country for show purposes, have a more pleasing appearance, and their flesh is much better, while they show an approach to fixed colors, for we have Black-breasted Reds, Brown Reds, Whites, Blacks and Pyles, all more or less attractive.

Somehow, the common Malay breed is often confounded with the pure Malay Game, although the latter is quite a small fowl in comparison to the stilty Malay, it generally has a small

pea comb, though single combs are not uncommon, short legs, large tail, plumage, silver gray with black breast, or golden with green and bronze neck and tail, for fancy colors. However, they have the same cruel and pugnacious look of the larger breed.

The pure Malay Game is much venerated by the Dyaks of Borneo. They tell us that the evil spirit was once a beautiful woman, and dwelt near the evening star. She asked of her wooer a worthy gift, and that when he presented her a deer she rejected it with contempt, when he offered a *mias* (the great orang outang) she turned her back upon it, but when, in desperation, he went out and slew a man noted for his courage and strength, brought back his head and threw it at her feet, she smiled upon him, and said that was indeed a gift worthy of her. Since European intercourse, and a more advanced state of civilization, the custom of offering the head of a man to appease the wrath of the evil spirit, who they say rides and directs the equatorial typhoons, is abandoned; but in place of this savage and revolting gift, they fill a *prahn* with the choicest foods, fruits and flowers with sail set, and upon its mast is placed a champion Malay cock with outstretched wings, bearing in its beak its own bleeding heart.—Wallace, in *Poultry Monthly*.

Preservation of Eggs.

At the London Dairy and at the Birmingham Fat Stock Show, during the last two years, prizes have been offered for the best preserved eggs, says an exchange. These, as well many private tests, have shown that the lime-water system is, all things considered, the best. A pound of lime should be stirred with a gallon of water, and the eggs, perfectly fresh, immersed therein in barrels or jars. This excludes air and any germs that might cause mildew or mould, and prevents evaporation, so that the contents of the egg are not reduced in bulk. It is important to have a considerable excess of lime to replace any that may become carbonated. The vessels containing the eggs should be kept in a cool, well ventilated place.

A very successful variation in the process consists in imbedding new-laid eggs, warm from the nest, in a thick paste of lime and water. Eggs thus prepared for six months could hardly be distinguished from those newly laid. The contents of eggs evaporate rather rapidly through the shell; and the object of the preserver must be to prevent this evaporation, and at the same time to allow for the expansion and contraction of the natural air-space in the egg due to changes of temperature. The plan of coating the shells with wax or melted paraffine fails in the latter particular. Strong brine fails because the contents of eggs preserved in it become much reduced in bulk.—*American Stockman*.

Poultry Notes.

Five toes on each foot of a dressed chicken is an excellent indication of quality, as such are the markings of the Dorkings and Houdans.

Dorking fowls in this country prove excellent layers, owing to fresh importations of the breed. Formerly they were closely inbred. Now they are hardy, and are considered one of the best breeds we have.

Breeders of fancy fowls, when pressed with orders, sometimes send out eggs that are small and undersized. While such eggs may hatch, yet, as a rule, the chicks will be weak and not easily reared. Only full-

sized eggs should be shipped for hatching purposes.

Pekin ducklings at three or four months old make a very desirable dish if they be well fed from the shell and fattened on cooked ground oats and corn, with potatoes added. They are also very hardy if not inbred, and stand our cold winter remarkably well. They are early layers and continue with only short intermissions until late in the summer. They thrive rapidly, and when matured will ordinarily weigh from twelve to fourteen pounds per pair.

A poultry authority pronounces a cross between a Dominique cock and Wyandotte hens to be excellent for producing first-class chicks for broilers. As the Dominique is of medium size, an active cock can be mated with twelve or fourteen hens, and the quick growth of the Dominique, with beautiful yellow legs and the compact, plump appearance usual to the Wyandotte, will be secured. Half-bred Wyandotte hens will answer all purposes where the pure-breeds are scarce, but the Dominique male must be pure-bred.

The Black Hamburgs are non-sitters. They lay medium-sized white eggs, and are rivals of the Leghorns. Their brilliant black plumage, elegant, broad rose combs and handsome carriage place them high on the list as ornamental fowls, and, being great foragers, active and industrious, where they have free range, cost but very little to keep. A prominent feature of the bird is its comb, which is the kind denominated "rose," and which has a "spike" at the rear. All the Hamburgs are similar in make-up—body, combs, tail, etc.—but there is great diversity of color. The blacks are often used for crossing with Black Java, Black Cochins, Black Spanish, or Langshan hens. For beauty, eggs and profit, the Hamburgs are not inferior to any of our breeds.



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St. Louis Wool Market.

Messrs. Hagey & Wilhelm, in their wool circular of date June 13, say:

Our wool market continues active, firm and more animated than at any time since the opening of the season. Our daily increasing receipts meet sale as quick as we can open, examine and fix prices, and at higher prices than in any other American market; thus enabling us to sell quickly, and we remit in full the next day after sale is made. Congress is still hammering at the tariff bill, and have adopted amendments on most every item, except wool. Buyers here, both manufacturers and speculators, are so well satisfied that the tariff bill will not be passed, that they are offering us to-day's prices for all wools we may receive in the month of July, thus showing that all grades and shrinkages of wool have touched bottom, and that there will be no decline until the tariff bill is passed. We cannot hope for higher prices under any circumstances, as the heavy cargoes of foreign wools now in the seaboard markets, in bond, will be held until some action is taken on the tariff bill, or until Congress adjourns; then the owners will rush to sell, and as the stocks owned by them are immense, and stored in anticipation of free wool, they will not lose any money under the present tariff, but make handsome profits if the tariff bill is passed making wool free of duty, and the sale of these wools will prevent any advance in prices of the American clip.

KANSAS AND NEBRASKA UNWASHED.

Fancy medium.....	23
Choice medium.....	18a21
Fine medium.....	17a20
Low medium.....	16a18
Light fine.....	15a18
Heavy fine.....	12a16
Heavy Merino.....	13a17
Common.....	13a16
Carpet.....	12a14
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Burry 2 to 5 cents per pound less.

Gossip About Stock.

Remember that we can supply "Haaff's Practical Dehorner," the best book on the subject ever published, for only \$1.25, or we will send it and the KANSAS FARMER one year for only \$2.

The Golden Belt herd of Poland-China swine, owned by Frank W. Truesdell, Lyons, Kas., is reported to be in "grand condition." Mr. Truesdell writes us that he has 150 spring pigs "all model specimens." The herd now numbers about 300. Look for his card in the KANSAS FARMER.

Col. Harris, of Linwood, shipped a 12-month-old bull—Eleventh Baronet of Linwood, weight 1,220 pounds and never stabled—to Mr. Julius Peterson, Lancaster, Atchison county, Kas. This fine animal is brother to Seventh Baronet of Linwood, successfully shown last year at Iowa and Illinois State Fairs. Mr. Peterson is to be congratulated on his purchase, for Col. Harris never sells an inferior animal as a breeder. The Colonel now has ten choice young bulls for sale of ages ranging from 8 to 14 months.

At the sale of running horse stock held on the Sangamon county, Ill., fair grounds, on the 13th inst., S. D. Bruce, New York, auctioneer, James A. Simpson, Palmer, Ill., sold six yearling colts for \$575, average \$95.83. He sold also six yearling fillies for \$1,070, average \$178.33. At the same time A. B. Watts, Farmingdale, Ill., sold one yearling colt for \$90, and three yearling fillies for \$515, average of the fillies \$171.66. S. H. Jones, Springfield, Ill., sold four 2-year-old colts for \$785, average \$196.25, and four yearling fillies for \$575, average \$143.75. Low A. Huber, Pleasant Plains, Ill., sold one 2-year-old colt for \$140, and five yearling colts for \$125, average of the yearlings \$65. The only buyer residing outside of Illinois was Michael Ryan, Leavenworth, Kas., who bought eight colts at an average of \$108.12. Summing up the result, five 2-year-old colts brought \$925, or an average of \$185. Twelve yearling colts brought \$900, or an average of \$82.50. Thirteen yearling fillies brought \$2,160, an average of \$166.15. The sale of the entire thirty amounted to \$4,075, an average of \$135.83. This average is much less than the parties making the sales had

expected, yet they are not discouraged, considering this is the first sale of this class of horses held here in many years.—Phil Thrlton, Springfield, Ill.

May Weather Report.

From Prof. F. H. Snow's report of observations taken at the State University at Lawrence, we take the following extracts: This was one of the three coldest Mays on our record, the other two being in 1869 and 1883. The hoar frosts on the 14th and 19th were quite severe, injuring tender vegetation in some localities. The rainfall was deficient, being a little less than half the normal amount; it was, however, well distributed, and the total precipitation for the year 1888 is still slightly above the average. The cloudiness and wind velocity were nearly normal and the barometer was very low.

Mean Temperature—62.08 deg., which is 3.39 deg. below the May average. The highest temperature was 83 deg., on the 22d; the lowest was 38 deg., on the 19th, giving a range of 45 deg. Mean temperature at 7 a. m., 57.23 deg.; at 2 p. m., 71.10 deg.; at 9 p. m., 60.01 deg.

Rainfall—1.97 inches, which is 2.18 inches below the May average. Rain in measurable quantities fell on eight days. There were five thunder showers. A small amount of hail accompanied the rains of the 15th and 22d, some of the stones on the 15th having a diameter of an inch. The entire rainfall for the five months of 1888 now completed has been 12.22 inches, which is 0.21 inch above the average for the same months in the preceding twenty years.

For Sale.

For the benefit of the parties who circulate the story that I am out of the Hereford business, I now offer registered bulls at \$50 to \$100. E. S. SHOCKEY, Topeka, Kas.

A Southern girl, who has been a clerk in the Treasury Department at Washington, has sold for \$100,000 a farm of 100 acres near Birmingham, Ala., for which her mother had often tried to obtain a few hundred dollars. Coal has been discovered on the land.

Farm Loans.

Ready money, lowest rates, and every accommodation on real estate loans; one to five years time as best suits borrower.

T. E. BOWMAN & Co.,

116 W. Sixth street, Topeka, Kas.

The fact is noted that, in climates having a difference of 70 deg. in temperature between the hot and cold seasons, a railroad track of the length of 400 miles is some 338 yards longer in summer than in winter; that is, though of course the length of road remains the same, expansion forces the metal closer together, making an aggregate closing up of space between the rails of nearly a yard in each mile.

Hardware for Farmers.

D. A. Mulvane & Co., 713 Kansas avenue, Topeka, always keep a full line of hardware, and especially desire the patronage of every farmer, who will find it to his interest to inspect our complete stock of hardware of every description, including the cheapest and best line of gasoline stoves, refrigerators, barb wire, screen doors, tinware, ladders, wheelbarrows, etc.

Consumption Surely Cured.

TO THE EDITOR:—Please inform your readers that I have a positive remedy for the above named disease. 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., New York.

Consumption Cured.

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

A Word to Farmers.

Extracts from an article prepared by J. S. Wedderburn, of Virginia, and published in the National Farm and Fireside.

Farmers grumble too much, and grumble without cause. They complain that the merchant, the lawyer, the doctor, etc., have a better and easier time than they, and more than their share of the good things of this life; that they go to the Springs and enjoy themselves while the farmer stays at home and tills the ground; that they build brown-stone mansions and live in luxury, while the farmer must needs be content with a humble cottage; that they array themselves in costly apparel and their wives in seal-skin and diamonds, while the poor oppressed farmer is glad to get shoddy for himself and calico for his wife. Now it is probable that if it were remotely hinted, that communistic principles were at work in his mind, he would be aroused to indignant protest, yet can he deny that he views with feelings of discontent and envy the superiority and advantage which other classes have gained over him, or that he looks with longing eyes upon wealth accumulated by men more energetic and enterprising than himself? And does he overlook the fact that it is just such blind envy which is the root of all communism?—the offshoots of which are the doctrines of such men as Henry George, who teaches his disciples to believe, that the broad acres which he has toiled to pay for, the home which he has spent the best years of his life in making comfortable and home-like, should be given up as common property, surrendered without even the compensation of an equivalent, and he sent adrift in his old age without chart or compass upon the cold charity of the world? Verily, the good things of life are unevenly divided; but has the farmer ever asked himself why this is so, and is he prepared to assert that they are not only unevenly but unfairly divided? What would be a fair distribution of the world's wealth? To a fair mind the answer should be very plain. If the age, the brains, the physical strength, the mental ability, the business talent, the industry, the economy, the genius; and a dozen other qualities which beget and conserve wealth, were equal in all men and in all classes; if all ambition—that irresistible force which carries a certain per cent of humanity ahead of all others—could be quelled; if all fathers lived their allotted three-score-and-ten to bequeath their possessions evenly among an equal number of sons; if all accidents of fortune could be foreseen and avoided; if in fine, Providence smiled alike on all, and never stopped in to take away from him who hath little to add to him who hath much—*if, I say, such a state of social stagnation could exist, an equal distribution of wealth would not only be fair but inevitable.* But as such a state of human equality is impossible, nay, inconceivable, so is the equal distribution of wealth alike impossible. And just in proportion to the inequality of human capability is the unavoidable and fair inequality of property. Did you ever ask yourself, my very reasonable farmer friend, whether, if you gained wealth tilling the soil (and there are rich farmers even in Virginia) you would take your family to the Springs when you desired to do so, or remain at home and share your gains with your shiftless neighbor, or city friend who was unfortunate in speculation? If you are not honest enough to answer this question for yourself I can answer it for you. No, you would not give one cent to either more than he squarely earns from you; nor would it occur to you that you were defrauding or oppressing one or the other because you chose to keep what you had spent labor and brains in getting to make your families more comfortable and happy than they had succeeded in making theirs. And in doing this you would be showing no extraordinary selfishness; but would simply be exemplifying common humanity, for the majority of individuals of all classes get all they can and keep what they get. There are indeed merchants, speculators, monopolists, etc., who use their vast gains for the good of their fellow men, and endow orphan asylums, libraries, colleges, etc., but verily, I have yet to see the philanthropic farmer.

We will look at this very much vexed question a little closer. Think you that if by a little of your father's hard cash and fat land added to brains, and brains to economy you were gradually accumulating wealth, while your inert, ignorant neighbor was growing daily poorer on the poverty-stricken acres which his father bequeathed him with his stupidity, you would do your family justice and be best serving the interests of humanity by sharing with him? No; then would you be doing the brotherly and kind thing to drag your brains, your industry, your earnings down to a level with his, or allow him to do so? No; you would think with me my friend (for the farmer must oppose every species of communism if he is to guard his best interests) that it is wisest to let him go down if he will, and to climb up if you can. And this is what the world is doing, my friend, in the city as in the country, with the merchant and the lawyer as with the farmer. He who has brains and opportunity and little or much of inherited property climbs up, and who blames him? Not you, for you would do the same if you could. And he who is weak or shiftless or obstinately stupid goes down; and who cares? Not you, for you despise him much more than your city brother who knows the difficulties which beset the path of the climbing and the agonies of mind which attend the falling man. Arouse yourselves farmers to better things! What does an honest man want in a free country like this? Why fair laws which protect all classes alike, and by which any man may, if he will, create for himself the necessities, the comforts, nay, even the luxuries of life without interference, so long as he does no injustice to his neighbor, and in spite of the lazy and narrow coward who is ready to destroy with dynamite what he lacks the industry to get for himself. The farmer has the right to make laws for himself, and can do so by sending farmers to represent him—but he sends lawyers instead, and why? Because he is insufficient and weak, has more right than might. Having might of numbers he lacks might of mind and will, and this is the case with all creatures who growl and threaten and never act, and such are generally held in contempt and very little attention paid to their complaints.

WHY?

WHY do I have this drowsy, lifeless feeling? WHY do I have Backache? WHY Neuralgia and Rheumatism? WHY does Scrofulous taint and Erysipelas show itself?

BECAUSE your blood is filled with Poison, which must be Completely Eradicated before you can regain health. You must go to the root of the matter. Put the Kidneys—the great and only blood-purifying organs—in complete order, which is complete health, and with

Warner's Safe Cure

and WARNER'S SAFE PILLS your cure is certain.

WHY do we know this? BECAUSE tens of thousands of grateful men and women in all parts of the world have voluntarily written us to this effect.

There is no stand-still in disease. You are either growing Better or Worse. How is it with YOU?

WHY not to-day resort to that medicine, which has veritably Cured Millions, and which will cure you if you will give it a chance?

All of Warner's preparations are Purely Vegetable. They are made on honor. They are time-tried. They are No New Discovery, Untried and Worthless; on the contrary, they have stood the test—they have proved their superiority. They stand alone in pre-eminent merit, and YOU KNOW IT.

HUGH E. THOMPSON, BROOMCORN

Commission and Dealer in Broom-Makers' Supplies. Reference:—National Bank of Commerce. 1412 & 1414 Liberty St., Kansas City, Mo.

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CHICAGO VETERINARY COLLEGE.

INCORPORATED 1883.

FACILITIES FOR TEACHING AND CLINICAL ADVANTAGES UNSURPASSED. Session of 1888-9 commences October 1st. For Catalogue and further information, address the Secretary, JOSEPH HUGHES, M. R. C. V. S., 2537 and 2539 State Street, Chicago.

The Busy Bee.

Letter From President Hilton.

EDITOR KANSAS FARMER:—Mr. Jas. McLaren, one of your subscribers, kindly sent me the May 17th No. of your paper, containing an extract from the Michigan Farmer. The item is of rather ancient origin, and I will say that my home, or the "Red White and Blue Apiary," now contains 100 colonies and I have an out apiary six miles west, known as the "Golden Rod Apiary," that contains 130 colonies, spring count, all in a flourishing condition, and I hope next fall to be able to make a report of a large yield of comb honey.

I wish to speak of another item purporting to come from the pen of W. Z. Hutchinson, of this State, in which he is made to say, "in order to produce comb honey in abundance bees must be fed uninterruptedly for at least two months previous to the opening of the honey harvest." I have the greatest respect for Mr. Hutchinson, both as a writer and as an editor, but if he unqualifiedly asserts that, he is carrying a wrong impression; it savors too much of the "Lizzie Cotton" system.

That bees need feeding sometimes is true, but their feeding is the exception and not the rule, and there is nothing that goes further to convince the masses that bees are fed sugar, sirup and glucose and that the stuff is palmed off on them as pure honey, than this constant feeding business; and I am sure bees are better to be let alone in the spring unless there is danger of their starving.

If there is, every bee-keeper should be provided with combs of sealed honey carried over from the previous season and enough of them inserted to carry them to new honey, then let them alone. If this plan was pursued we should hear less about adulterated and hand-made comb honey, and it is pursued in my apiary.

If you desire, I will give you an article on the "Relative Benefits of Apiculture, Horticulture and Agriculture," which will I think explain what honey is and where it comes from, also its misison in the blossom.

GEO. E. HILTON,
President Michigan State Bee-Keepers' Association, Fremont, Mich.
June 6, 1888.

Hiving Swarms.

A correspondent of the *American Bee Journal* says:

I have kept bees about all my lifetime, on a small scale, just for my own use and amusement; and for the last few years I have tried to combine pleasure and profit on a large scale, but living in the city I have not ground enough to accommodate more than about seventy colonies, and then they are rather close together.

Until last year they had proved to be quite profitable, but then the crop was not more than one-fourth of that of former years. I have been in the habit of going up trees, sometimes as high as forty feet, to take a swarm of bees; but two years ago last season I had a fall of twenty-one feet. The ladder slipped off of the limb that it was resting upon, and down I went, ladder, bees, and all, to the ground. I was bruised, and pretty well shaken up, but no bones broken, but I secured the bees after a little while.

I then thought that I must use some other means of catching runaway swarms. I was getting too old a man to climb trees, being then in my seventy-eighth year, and my weight was 210 pounds. I got a long, light pole, and fastened a small tackle block at the top

of it, with a cord to run through the block. I made a small hiving-box that would hold three or four racks with combs in them, that the honey had been extracted from. When the bees had settled on a limb, I would put the pole up against that limb, and run the box up, either under or over the bees, giving them quite a jar, and in five or ten minutes they would all gather in the box on the combs. I let them down by the cord, and took them to the hive already prepared for them. This worked very well.

Last season I thought of and tried another plan. I planted a pole in about the center of the bee-yard, about fifty feet high, with a tackle block at the top of it, and a cord to reach to the ground; when the bees began to come out to swarm, I run the hiving-box up as high as most of the bees were flying, kept the box moving slowly up and down a few feet, and often by the time the bees were half out of the hive, they would begin to gather in the hiving-box. As soon as they were settled, I lowered them carefully, and took the box to the hive already prepared for them, and either shook off the bees in front of the hive, or lifted the frames and bees all out and put them in the hive, when the job was done.

I have often, in preventing bees from leaving the hive, taken a comb from the hive they came from, with brood in it, and put it into the hive of the new colony. I have never had them leave the hive since I adopted that plan.

This above described pole arrangement is new to me, and whether any one ever used it before, I do not know; but so far it has worked well. The hiving-box is made out of three-eighths stuff, very light, and just long enough to hang the frames in lengthwise, the same as in the hive, and wide enough to hold four or more frames. I found that combs lately extracted are the best.

If the apiary is large, I think that having poles placed in different parts of the yard would save much trouble. When I leave the yard in swarming time I always run the hiving-box up, and leave it there until I return. I then made another tight box that would hold the hiving-box in it, with the combs always ready for use, but covered up so that bees in the yard cannot get at them, on the ground, at the bottom of the pole, ready for use.

THE MARKETS.

By Telegraph, June 18, 1888.

LIVE STOCK MARKETS.

St. Louis.

CATTLE—Receipts 1,400, shipments 1,800. Market quoted 10 to 15c lower. Choice heavy native steers \$5 40a5 75, fair to good native steers \$4 50 a5 30, medium to choice butchers' steers \$4 00a 5 00, fair to good stockers and feeders \$2 40a 3 75, ordinary to good rangiers \$2 30a4 25.

HOGS—Receipts 300; shipments 100. Market steady. Choice heavy and butchers selections \$5 50a5 60, medium to choice packing \$5 35 a5 50, ordinary to best light grades \$5 10a5 40.

SHEEP—Receipts 2,100, shipments 2,700. Market firm. Clipped sheep, \$2 00a4 50.

Chicago.

The Drovers' Journal reports:

CATTLE—Receipts 10,000, shipments 4,000. Market steady on good. Supply mostly Texas and common natives, which are lower. Choice steers, \$6 00a6 25; good, \$5 40a5 90; medium, \$4 80a5 30; common, \$4 00a4 70; stockers, \$2 60a 3 75; feeders, \$3 40a4 15; bulls, \$2 25a4 00; cows, \$1 75a4 00.

HOGS—Receipts 10,000. Market 5c higher. Mixed, \$5 50a5 70; heavy, \$5 60a5 80; light, \$5 45a 5 60; skips, \$4 00a5 30.

SHEEP—Receipts 5,000. Market dull. Muttons, \$3 90a4 90; stockers and feeders, \$2 00 a3 75; Texan, \$2 00a4 00; lambs, per head, \$2 00a4 00.

Kansas City.

CATTLE—A good many cattle were on the market, drawn by the high prices and the fear of a reaction downward, that should have been held back till fatter. It is not half fat cattle that are scarce, but fat cattle. There was a glut of half fat natives and rangiers here to-day, which were very slow sale, or poor sale or no sale, at no better prices in any case and worse prices generally.

For so many cattle, there was a light supply of corn cattle, which sold in a rather quiet way at steady to firm prices. A little business was scattered along at \$5.50a5.80. The under grades generally ruled lower. Dressed beef and shipping steers sold at \$4 20a5 35.

HOGS—Tops sold at \$5 50, against \$5 45 Sat-

urday. The bulk of sales was at \$5 25a5 45, against \$5 20a5 35 Saturday. Good strong singeing pigs sold 5c higher at \$5 20. Light 120 to 140-pound pigs were unchanged at \$4 90a 5 00. Light grades quiet for lack of supply.

SHEEP—Receipts since Saturday 2,344 head. Most of the receipts went direct to the packing houses. Market steady. 500 Texas, average 83 pounds, sold at \$3 30.

PRODUCE MARKETS.

New York.

WHEAT—Dull. No. 2 red, 89½¢ delivered. CORN—No. 2, 55½¢ elevator; 55a55½¢ delivered.

St. Louis.

FLOUR—Steady but unchanged. WHEAT—No. 2 red, cash, 84½¢; July, 84a84½¢.

CORN—Cash, 44½¢; July, 44½a45½¢.

OATS—Irrregular. Cash, 32c.

RYE—Nominal.

BARLEY—Nominal.

HAY—Firm. Prime timothy, \$13 00a16 50; prairie, \$11 00a13 00.

BUTTER—Steady. Creamery, 14a17c; dairy, 12a14c.

EGGS—12c.

PROVISIONS—Firm. Pork, \$14 40; lard, \$8 00.

Chicago.

Cash quotations were as follows:

FLOUR—Quiet.

WHEAT—No. 2 spring, 82½¢; No. 2 red, 80a82½¢.

CORN—No. 2, 49½¢.

OATS—No. 2, 31½¢.

RYE—No. 2, 56c.

BARLEY—No. 2, 64a65c.

FLAXSEED—No. 1, \$1 30.

TIMOTHY—Prime, \$2 15a2 20.

PORK—\$13 75.

LARD—\$8 42½.

BUTTER—Quiet. Creamery, 15½a19c; dairy, 13½a17c.

EGGS—Unchanged.

Kansas City.

WHEAT—Receipts at regular elevators since last report... bushels; withdrawals, 6,000 bushels, leaving stock in store as reported to the Board of Trade to-day, 29,641 bushels.

There was a weaker market to-day on 'change, with lower values. On the call there were no sales except for No. 2 red, August, at 71½¢—¼c lower.

CORN—No. 2 white, cash, no bids, 48c asked; June, no bids, nor offerings.

OATS—No. 2 cash, no bids nor offerings.

RYE—No. 2 cash, no bids nor offerings; June, no bids nor offerings.

HAY—Receipts, old, 7 cars; new, 5 cars. Market firm. New, \$11; old, fancy, \$9 50 for small baled; large baled, \$9 00; wire-bound 50c less; medium, \$6 50a7 00; poor stock, \$1 00a2 00.

SEEDS—We quote: Flaxseed, \$1 00 per bu. on a basis of pure; castor beans, \$1 00 for prime.

OIL-CAKE—Per 100 lbs. sacked, f. o. b., \$1 25; \$11 00 per 1,000 lbs.; \$21 00 per ton; car lots, \$19 00 per ten.

FLOUR—Quiet. Quotations are for unestablished brands in car lots, per ½ bbl. in sacks, as follows: XX, 95c; XXX, \$1 05a1 10; family, \$1 20a1 30; choice, \$1 55a1 65; fancy, \$1 70a1 75; extra fancy, \$1 80a1 85; patent, \$2 10a2 15; rye, \$1 40a1 60. From city mills, 25c higher.

BUTTER—Creamery easy. There is a weak feeling in dairy and store-packed. We quote: Creamery, fancy, 17c; good, 15c; dairy, fancy, 14c; good to choice, 12a13c; store-packed, choice, 11c.

CHEESE—We quote: Full cream, twins, 10c; full cream, Young America, 10½c.

EGGS—Receipts fair and market weak at 12½c per dozen for strictly fresh.

POTATOES—Irish, home-grown, 25c per bus.; Colorado and Utah, 90c per bus.

BROOMCORN—Dull and weak. We quote: Green self-working, 4c; green hurl, 4c; green inside and covers, 2½a3c; red-tipped and common self-working, 2c; crooked, 1c.

PROVISIONS—Following quotations are for round lots. Job lots usually ¼c higher. Sugar-cured meats (canned or plain): Hams 11c, breakfast bacon 10c, dried beef 9c. Dry salt meats: clear rib sides \$7 45, long clear sides \$7 35, shoulders \$5 75, short clear sides \$7 85. Smoked meats: clear rib sides \$8 65, long clear sides \$7 95, shoulders \$6 50, short clear sides \$8 55. Barrel meats: mess pork \$13 50. Choice tierce lard, \$7 50.

Kansas City Stock Yards,

KANSAS CITY, MISSOURI,

ARE BY FAR THE

Most Commodious and Best Appointed in the Missouri Valley,

With ample capacity for feeding, weighing and shipping cattle, hogs, sheep, horses and mules. They are plankled throughout, no yards are better watered and in none is there a better system of drainage. The fact that

Higher Prices are Realized Here than in the Markets East,

Is due to the location at these Yards of EIGHT PACKING HOUSES, with an aggregate daily capacity of 3,300 cattle, and 27,200 hogs, and the regular attendance and sharp competitive buyers for the Packing Houses of Omaha, Chicago, St. Louis, Indianapolis, Cincinnati, New York and Boston. All the thirteen roads running into Kansas City have direct connection with the Yards, affording the best accommodations for stock coming from the great grazing grounds of all the Western States and Territories, and also for stock destined for Eastern markets.

The business of the Yards is done systematically, and with the utmost promptness, so that there is no delay and no clashing, and stockmen have found here, and will continue to find, that they get all their stock is worth, with the least possible delay.

C. F. MORSE, General Manager. E. E. RICHARDSON, Secretary and Treasurer. H. P. CHILD, Superintendent.

HAGEY & WILHELM,

WOOL COMMISSION MERCHANTS

ST. LOUIS, MO.

REFERENCES:—KANSAS FARMER Co., Topeka, Kas.; Boatmen's Bank, St. Louis; Dunn's Mercantile Reporter, St. Louis; First National Bank, Beloit, Kas.

GENERAL AGENTS FOR COOPER'S SHEEP DIP.

We guarantee sale and full returns inside of TEN DAYS from receipt of shipment.

CONSIGN YOUR CATTLE, HOGS & SHEEP TO

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LIVE STOCK COMMISSION MERCHANTS,

Kansas City Stock Yards, Kansas City, Kansas.

Highest market prices realized and satisfaction guaranteed. Market reports furnished free to shippers and feeders. Correspondence solicited. Reference:—The National Bank of Commerce, Kansas City.

The Veterinarian.

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

BLOODY MILK.—Please tell me what to do for a cow that gives bloody milk out of one teat. She has been giving bloody milk for several months; gets no better. [Bloody milk is most commonly the lack of tone in the blood vessels of the udder which allow the blood to transude through the wall of the vessel. Bathe the affected quarter three times daily with cold water, and afterwards manipulate the part with the hand for ten or fifteen minutes at a time. Feed chiefly on a grass diet.]

GARGET.—My cow laid out all night. In the morning came home with her teats and udder swollen. We were advised to poultice it, but the milk is tinged with blood, and we fear she will lose the use of her teats. [You did wrong to poultice the udder, as that has a tendency to break down the milk glands and increase inflammation. You must keep her in the barn, well and comfortably bedded. Foment the udder with hot water and arnica, then dry it well, then rub on a mild liniment to reduce the soreness and inflammation. Keep milking-tubes in the teats till they are all right, or they are sure to be stopped up.]

ABSCESSES—CATARRH.—I have a mare that had a bunch on the lower part of her neck, where it joins the shoulder, the size of one's fist, last February. I thought she got a kick of some of the other horses, for she was running in the stock pasture all winter, and by the use of some liniment it disappeared, and in about five or six weeks it came back again. I worked her some, and it got larger and I had to quit working her. I cut it open and it is getting smaller, and yet there is a hard bunch there. She also has a few little knots in the hide on the same shoulder. (2.) And what is the matter with her eyes? There is always water seeping out at the corners for about a year. Her eyes look good. [The bunch we consider an ordinary abscess, and if thoroughly opened up and allowed to heal slowly from the bottom will disappear. (2.) We would ascribe the condition of her eyes to a catarrhal affection. Bathe them twice daily with warm water; then use with a soft sponge a little of a solution of one drachm of borax in a pint of water.]

SCAB IN SHEEP.—Have you a recipe that is a sure cure for scab in sheep? I bought a carload of sheep in Chicago last fall, which to all appearance were free from all disease, but along through the winter I noticed that a few of them were pulling their wool out and rubbing themselves against everything they came in contact with. Since it has got to be warm weather I notice that nearly all of them are affected and are pulling their wool out. If you have a recipe that will cure the scab, and will publish it in your paper, you will greatly oblige an old subscriber. [We don't believe in sure cures. A useful dip for scab is made by dissolving one and one-half pounds each of powdered arsenic, carbonate of potash, soft soap and sulphur in fifty gallons of boiling water. This will dip fifty sheep. Use the following precautions: Let the water cool till it is luke warm. Immerse every part of the sheep in the bath except the head. Keep each sheep in bath one minute. If scabs are hard, scratch them with the finger-nail while sheep is in bath. When removed from bath, put sheep on a bare floor or yard, so that they may thoroughly drip. Dip again at end of ten days. Do not put sheep into pens or pasture that they

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had occupied before dipping. If these directions are followed, no fear from poisoning need be apprehended.]

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Hard Soap in 20 minutes

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To prove it, will ship to any one, from stock farm Poland-China sow, bred to bring pigs all one sex, for \$10. Half with order, balance C. O. D. Will name sex of pigs at time of shipment of sows. My plan is a mechanical contrivance, absolutely accurate in results—cannot fail. Plan offered after proving. Result of ten years trial. Guarantee results as stated. If desired, send 2-cent stamp for sealed particulars of trials. For character, refer to Editor *Colman's Rural World*. Address W. H. GARRETT, Box 553, St. Louis, Mo.

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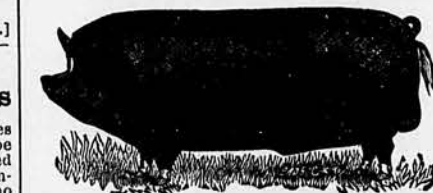
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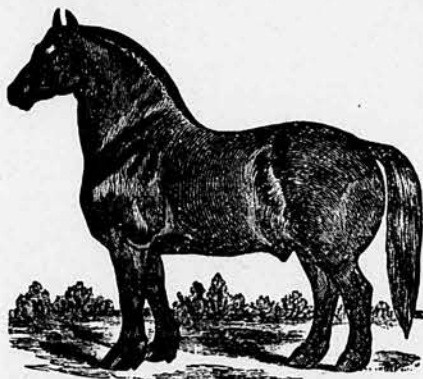
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a cathartic stimulant for HORSES, CATTLE and
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purifies the blood and water, loosens the hide, acts
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animals in healthy, thriving condition. Also is a
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THE STRAY LIST.

HOW TO POST A STRAY.

THE FEES, FINES AND PENALTIES FOR NOT POSTING.

BY AN ACT of the Legislature, approved February 27, 1886, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and appraisal, to forward by mail, notice containing a complete description of said strays, the day on which they were taken up, their appraised value, and the name and residence of the taker-up, to the KANSAS FARMER, together with the sum of fifty cents for each animal contained in said notice. And such notice shall be published in the FARMER in three successive issues of the paper. It is made the duty of the proprietors of the KANSAS FARMER to send the paper, free of cost, to every County Clerk in the State, to be kept on file in his office for the inspection of all persons interested as strays. A penalty of from \$5.00 to \$50.00 is affixed to any failure of a Justice of the Peace, a County Clerk, or the proprietors of the FARMER for a violation of this law.

Broken animals can be taken up at any time in the year.

Unbroken animals can only be taken up between the first day of November and the first day of April, except when found in the lawful enclosure of the taker-up.

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

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

Any person taking up an stray, must immediately advertise the same by posting three written notices in as many places in the township giving a correct description of such stray, and he must at the same time deliver a copy of said notice to the County Clerk of his county, who shall post the same on a bill-board in his office thirty days.

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

The Justice of the Peace shall within twenty days from the time such stray was taken up (ten days after posting), make out and return to the County Clerk, a certified copy of the description and value of such stray.

If such stray shall be valued at more than ten dollars, it shall be advertised in the KANSAS FARMER in three successive numbers.

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

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

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

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

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

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

FOR WEEK ENDING JUNE 7, 1888.

Lincoln county—H. H. Gilpin, clerk.

MARE—Taken up by Henry Wacker, in Pleasant Valley tp., May 8, 1888, one dark bay mare, 15 hands high, weight about 900 pounds, no marks or brands; valued at \$40.

Pottawatomie county—L. D. Hart, clerk.

STEER—Taken up by Philip Wise, in Mill Creek tp., May 25, 1888, one red and white spotted 1-year-old steer; valued at \$14.

Lane county—T. J. Smith, clerk.

MARE—Taken up by John Gould, in Cheyenne tp., April 25, 1888, one brown mare, cross on left hip; valued at \$25.

Nemaha county—W. E. Young, clerk.

MULE—Taken up by A. H. Chilson, in Mitchell tp., (P. O. Seneca), May 15, 1888, one roan mule, 12 years old, sorrel harness marks, no other marks or brands; valued at \$15.

Butler county—T. O. Castle, clerk.

PONY—Taken up by T. R. Evans, in Lincoln tp., May 5, 1888, one bay mare pony, 10 or 12 years old, both ears split; valued at \$15.

Clay county—W. P. Anthony, clerk.

COW—Taken up by F. M. Clark, in Highland tp., May 14, 1888, one white and black spotted cow, holes in points of horns, had on bell when taken up, 10 years old; valued at \$15.

Rawlins county—E. A. Mikesell, clerk.

MARE—Taken up by James Kendall, (P. O. Atwood), May 11, 1888, one black mare, weight about 800 pounds, branded F on left shoulder; valued at \$30.

Jefferson county—E. L. Worswick, clerk.

2 STEERS—Taken up by J. M. Davis, in Jefferson tp., (P. O. Winchester), May 17, 1888, two medium-size red and white spotted steers, no marks or brands; valued at \$12 each.

MARE—Taken up by C. L. Waters, in Rural tp., (P. O. Williamstown), May 13, 1888, one dark brown mare, 14½ hands high, collar marks and white specks on hips, white specks on left fore leg and ankles, right hind foot white, tender-footed, 11 or 12 years old; valued at \$25.

Anderson county—S. Durall, clerk.

STEER—Taken up by Sophia Kolb, December 24, 1887, one white 2-year-old steer, crop off right ear, swallow-fork in left ear.

Johnson county—W. M. Adams, clerk.

STEER—Taken up by J. G. McKangham, in McCamish tp., (P. O. Edgerton), one 2-year-old red steer, ear clipped.

FOR WEEK ENDING JUNE 14, 1888.

Shawnee county—D. N. Burdge, clerk.

HORSE—Taken up by Jas. F. Hetzel, in Menoken tp., May 24, 1888, one roan horse, about 8 years old, 16½ hands high, collar-pinch on shoulder, no marks or brands; valued at \$65.

Cherokee county—J. C. Atkinson, clerk.

PONY—Taken up by W. T. Gentle, in Garden tp.,

May 27, 1888, one dun mare pony, about 13 hands high, branded with Spanish brand on left hip, left hip down, black mane and tail, black stripe along back, about 6 years old; valued at \$15.

PONY—Taken up by J. H. Sackett, in Spring Valley tp., one dark brown horse pony, white on left hind foot and leg, no brands, about 3 years old; valued at \$20.

PONY—Taken up by J. H. Chubb, four miles east and two miles south of Baxter Springs, one black mare pony, 5 or 6 years old, white strip in face, no brands, in foal; valued at \$40.

PONY—By same, one black mare pony, hind foot white, shod all round, 5 or 6 years old, no brands; valued at \$40.

Butler county—T. O. Castle, clerk.

COLT—Taken up by Isaac C. Moreland, in Union tp., May 19, 1888, one bay mare colt, 2 or 3 years old, white spot in forehead, black mane and tail; valued at \$55.

Cowley county—S. J. Smock, clerk.

HORSE—Taken up by E. E. Hunt, in Beaver tp., (P. O. Winfield), May 15, 1888, one bay horse, white hind feet, branded 6 on left shoulder; valued at \$30.

Johnson county—W. M. Adams, clerk.

MARE—Taken up by Zack North, in Oxford tp., (P. O. Olatho), May 23, 1888, one chestnut sorrel mare, about 12 years old, white hind feet, bald face, brand on right shoulder; valued at \$10.

Pottawatomie county—L. D. Hart, clerk.

PONY—Taken up by W. D. Robbins, in Mill Creek tp., June 2, 1888, one chestnut sorrel horse pony, 5 years old, white spot in forehead, right hind foot white; valued at \$25.

Crawford county—J. C. Gove, clerk.

HORSE—Taken up by Peter Long, (P. O. Cherokee), April 16, 1888, one sorrel horse, 15 hands high, blaze in face; valued at \$15.

HORSE—By same, one black horse, 15 hands high, two white feet; valued at \$25.

COW—Taken up by D. J. Roberts, (P. O. Frontenac), May 15, 1888, one red and white cow, under-slope out of left ear and swallow-fork in end of same ear; valued at \$15.

FOR WEEK ENDING JUNE 21, 1888.

Cowley county—S. J. Smock, clerk.

MARE—Taken up by H. D. Wilkins, in Windsor tp., May 23, 1888, one gray mare, 4 years old, no marks or brands; valued at \$20.

MARE—By same, one 2-year-old bay mare, no marks or brands; valued at \$20.

Labette county—W. J. Millikin, clerk.

PONY—Taken up by Ira W. Clark, in Hackberry tp., June 1, 1888, one dun horse pony, H on left jaw, 5 years old, star in forehead, branded on left thigh, shod all round; valued at \$20.

Pottawatomie county—L. D. Hart, clerk.

STEER—Taken up by Henry Cox, in Rock Creek tp., June 7, 1888, one blue-black 3-year-old steer, J. S. on right hip; valued at \$25.

STEER—By same, one white 3-year-old steer, J. S. on right hip; valued at \$25.

STEER—By same, one brindle 3-year-old steer, O on right hip; valued at \$25.

Wichita county—H. A. Platt, clerk.

PONY—Taken up by A. F. Humbertson, in Leoti tp., May 25, 1888, one bay pony mare, weight 800 pounds, branded V on left hip, brand similar to T on left thigh, also indistinct mark on left shoulder; valued at \$25.

Sedgwick county—S. Dunkin, clerk.

MARE—Taken up by N. R. Fernell, in Minneha tp., (P. O. Wichita), on or about May 16, 1888, one dark bay mare, black points, 8 or 10 years old, about 15½ hands high, white spot in face, sweetie in left shoulder, no harness marks or brands; valued at \$60.

Neosho county—T. B. Limbocker, clerk.

PONY—Taken up by G. W. Allen, in Grant tp., May 11, 1888, one roan pony mare, 14 hands high, 5 years old, branded with letter "Y" on right shoulder.

COLT—By same, one brown mare colt, 10 months old. (P. O. address Odense).

Hamilton county—T. H. Ford, clerk.

PONY—Taken up by A. B. Willis, in Richland tp., May 23, 1888, one light bay mare pony, no marks or brands, weight about 600 pounds; valued at \$15.

Harper county—H. E. Patterson, clerk.

MARE—Taken up by C. P. Bradford, in Lake tp., (P. O. Crystal Springs), May 23, 1888, one bay mare; valued at \$18.

COW—Taken up by T. E. Roy, in Banner tp., (P. O. Harper), May 21, 1888, one white cow with red neck, 4 feet 8 inches high, CC on left hip, 7 years old; valued at \$15.

Brown county—N. E. Chapman, clerk.

STEER—Taken up by Ambrose Kessler, in Walnut tp., one red 2-year-old steer, no marks or brands visible; valued at \$15.

Too Late to Classify.

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One bay horse, left hind feet white, 9 years old; and one gray-roan horse, front feet a little turned in, about 11 years old, right eye nearly blind. Both horses are pacers. They left Thursday night, May 31. Any one returning same or furnishing information leading to their recovery will be suitably rewarded.

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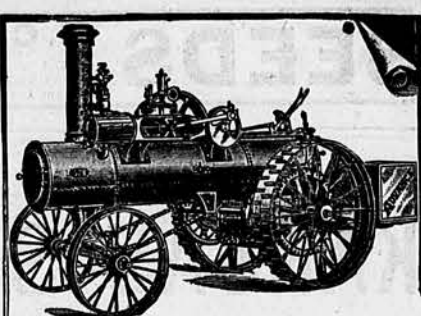
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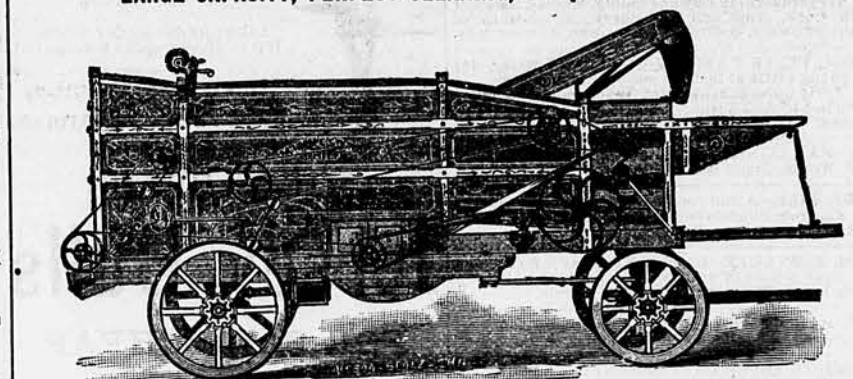


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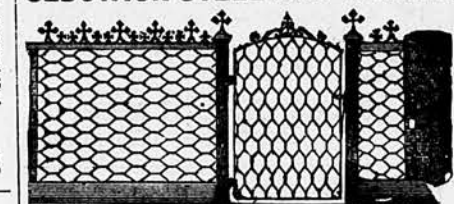
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TWO-CENT COLUMN—(Continued.)

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STRAYED—On March 31, 1888, from Pinkerton place, south of Elevator school house, one bay three-year-old filly, a scar on left hind leg, and had halter on. Also a one-year-old brown horse colt. A liberal reward for their recovery. S. W. McKnight, Topeka, Kas.

100,000 THIRD-CLASS HEDGE PLANTS for sale. Nice, healthy plants. Fifty cents per 1,000. 10,000 Catalpa, 12 to 24 inches, \$2.25 per 1,000. Boxed free. Douglas County Nurseries, Box 33, Lawrence, Kas.

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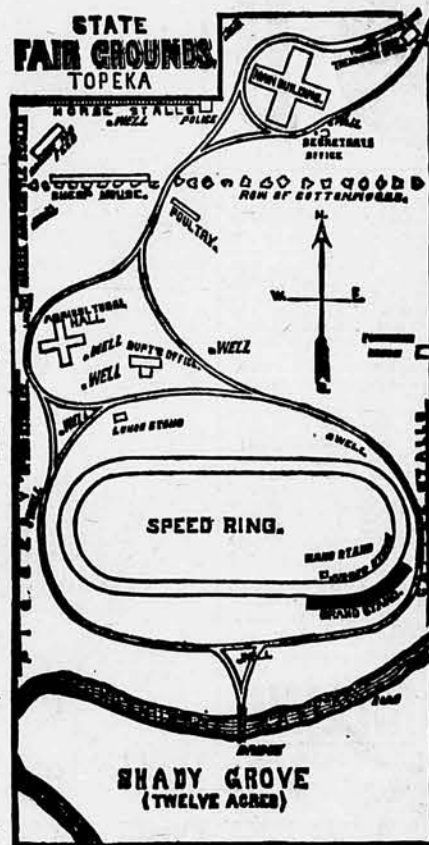
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