

# KANSAS FARMER

ESTABLISHED IN 1863. VOL. XXXIV. NO. 13. TOPEKA, KANSAS, THURSDAY, MARCH 26, 1896. SIXTEEN TO TWENTY PAGES--\$1.00 A YEAR.

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## Agricultural Matters.

### THE TAME GRASSES.

By C. A. Thresher, read at Berryton (Kas.) Farmers' Institute, March 13, 1896.

The subject of grass is old—as old as the hills. The Bible, the oldest book we have, in its very first chapter speaks of grass. And as the Creator said it was very good, doubtless it was like all the other subjects of his creative power, perfect, or tame grass. It reads: "And he said, let the earth bring forth grass, yielding seed after its kind, and it was so."

In that early day, probably, dry seasons and parching droughts were rare. But later on, even in the "land of milk and honey," we find such conditions to surround the growth of grass as we, in our day, often experience. Grass does not flourish in a time of drought. Isaiah says of a drought: "They go to the wells for water and there is none." "They return empty. The ground even has cracked open since there is no rain in the land." "The plowmen are ashamed and cover their heads. Yea, the brute bringeth forth her young in the field and forsaketh them, because there is no grass." The same writer likens all flesh to grass, saying: "All flesh is grass. \* \* \* The grass withereth, the flower fadeth; \* \* \* surely the people is grass." And when we consider that all the inhabitants of the earth are fed by the grass that grows out of the earth, converted into food for man in one way or another, then we can understand the saying, "all flesh is grass."

To man, as well as beast, grass is a very important part of earth's productions. "The king, himself, is served by the field." I suppose that grass, since the creation, has, like man, left its first estate and grown wild. But where man has again, in a measure, become subject to God, there man has cultivated the grasses, and in some respects improved them. Grass, even though its only purpose in creation were to hide the nakedness of Mother Earth, with its beautiful attire of green, would be one of God's good gifts to man. But it is more than that. It is the foundation of farming, and the one source of fertility that must have a place in all rotation of crops.

To us, perhaps, the most important of the tame grasses are timothy, orchard grass, blue grass and the clovers, including alfalfa.

Timothy is the best known of all the tame grasses, and must have a prominent place in the affairs of every well-regulated farm. All the stock I have ever kept seem to think there is no doubt about this. I don't know the per cent. analysis of this grass, either green or dry, but I will pin my faith upon the milk cow as a reliable test-maker, as to the relative value of nice green-cut, well cured timothy hay, as compared with prairie hay. I have never raised too much of this hay yet. If not fed or marketed, it keeps in round stacks very well for several years. Of course better in a barn. But for horses, I am inclined to think that, with sufficient grain, the prairie hay is safer. Timothy, if cut too green, is apt to be dusty and give horses the heaves. For horses it should be cut more nearly ripe than for cattle. And if possible, never let the dews fall on the partly-cured grass before it is raked, as this is sure to make it dusty and smoky. One winter I fed such hay to my horses and it gave one of them a cough that it did not get over for a long while after changing feed to prairie hay.

It is a pleasure to own a good meadow of timothy, and a delight when it has attained the height of two or three feet and is in full bloom, to get upon a good mower, and, with a fine team, on a beautiful summer day, as you ride beside the edge of the grass, to see the glittering shine of the knives as they cut through the tall, waving timothy, laying behind you such a wealth of fine feed for your stock the coming winter. Contrast this with the hard pull in prairie wire-grass, and the chugging down and clogging up of the mower, necessitating the frequent use of the

pocket-knife and fingers before you can start up again.

In a fair season, timothy, like millet, yields well, and, like millet takes muscle to load and stack.

Now that our crops of grain and potatoes were so good last year, it gives us a good opportunity to put more of our grain land into grass.

It is time to stop raising corn year after year, and rest the soil with grass. The land for the future meadow is the better for raising a few crops of corn first. The wildness of the land is subdued, the soil is made fine and is in order for grass. First, plow the land in good shape and harrow it well. Then, about the 10th of September, if the ground is damp enough to bring up the seed, sow it and brush or lightly harrow it in. I like to sow in the fall, for we can get it started then in the cool days of the fall, and another start in early spring places it beyond danger if it should prove dry that summer. There would not be the danger of burning out the grass that there would be if it had only the start of the spring-time. I would always sow clover or timothy the following spring, if for feed.

About the quantity of seed, men differ. I don't want it too thick. The first I sowed was a part of a twenty-acre piece. I got ready about four acres of it first, and sowed it first. I wrote to the *Prairie Farmer*, which I was then taking, for advice. They replied in the paper, stating that I ought to sow a variety of grass seeds, as timothy, orchard grass, red-top, meadow fescue, etc. As I wanted that meadow right, I invested a lot of cash in grass seeds of nearly all kinds. I sowed that four acres. The seed was good—at least a great deal of it came up—but proved mostly timothy. It was "thick as hair on a dog's back," as they say. But that four acres did me little good. The sod was close, but grass grew but little and threw up few seed stems. It was not worth cutting for several years. The clover on it was rather a thin stand. One year I cut it over and raked up the proceeds into windrows. That night there came up one of our Kansas zephyrs, with black thunder clouds in the west. The wind set the windrows of clover rolling over the length of the piece. I got no good of that crop, but the seed shattered out and next year it grew so that after that I got a fair crop from that four acres.

The rest of the twenty acres was duly seeded, but times had changed and it came up too thin. I reseeded it the next season. The seed for that twenty acres cost me about \$160. So much for sowing a variety of seeds. For timothy and clover alone the cost would not have been one-third that sum. And the result was I had at last little else than timothy and clover. As long as I kept all stock off of that meadow the yield was good. When I began to let the cattle on in the fall it began to fail, and in a few years ran into blue grass and crab-grass. But when we know that the first white frost kills prairie grass, and cattle feeding may begin October 15, and also know that our cattle can get a sumptuous living in the meadow until Christmas, it is hard to feed hay and see the green feed in the meadow go apparently to waste. And it may be profitable to let in the stock and spoil the meadow, and let the good it does the stock help to furnish means to seed down another meadow.

I think a bushel of timothy seed sufficient to sow six acres, if it is to be followed in the spring with clover. With clover seed \$7 or \$8 a bushel and orchard grass and timothy \$2.50 or \$3.00, much money can be sown on a piece of meadow land.

I would not sow grass seed with grain, for when the grain is cut away, in the heat of summer, it leaves the young grass in the stubble exposed to the hot sun, and unless the season is unusually wet will kill out the grass.

#### TIME FOR CUTTING.

A mixture of timothy and clover should be cut as soon as the timothy is in bloom. The clover will already be past its best time. Some say ripe grass is more nutritious as hay than when cut green. Cattle always say no. Don't cut too low down. Timothy has

a bulbous-shaped stalk near the ground, and to cut into that is ruinous to the future growth. Cut after the dew is off as much as possible, and rake into windrows the same day all that is partly dried. Put in cocks next day and let it cure in heaps. The hay is long and sheds water well in stack.

Next to timothy, in my estimation, is orchard grass. Orchard grass is so named because, as it grows well in the shade, it is often sown in orchards. It is of a thrifty growth, ripens with clover, has more leaves than timothy and yields more per acre. As hay it is not so well liked by cattle as timothy. As grass they are very fond of it. It should be sown thick, as its tendency is to grow in tussocks. As the seed is high, and it takes over two bushels to the acre, instead of one bushel to six acres, as timothy does, it makes a stand of this grass rather expensive. But it is more permanent than timothy. Like blue grass, it grows early and late, but, unlike blue grass, it makes a bite for stock the season through—growing at night nearly enough for feed the next day. It roots deep and is not so hard on the land as timothy. Clover should always be sown with orchard grass. It is a much better grass for pasture than timothy.

Red-top grass is a smaller, finer grass than timothy, but is larger than blue grass. It does best in low lands.

Blue grass is too well known to need description. In Kentucky it is at home and duly appreciated. But here, the less said the better, in my opinion. It is a good lawn grass but a poor dependence for pasture. It may do well on bottom land, but on high prairie, in the spring by time it is large enough to furnish a bite for stock it is done growing until the next fall. One cow would have a poor existence on ten acres from June to October. Perhaps I am too hard on blue grass, but, as the old lady said, "You must allow half I say," for I don't like it. Once a foothold on a farm, it runs out all the better grasses and does not of itself afford feed enough to warrant its existence. I will, however, give it one good word as I pass it. If you can afford to let it have a good piece all to itself until next winter, it will be next thing to buffalo grass for a nice place for the calves to get a large part of their winter's feed.

Next to, if not before timothy, comes clover. It is the poor farmer's friend. But you must understand something of its nature, or you may lose stock by it. If they feed on young green growing clover while wet with dew or rain, it is apt to cause death by bloat.

In the spring is the time to sow red clover. Take, in preference, some morning after a rain and a freeze, when the ground is all checked up in small cracks on its surface. The seed falls into these openings. The thawing out fills them and covers the seed so deep that it soon becomes well rooted. Do not sow when the earth is in a thawing, wet condition, as the seed will stick then on top where it falls and fail to be covered, and will perhaps sprout and another freeze kill it. Don't sow on snow if you want an even stand. For if the snow goes off quickly or with a rain, much of the seed will be washed away and grow in some places too thick, leaving others bare. Sow four quarts to the acre if with or on timothy; six quarts if alone, and some think eight quarts is none too much. But clover will drop seed, and be thicker year by year, if the second growth is not taken off. The seed crop in red clover is the second growth. Clover remained in my meadow after timothy was all gone.

Clover is a valuable renovator for the soil, either to plow it under as a fertilizer, or to cut for feed. Its long roots act as a subsoiler, and bring up the cash from the basement of your farm, and the upper part compels the very air to part with some of its virtues for your benefit. By all means sow clover.

Every year, by rotation, have three fields—a corn field, a clover field and a meadow; also a pasture. When the meadow fails to be profitable, make a corn field of it. By so doing you will keep up the fertility of your farm.

Mammoth clover is of a larger

## The Only One To Stand the Test.

Rev. William Copp, whose father was a physician for over fifty years, in New Jersey, and who himself spent many years preparing for the practice of medicine, but subsequently entered the ministry of the M. E. Church, writes: "I am glad



to testify that I have had analyzed all the sarsaparilla preparations known in the trade, but

### AYER'S

is the only one of them that I could recommend as a blood-purifier. I have given away hundreds of bottles of it, as I consider it the safest as well as the best to be had."—Wm. Copp, Pastor M. E. Church, Jackson, Minn.

# AYER'S

THE ONLY WORLD'S FAIR  
Sarsaparilla

When in doubt, ask for Ayer's Pills

growth than the red. I have had no experience with it. It is valuable to plow under, and is said to be relished by cattle.

Alsike clover is smaller than the red, and larger than white clover. It is a cross between the two, and runs out into little white clover usually. Bees store much honey from the small clovers.

Crimson clover is a late comer for trial, and makes quick growth and good feed, but if it don't seed itself must be resown each year. This clover, unlike the red, should be sown in the early fall.

Alfalfa is a clover. It also is becoming very popular. A few years ago most farmers would not have known it by sight; now all want to know about it. I have not had much experience with it. It takes twenty pounds seed to the acre.\* Must be sown thick; put in much as other clovers. Sow in spring. It is said to yield great crops—three to six tons per acre, and to be cut three times each season. If not cut often its rank growth turns woody and tough, unfit for hay. It is not much affected by drought, frost or insects.† The home of alfalfa is in a warm, somewhat dry climate, where the soil is porous and deep, and where it can be irrigated. There it is very profitable. In western Kansas it does well if irrigated, especially on the Arkansas river bottoms. It may succeed on our creek bottoms in eastern Kansas, but I hardly think on our high prairies that it will be more profitable than red clover. It is harder to cure into hay than red clover, and is worse in causing bloat in cattle if they feed on it when wet.

The clovers all need to be cut after the dew is gone, dried soon as possible, put into heaps and stacked without any rain. If there is not a bit of dew or rainwater on the clover hay, it may be safely put in stack long before it is perfectly dry. If dry, its leaves crumble and go to waste. Some of its natural juices will not spoil it, but a little rain water will. The stack will steam and sweat, so one would think it would spoil, but next winter it will open up nice and bright. Cattle will eat spoiled clover hay better than prairie hay.

Alfalfa makes no sod, and in a muddy time the tramping of stock would injure it. It is splendid pasture for hogs, and many are intending to have one for their hogs. Some say they

\*Some of the finest stands of alfalfa have been produced from twelve pounds of seed per acre. Some successful growers use only ten pounds.—EDITOR.

†Grasshoppers are exceedingly fond of it, but if supplied with plenty of moisture it grows so rapidly that nothing but an army can keep it down. It endures drought well, not because of any ability to do without moisture, but because its roots go to great depth and obtain supplies far below the surface. It is the heaviest drinker of our farm crops.—EDITOR.

would soon destroy it. Unlike red clover, you sow alfalfa but once, if you secure a good stand, for it usually holds the fort as long as required. It leaves much space between the plants for weeds to grow, and they will surely do so unless you sow the alfalfa thick enough to cover the ground. It will be thereby smaller and of finer growth for hay. It starts early in the spring, bears close cropping pretty well, and dry weather does not affect it like the other grasses and clovers. If rock or hard-pan underlie the surface, I think alfalfa will not be a success. Its roots run deep down—fifteen feet in some soils. Seed is expensive, but it must be sown thick. It may take the place of clover, but I doubt it. It demands peculiar and special conditions. If they are favorable alfalfa will be a paying crop.

"Tis said that the Indians in their contract with "Uncle Sam," stipulated terms to the effect that they were to have exclusive use of their lands "as long as grass grows or water runs." It is doubtful if "Uncle Sam" keeps his agreement. But there is no doubt that so long as water runs or grass grows, grass will be to the farmer and to the world the basis of all material prosperity.

## The Stock Interest.

### HOLSTEIN-FRIESIANS AS A DAIRY BREED.

By M. S. Babcock, of Nortonville, Kas., read before the Kansas Improved Stock Breeders' Association, at Topeka, January 8, 1896.

We always take pleasure in speaking a good word for a tried and faithful servant, who has served us faithfully for years and has never been found recreant to any trust imposed upon him, and while we may not have the same affection for domestic animals that we have for our own species, still we have the same feeling in a less degree, and, of all domestic animals, it has been my experience that the cow is the most faithful, viewed from the standpoint of profit and loss.

Even in times of prosperity in the horse industry, there is no man who has had much experience in the business who can truthfully deny that there is a vast amount of uncertainty between the foal and the mature horse ready for market.

And if we turn to the production of beef for a livelihood, it has been my experience that we are likely to sometimes market our corn at 15 cents per bushel or less, which requires a great amount of figuring to bring the balance on the right side of the ledger.

And there is the hog. Well, I don't like to cast any reflections on my friends, but I will say this much: When we compare the hog with the cow, as regards their faithfulness as servants of man, the party of the first part isn't "in it" very much—at least that has been my experience. He too much resembles the hired man who will, occasionally, go on a spree, and, like the man, he is pretty likely to go on a spree when he is most needed. I have spent years in breeding and rearing a herd of swine, and then stood by and looked on while the fruits of my labors vanished like the morning dew, but seldom, in my experience, has the cow for dairy purposes failed to return a profit.

This subject is of vast and increasing magnitude. Referring for a moment to the best statistics obtainable as to the annual value of the dairy products of the United States, we find that over \$900,000,000 is a conservative estimate for the production of butter and cheese alone, without taking into account milk of the retail trade. The value of skim-milk for feeding purposes would amount to over \$1,000,000. This is the annual product in a commercial way. It does not include the increase in value of stock or the value of the farms, which is one of the important features in connection with the dairy industry.

Taking the amount of land, improved stock and machinery necessary to care for the 19,000,000 cows that at present are to be found in this country, it would exceed \$1,000,000,000, a much larger amount than the banking capital of the whole country. And with the produc-

tion, as estimated, at \$1,000,000,000, it shows how this great industry has overtopped even the great financial institutions that have had so much attention in the halls of Congress and received such extensive notice from the public press.

The value of this industry has increased 100 per cent. within the past twenty years, and will continue to increase. As the country grows richer and more luxurious, the greater will be the demand per capita for the pure and skillfully-handled products of the cow and this demand must be supplied by intelligent, studious dairymen who read, travel, observe and reach out in every possible way for every assistance science and trained investigation can give them. It is going to be harder and harder every year hence for the unthinking, non-reading, unskillful farmer to make a success with cows. Every State will, sooner or later, be compelled to organize its own educational forces for the training of young men into an understanding of dairy farming, dairy cattle breeding, and the manufacture and care of dairy products. The demand of the consumer will grow more critical and the labor which answers to this demand must be more and more intellectual and, as a consequence, more skillful. There will soon be no place in this business, from the farm to the factory and final consumer, for the man who will not brace up and do his part of the work with modern dairy intelligence. "If the righteous scarcely be saved, where shall the ungodly appear?" If only the best-posted men can make any profit from cows, where will the men who are not posted appear?

The business of dairying requires reading, thinking and hard study. Hard study is worth more than hard work, because we can buy the labor, but we must furnish our own brains, and when the brain is starved for want of sound knowledge, where will we bring up?

Notwithstanding the vast magnitude of the dairy industry of the country, in no branch of farming is there such deplorable waste and short-sightedness as in dairying, such a large amount of labor for so small results, and these results, too, of a very indifferent quality. And, in my opinion, the first and principal cause of this is made in the beginning—the choice of a cow. The old adage, "It is ill work working with poor tools," comes in here with as much force as any place I can imagine. Men who would not think of going back to the old-fashioned plow of our forefathers, nor to the flail to thresh out their grain, will continue to breed, rear and milk cows year after year that not only fail to pay their owners a cent of profit, but are actually running their owners into debt. We must have tools adapted to the work to be performed. Trotting horse men are not governed by draft ideas, neither are the breeders of dogs for speed governed by the outlines of dogs that are bred for fighting and muscular strength, yet men will persist in trying to make a beef cow do dairy work.

It seems to us it would be the part of common wisdom and prudence, if we expect to do profitable work in any line, to study the practices of those who have made the greatest success in that line, and, in bringing this to bear on the subject of dairying, our attention is at once attracted to a country of Europe, much of which has been reclaimed from the sea, where land is worth from \$1,500 to \$2,000 per acre and where more dairy cattle are profitably kept than in any other country in the world, in proportion to its area. I refer to the Netherlands, commonly known as "Holland," with an area of about 13,000 square miles and a population of less than 4,000,000. In one province of this small country, containing 1,700 square miles and a population of about a half million, the number of milch cows exceeds the population. Without going further into details, statistics show that the Hollanders are the most successful dairymen in the world, and statistics also show, we think, that the Holstein-Friesian is the most successful dairy cow in the world, and, from our own experience and observation, we believe that in this case

statistics are correct. We will give a few reasons for the faith that is in us and leave the subject for more capable men to discuss: (1) We believe the Holstein cow has a stronger constitution than any other breed of dairy cows. (2) We believe she will produce more butter, cheese or milk, in proportion to food consumed, than any other cow. (3) We believe Holstein cattle will produce as much meat, in proportion to food consumed, as any breed of cattle.

Now, while this is the position I hold in regard to Holstein cattle, I have no war with any one who thinks otherwise, or has a fancy or preference for any other breed, nor even with the man who thinks he can do satisfactory dairy work with a beef breed, but I do insist that it is the part of wisdom for every man who keeps a half dozen cows to use a scale, the Babcock test, a lead pencil and piece of paper, and find out for himself just what he is doing.

### About Hereford Cattle.

By R. A. Steele, of Belvoir, Kas., read before the Kansas Improved Stock Breeders' Association, at Topeka, January 7, 1896.

As many of us have our preference, and founded on experience, I will not now discuss the best beef breed, but will confine my remarks to the Hereford family. I will not give the history of this breed, but will briefly state that they have been purely bred for over one hundred years, and have overcome strong opposition and prejudice, so that at this date they are recognized as one of the best beef breeds. This leads to the question: "What are some of the desirable qualities of this noble breed?" They are eminently adapted to grazing even on scanty pastures, cleaning up the farm of straw and rough feed, and presenting a fine appearance nearly the season through; adapted to feed or fatten at any age. No breed on earth is their equal in this respect. In the feed lot are quiet, but rustling for something to eat, and if properly fed produce best results, always fine in appearance, i. e., with good backs, which makes the good seller, at best or top prices.

My remarks are largely from experience and observation, and in no way allow any hobby to sway my convictions. Neither do I recognize small tests as being the true road to success, but admit often show the direction of the facts sought after. I and my sons are Hereford breeders, but in no way allow that to influence the facts sought after—best results. Now, as to cross-bred animals, we have eight Short-horn cows of the roan type, all pedigreed and all with good backs. I bought them for good. Crossed with Hereford bulls, the calves are very satisfactory, invariably retaining the white face, or nearly so. Have not used the offspring from this cross as yet to any extent, but am favorably impressed and think they make the best feeders we ever had. Having a few Jerseys, pure-bred, used Hereford bulls in mating same. If steers, they were large enough to feed and sell with other grades.

Having shipped Hereford bulls to our ranch in Oklahoma, north of the Pan-handle, for the last five years, am familiar with results of using Hereford bulls on native cows of that country, which means Texas and Indian cows, with mixture of scrub. Now, as to results, this cross in the main were good, greatly improving the class of feeders and materially advancing the price. This point was noticed, that bulls taken there as yearlings usually remained small, and I believe the increase tended that way.

I believe the craze for "baby beef" is liable to dwarf and "pony" up the breeding to a damaging extent, especially in the West. This is certain, a steer should weigh near 1,000 pounds when he is 2½ years old in the fall. This will make a feeder to feed in winter, or better, to feed grain on grass the following spring. The deduction is this: Use bulls 18 months or 2 years old—(I would prefer older). By so doing, get stronger and better developed calves. It is a self-evident fact that the shape and form of an animal largely depends on the feed he gets, and this goes in favor of this "baby beef." But we believe this to be somewhat of a fancy, and may be only of

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short duration, and to my mind rather "veally." I do not wish to be understood as stopping the growth of animal to get age to feed, but kept growing all the time from birth. There is no economy in letting an animal shrink 300 or 400 pounds in the winter to build up again in the spring. I would not favor the contracting in size to meet the present want, but would retain the length, and especially the broad back, tending to shorter legs. Neither would I favor fancy points as to color. The dark red appears now very popular, but think the yellow tinge or type make the most satisfactory feeders, certainly are the best feelers, mellow skin and every way pleasant to the touch.

We have made many tests. Were particular in selecting cows with great records, both in the show yards and feed lot, closely observing the condition of the cows at the different seasons in regard to what it required to keep them in good breeding condition. This we found more varied than one would suppose, so much so that I would select no bull for my use without knowing well the dam. Have seen it laid down that the sire was at the ratio of 60 per cent. in impressing the offspring. This I have reason to doubt, and have laid this down as our guide: Save 20 per cent. of the best developed cow calves for breeding, the others we turn off as best we can—usually pay well in the feed lot. It is all nonsense to expect to retain a uniform character in the breeding by breeding everything eligible to register. This course, pursued, will ruin the breed in ten years, no difference where you get the sires, even if you have the closest relation to Lord Wilton 4057, Archibald 11129, Sir Benjamin 36, Sir Thomas 20, Grove 3d, etc., who in their day were prize-winners and did much to build up the breed. I now treat them as back numbers, do not put the picture of either of them on my letter-heads (prefer rather to use my own cattle for that purpose), for why should I? Is our climate and feed inferior to England? We, surely, in America have improved the form, especially the hind quarters, Americanized the animal, as it were, and to keep up these old traditions and keep going back to England to retain our stock, is foolish; in fact, late importations did not meet the expectations of the parties making the importations, and, so far as my observation goes, the offspring were not up to the standard of American-bred.

As long as I can remember, I was a Durham or Short-horn supporter. Predicted their downfall as to color, high up, slab-sided forms. It came. This evil was slowly remedied, and now this breed has promise of again rivaling the world. Age and infirmity prevents me from starting a new breed—using a Short-horn cow and Hereford bull, combining, as it were, the useful in each.

As everything has a tendency to degenerate, select your stock as you would your seed corn; having your type, improve it rather than lower the quality.

If the hair is falling out and turning gray the glands of the skin need stimulating and color food, and the best remedy and stimulant is Hall's Hair Renewer.

## Irrigation.

### IRRIGATION BY FURROWS.\*

(By T. S. Van Dyke, in *Irrigation Age*.)

In orchard work many of the best irrigators run but two furrows to a tree, one on each side, the first year, two on each side the second year, and so on until the third or fourth year, when the whole intervening space is filled. Others gridiron the whole ground at once and lead the roots of the trees away from the trunk and out into the warm, sunlit soil as rapidly as possible. This is the better way where one has the water and time. And where one wants to make the place pay its way from the start one can raise a large amount of produce in the space between the young trees without any perceptible injury to them. This is now a common practice in many places, though some condemn it. Theoretically it injures the trees by drawing too heavily upon the soil. Practically it does nothing of the kind and the difference cannot be seen. Of course the extra product is an extra drain upon the fertility of the soil, and will hasten the time when fertilizers must be used. But most all ground is rich enough for young trees, while no ground is rich enough for old ones in full bearing. The time will come when you must fertilize anyhow for large yields of high-grade fruit, and in the meantime by using the ground you have some returns before your orchard comes into bearing. If the ground is well irrigated and cultivated the amount of stuff that can be raised between the rows under a warm sun without apparently injuring the trees is wonderful, and helps out many a poor man in California. But it must, of course, be done with care and good judgment.

#### REGULATING THE FLOW.

When everything is ready and the water turned into the distributing flume there is little to do but regulate



Flume for Distribution of Water by the Furrow System.

the gates. This is not much of a task, even the first time, for they may be set very nearly by guess. But you should go along the line to and fro several times, watching the flow closely so as to get it as even as possible from every hole. It is not easy to judge of the amount of flow by the size of the stream, for velocity is as important a factor as thickness. But by watching the discharge awhile, and the way the water flows down the furrows, you will soon have the gates set so as to insure quite an even delivery to each furrow. Give the small boy of the ranch a half dollar to let them alone and you will have little or no work with them the next time.

With hoe in hand go over the field a few times and see that the furrows are all right. Some think bare feet and legs essential to thorough irrigation. So they are for shiftless people, and for flooding they sometimes are in the best work. But for small furrows, after you have everything working right, you will need nothing but slippers and will hardly soil them.

You need not spend any time coaxing water down a furrow. This will do in a little garden patch, but on a tract of any size it is an endless job. If the water does not run fast enough after a fair trial, open the gates a little more. But be careful how you decide it is not running fast enough. Patience is here the cardinal virtue. The water may seem to drop out of sight too soon and

yet be creeping along below and filling up toward the top. Give it at least twenty-four hours to go 660 feet. If your soil has stood the test before mentioned the water will probably get through, though very slow at the start. Once acquainted with the vagaries of your soil you will have little trouble. You will know whether to crowd on more water at the beginning and force it through or to wait and let the smallest streams work their way. When you can have the irrigating head long enough the latter course is most always the best. If limited to a short run you will, of course, have to force it through with larger streams. The length of the run will be considered further on.

#### THE WASTE WATER.

To insure good wetting of the lower end of the tract some waste must run off. If the tract is well laid out this should not exceed 5 per cent. and on many places it is almost nothing. But even a little may be considerable in amount and it is well to provide some way to utilize it. Considerable firewood as well as shade, and wind-break for things like oranges that do best in almost dead air, is grown in this way in some of the dry sections. Where the waste amounts to anything and is run in a ditch along the outer edge of trees it will generally keep the roots at home instead of allowing them to rob the main tract, as they are apt to do if left to shift for themselves. In the dry countries no unnecessary trees or large shrubs should be grown around the irrigated tracts, unless in some way supplied with water to keep the roots at home. In a garden the waste may be used for berries, a small alfalfa patch for the cow or chickens, and many other things. As it carries considerable of the fertilizers that may be used, it should never be allowed to run away as it generally is. At the same time provision for waste ditches should be made, as water is at any time liable to escape under careless management and do damage.

#### SMALL STREAMS BEST.

One who has never watched them for a whole season can scarcely believe the work done by streams so small that they never run muddy, never cut and never build bars. But if the soil is close enough to permit it, they are as much superior to all other modes of applying water as a long, slow rain is to a cloud-burst. In its present perfection the system was first worked out at Riverside, Cal., by people with the means, the time and the inclination to experiment. It has worked its way around wherever it is possible to apply it, and its value over all else on fine soil can be no longer questioned. The only exception is that before given, of alfalfa and some other crops on a very large scale, where it is simply a question of economy in handling the water and not one of results.

How far people may drift from this easy and effective work and lose money without knowing it is well illustrated by the following:

At Phoenix, Arizona, in June last, I was shown an apricot orchard by the owner, who was driving. As we came up to it I could see fifty yards away that the fruit was runty and tough. The soil, climate and all natural conditions were apparently the very best for the highest perfection of the apricot.

"Those trees are too heavily loaded and I haven't had time to shake any off," remarked the owner.

"Yes?" I replied. "We carry twice that load on trees in California and pull them through with 90 per cent. of first-grade fruit on."

He wheeled around on the seat and stared at me from head to foot until the horses almost ran into the ditch.

"That's correct," dryly remarked the editor of the Redlands *Citrograph*, one of the oldest and most practical fruit-growers in southern California, who sat beside me.

"They are suffering for water. They look leathery," I continued.

He wheeled around with another look that said as plainly as words:

"Why, what asylum have you just broken loose from?"

Then he added with a sneer:

"They have had lots of 'water.'"

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"They are suffering for water all the same," remarked the editor. "There is no mistaking the leathery look." Then he got withered with a look of terrible contempt.

"That furrow on each side the trees had about fifteen inches of water fired down it, didn't it?" I asked. It showed plainly what the answer would be.

"About that," he replied.

"And it ran muddy at once, and in this fine soil coated the bottom and sides of the furrow with a fine slime?" "Y—yes," he answered. He need not have taken the trouble, for the dried slime spoke for itself.

"And when it dried, instead of cultivating and breaking it up you left it to crack."

He did not answer this. The furrow answered for him.

"And when it dried and cracked until it got dry enough you fired more muddy water down it and puddled the cracks. And you let it dry and form new cracks and then puddled them again. And you repeated this process several times a year for two or three years until now it comes near being a cement ditch. Consequently a tree may stand within three feet of it and get moisture enough to carry half a crop fairly well but not get enough evenly distributed through the soil to feed up to the point necessary to carry a big load up to first grade."

"That's what's the matter," remarked the editor.

The owner did not say much, but the chances are that he is still running that field in the same way without a particle of cultivation, keeping the same old furrows and puddling the new cracks in them as fast as they form. The number of people who can comprehend the folly of working out anew for themselves things that for years have been worked out for them somewhere else is very small.

By a long run of a small stream instead of a short run of a big one, and with good cultivation of the whole, breaking up the furrows each time, these trees would have done as well as any trees in California. The soil was fine enough to permit it, and it would have taken far less water to produce twice the crop and make it nearly all first grade.

#### EXPERIMENTS IN CALIFORNIA.

On a place where I once spent three years, and took considerable interest in the irrigation, because I was depending on it for fruit, the watering was all of this kind. It was in 1879, and little was then known about irrigation in California, the methods being of the crudest types. But it would not have paid to use anything better in this case, for there was no market for the fruit and it was raised only for home use. A little dam across the creek furnished a head of about twelve inches for six hours every three days, and there was nothing to do but go up and

pull out the shingle that formed the gate. I soon found that the trees had grown balls of thread roots close up to the ditches and that the water soaked but a short distance to the sides. The fruit was very good provided there was not much of it. When there was it was small, sour and flat. This was in a region where the rainfall was about twenty inches, and trees would live and bear something without any irrigation. But it was then plain to me from some experiments I made that, while the trees got drink enough through the skeins of thread roots they had formed along the ditches, there was not enough ground sufficiently wet to enable them to feed the tree properly when well loaded.

Many such little ditches are still found in out-of-the-way places, and they bear well enough for home use but not enough for heavy profit. And the results look very fine to one who has never known what it is to market a crop of fruit. When one learns that nearly all the profit is in the first grade, and that the second hardly pays expenses, while the third had better go to the hogs than ruin the reputation of the grower and his locality by going on the market, one begins to find out where he is. And if the place has a mortgage on it he may be behind on the interest, while some one, with conditions not as good, is making large profits out of every acre.

In 1878 I experimented with these small streams on adobe soil of the blackest and stickiest kind. I wanted vegetables and could get them only by raising them myself. I was limited to a windmill from a very deep well, making the stream small and slow. But I was surprised to find that a very small stream soaked sideways with great rapidity, and that nothing was gained by increasing it so long as it flowed at all. All it wanted was time, and this it had to have, no matter how long.

On some soils, however, this will be an absolute failure. In 1877 I tried the same thing on some alluvial soil of very fine appearance and very rich. But the water fell through it as fast as it was turned in, and if the stream was increased enough to force its way along then it puddled the sides and bottom and still refused to soak far enough to the sides to be of any use for anything unless planted almost on the ditch. A tree could have stood within two feet of it and got no water until it sent roots to it and then would get only drink, the ground remaining too dry to enable it to feed. Quick flooding is about the only way to handle such ground.

#### A NEW JERSEY INSTANCE.

My first experiment with irrigation was in New Jersey, in 1856, at the age of fourteen. There was a very dry spell and we had in the garden a new variety of sweet corn, to which I was

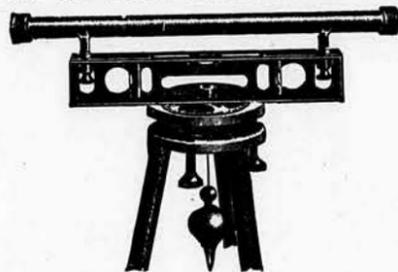
\*Copyright, 1895, by T. S. Van Dyke.

very much attached and I tried to save it. The gardener and my father both told me it was no use to try to water it, but I went at it with a pail and packed water from the well for nearly half a day and poured it down the rows. Then the hired man started in to help me and we gave it what seemed a good wetting. The result was a practical failure, though there was more corn than there would have been had we not watered it. Looking at the same ground years after it was easy to see what was the matter. It was a loose red shale soil lying upon fissured rock. This rock was thoroughly dry for we did not begin to water until all hope of rain, enough to save the corn, was past. The water dropped through the loose texture of the soil and the fissures of the bed-rock drank it up as fast as we could pour it in. The quantity that seemed so great to us because pumped from a deep well and packed some fifty yards by hand was really but a trifle compared with the needs of the soil. Assuming that we carried five gallons a trip with two pails from the pump to the patch, and made thirty trips an hour for five hours, which is more than we did, we put on 750 gallons. This is a trifle more than one-eighteenth of an inch for twenty-four hours, or one-ninth for twelve hours, or one-fourth for about five hours. It was not possible for the water to soak sideways and upward until the crevices in the rock had been either filled or the bottom of the furrows puddled so as to stop the downward flow. The short dashing doses that we inflicted upon the suffering patch had no such effect. The ground either needed flooding or a long run of streams of a third to half an inch and perhaps more. While we made lots of fuss, mud and slush, the roots of the corn, which were not trained near the center of the furrows, but went straight down, got little of the moisture. Add the fact that the corn was twisted all night after it was in tassel, while the water from the deep well was very cold, and it is easy to see the cause of failure. Many would conclude from this that irrigation in New Jersey was a failure. On the contrary, few States need it more or would show much better results where warm muddy water from the streams could be economically brought upon the soil. I saw this tried in 1893 in a garden at Mont Clair, and showed a friend's gardener how to run small streams. The season ruined all the neighboring gardens, but this one was loaded with produce, of a better quality and earlier than they had ever before seen. The bearing season for beans, melons, and some other things, was extended fully two weeks by it.

A neglected cold often terminates in consumption. Take Dr. Bull's Cough Syrup in time and forestall the dreadful disease.

**Leveling Instrument.**

In laying off land for irrigation, a matter of first importance is to determine the levels. The KANSAS FARMER has desired to offer its patrons a reliable, low-priced instrument for this purpose, and has finally secured the one herewith illustrated. It is



manufactured by L. S. Starrett, a well-known and reliable manufacturer of fine mechanical tools at Athol, Mass., who warrants it to be true in every respect.

The price of the instrument is \$12.50 at the factory. By a special arrangement we are able to furnish it to subscribers, together with a year's subscription to the KANSAS FARMER, delivered at any express office in Kansas, charges prepaid, at the manufacturer's price. Send orders with money to KANSAS FARMER Co., Topeka, Kas.

We can furnish you KANSAS FARMER and Peterson's Magazine, each one year, for \$1.75. Or KANSAS FARMER and Arthur's Home Magazine for \$1.65. Send to this office amounts above named.

**Gossip About Stock.**

M. H. Alberty, of Cherokee, Kas., reports sale of a pair of his fine Holsteins—a bull and a heifer. He is having fine success with his cattle and Duroc-Jersey pigs.

W. S. Hanna, the veteran swine breeder, of Ottawa, writes that he has fifty excellent Poland-China boars for sale, and has bred thirty-five sows which he offers for fair prices. Write him for particulars.

Attention is directed to the change of advertisement of Pleasant View stock farm of J. A. Worley, Sabetha, Kas., who makes a few pertinent remarks about the outlook for the horse business, which we will publish next week.

Kansas breeders of Short-horn cattle will be pleased to learn that Col. W. A. Harris, of Linwood, Kas., has decided to make his next annual sale of Cruickshank Short-horns at Linwood farm, on May 6, 1896. Heretofore, in order to avoid undue sacrifice on pure Cruickshank cattle, his annual sales have been made at Chicago or outside of Kansas, but the time has now arrived when Kansas breeders can readily take the entire annual offering, which will consist of forty-five head of the best specimens of young things ever offered for sale in this country. Further announcements will be made next week.

Attention is directed to the public sale of Short-horn cattle to be held on Friday, April 10, 1896, at Sabetha, Kas., by John McCoy, of Sabetha, and L. J. Hitchcock. The offering comprises forty head of Short-horn cattle, cows with calves at foot, a splendid lot of heifers, some bred to Royal Thistle 105357 or Imperial Knight 119669, also seventeen choice bulls. These cattle are mostly Cruickshank-topped of the Young Mary, Daisy, Rose Mary and Ianthe families, of which some are splendid milking strains. Write for catalogue and easy terms. Kansas stockmen cordially invited to be present.

The combination reduction sale of swine held at Savannah, Mo., on March 11, by Messrs. W. P. Haylett, F. M. Waters and Moffitt Bros., was well attended and fairly good prices were realized, considering that about half of the offerings were summer and fall youngsters, the gilts being too young for nicking. Buyers were present from Nebraska, Iowa, Kansas and Missouri. The top of the sale was made by M. C. Baublets, of Graham, Mo., on the eleven-months gilt by Tom Corwin Jr. 10275 S. and out of Sunset 14th 82198 S. The fifty-seven head brought \$1,037, making an average of \$18.50. Col. T. C. Callahan, of Friend, Neb., did the honors of the block. It was unanimously agreed by all in attendance to be a fair, open sale and everything carried out as advertised, and further, that the breeders contributing the offerings merited the confidence of fellow breeders.

Mr. A. Allardyce, of 113 Adams street, Chicago, in replying to F. J. Knappenberger, of Penolos, Kas., on germ disease, says: "It speaks badly for the Kansas hog breeders, when a man like this openly declares that he is a cholera importer and breeder, and there is no wonder if he raises and sells hogs that there is so much cholera in Kansas. Sanitary conditions are a good thing, but it takes a germicide to kill a germ, and, if you kill a hog cholera germ, which can be done with Bannerman's Phenyle, beyond a doubt, it is not necessary to have hog cholera around. Mr. Knappenberger says that common sense is better than science with hogs. Possibly it is, but when a man has no common sense, and thus does not understand science, most anything would answer his case. He says he believes in cleanliness, but it seems he does not believe in the means that would bring it about. He is more to be pitied than laughed at. His way of doing is both dangerous and detrimental to farm interests, and it is to be hoped that none of his neighbors will pattern after his methods. No medical or professional man will agree with him."

**Publishers' Paragraphs.**

We have received from the publishing house of A. Corbett & Co., Bible House, Astor Place, New York, a book bearing the significant title, "How to Make \$500 Yearly Profit With Twelve Hens," by A. Corbett, Professor of Galliniculture Science.

A GOOD-SENSE BOOK FOR PLANTERS.—Those planters who wish the latest information about seeds, presented in a straightforward, matter-of-fact way, will be gratified by the practical good sense evidenced in Gregory's Seed Catalogue for 1896. The purpose of this book is to help the planter in the choice of seeds best adapted to the conditions of his particular locality, and it probably contains descriptions of a greater variety and more new varieties of seeds, than any other catalogue. It gives plain useful information in place of chromos, and hard facts instead of fanciful descriptions. It is a work worthy of the reputation of the firm that publishes it, and one that cannot fail to win the approval and appreciation of all farmers and gardeners. Any one who plants seeds can obtain a copy

free of postage upon application to J. J. H. Gregory & Son, Marblehead, Mass., who are the oldest and largest seed-growers in New England, and one of the best known firms in the entire country. Their business was established in 1856, and its growth has been continuous and healthy. There is probably no section of the country where "Gregory's Home Grown" Seeds are not sold and planted.

The General of the army, the General commanding the United States corps of engineers, Vice President Webb of the New York Central, and John Jacob Astor, compose The Cosmopolitan Magazine's Board of Judges to decide the merits of the horseless carriages which will be entered in the May trials, for which The Cosmopolitan offers \$3,000 in prizes. This committee is undoubtedly the most distinguished that has ever consented to act upon the occasion of the trial of a new and useful invention. The interest which these gentlemen have shown in accepting places upon the committee is indicative of the importance of the subject, and that the contest itself will be watched with marked interest on both sides of the Atlantic. KANSAS FARMER and Cosmopolitan \$1.85 per year.

**Millions of Gold**

In sight at Cripple Creek, Colo. Only twenty-three hours from Topeka by the Santa Fe Route, the only broad-gauge route passing right by the "Anaconda" and all the famous mines. See the nearest Santa Fe agent for all particulars, or write to GEO. T. NICHOLSON, W. J. BLACK, G. P. A., A. G. P. A., Chicago, Ill. Topeka, Kas.

**WEAK MEN**

CURED AS IF BY MAGIC.

Victims of Lost Manhood should send at once for a book that explains how full manly vigor is easily, quickly and permanently restored. No man suffering from weakness can afford to ignore this timely advice. Book tells how full strength, development and tone are imparted to every portion of the body. Sent with positive proofs (sealed) free to any man on application. ERIE MEDICAL CO., BUFFALO, N. Y.

**STARK TREES BEARFRUIT**

TESTED 70 YEARS. Salesmen and club makers wanted for GOLD plum, etc. Stark, Louisiana, Mo., Rockport, Ill. KANSAS HOME NURSERY. Grows the best New and Standard Fruits and Ornamentals. Own the largest and oldest experiment grounds in the West. Offer new Apricots, Raspberry, Strawberry and Apple. Catalogue free. A. H. GRIESA, Box J., Lawrence, Kas.

**Pear, Peach, Apricot**

Apple, Cherry, Plum, Grape Vines, Small Fruits, Evergreens, Roses, Shrubs, etc. Send for descriptive list and prices. Address J. F. CECIL, Nurseryman, North Topeka, Kas.

**Trees, Shrubs, Plants, Bulbs!**

Apple trees, large stock, \$30 per 1,000; special rates on large orders. Cherry, Pear and Plum, \$15 per 100. Strawberry, \$2.50 per 1,000. Blackberry, \$6 per 1,000. Concord Grape, \$1.25 per 100. Thirty Greenhouse Plants, \$1—mail or express. Price list free. BONNER SPRINGS NURSERIES, Bonner Springs, Kansas.

**Litson Nursery.**

Fruit trees, Berry plants, Evergreens and Ornamental shrubbery at wholesale to the planter. Write for free price list. W. H. LITSON, JR., Nevada, Mo.

**SOIL MOISTURE!**

HOW BEST TO CONSERVE IT. Send us your name and address, mentioning the paper in which you saw this advertisement, and we will send you a pamphlet giving our own experience, together with the experience and conclusions of fifty more of the best farmers in Nebraska and Kansas. Also our wholesale price list of choice FRUIT TREES, plants and ornamentals. Address YOUNGERS & CO., Geneva, Neb.

**FIELD AND GARDEN SEEDS**

Selected from choice seed stocks grown in Northern New York State. Send for thirty-two-page catalogue of Field, Grass and Garden Seeds. EARLY SEED POTATOES in car lots. Ask for prices. H. T. McCURM, Atchison, Kas.

**ARTICHOKES.**

Mammoth White Jerusalem Artichokes, a substitute for bran and oil cake at one-fifth the cost and trouble, as the hogs do the harvesting. For particulars and prices, address W. H. ARNOLD, Kearney, Neb.

**Evergreens and Forest Trees**

At \$1 per 1,000 and upwards. Price list free. Address C. A. COCAGNE & CO., Wis. Mention FARMER. Sawyer, Door Co., Wis.

1000 ASH \$1. 100 APPLE, 3 to 4 ft., \$5. All leading sorts. Black Locust and Cherry, 3 to 4 feet, \$15. Osage Hedge at Complete Price List FREE. about same price. JANSSEN NURSERY, Jansen, (Jeffco Co.), Neb.

**NORTH TOPEKA NURSERIES**

Carries a full supply of all standard fruits. Send for special prices on Apple, Cherry, Plum, etc. A good line of Japan Plums.

A. L. BROOK, PROP'R., NORTH TOPEKA, KAS.

ALLIANCE Seed House GOVE CITY, KAS. It is acknowledged by all to be the cheapest reliable Seed House on earth. Pkts. 2 to 3 cents each; other seed cheap in proportion. Complete catalogue of FRUIT TREES, PLANTS and ORNAMENTALS to all. Give us a trial.

**CORN IS KING!**

EARLY YELLOW ROSE, SNOWFLAKE WHITE, PRIDE OF THE NORTH, VORITES. SEND 5 cents in stamps for a package of each of the above named corns and "Hints on Corn-Growing"—a twelve-page book—and how up-to-date farmers grow the big crops of 100 to 150 bushels per acre in 90 to 100 days. Address all orders to J. B. ARMSTRONG, Pleasant Valley Seed Corn Farm, Shenandoah, Iowa.

SEED CORN! 26 Best Kinds. One Kansas customer says: "Your C. Y. Dent corn is two weeks earlier than, and will make 10 bus. per acre more than, our native corn alongside." Catalogue and sample C. Y. Dent free. J. C. SUFFERN, Seed Grower, Voorhies, Ills.

**PURE EARLY OHIO SEED POTATOES.**

From Northern-grown seed. Comparatively free from scab, and solid. 45 cents a bushel. Write for prices on large amounts. D. A. WILLIAMS, Silver Lake, Kas.

**CHOICE SEED POTATOES! EARLY SEED POTATOES!**

Extra Early Six Weeks, 55 cents per bushel. Early Kansas, 50 cents per bushel. Early Ohio, Early Beauty of Hebron, Early Rose, Early Sunrise, 30 cents per bushel. Medium and late varieties: Snowflake, Blue Victor, Burbank, White King, Late Rose, 30 cents per bushel. Potatoes good average size and sound, put up in sacks or barrels and delivered to railroad depot here. Address EUGENE R. HAYES, Topeka, Kas.

**Carman No. 1 Seed Potatoes, \$1.00 Per Bushel**

F. O. B. I have got a chance to secure a few bushels of these celebrated potatoes, from the American Bottoms, of Illinois, grown under straw mulch, and guaranteed true and sound. Ten per cent. discount on ten bushels. I can recommend this potato. CLARENCE J. NORTON, Morantown, Kas.

RED RIVER VALLEY SEED POTATOES

Choice Standard and New Varieties grown and stored in the Cold Northwest. Send for handsome Illustrated Catalogue, containing article describing method of raising and handling. Small shipments at car-load freight rates. Samples free. E. W. Allen, Wolverton, Wilkin Co., Minn.

**FOR SALE!**

**Choice Varieties of Best Early SEED POTATOES.**

- Early Six Weeks.....60c. per bushel
- Early Kansas.....50c. per bushel
- Early Ohio.....30c. per bushel
- Early Rose.....30c. per bushel
- Burpee's Early Superior 30c. per bushel
- Early Sunrise.....30c. per bushel
- Snowflake, medium late. 30c. per bushel
- Burbanks, late varieties 30c. per bushel
- Blue Victor, medium late 30c. per bushel

All the above varieties good size and sound, in sacks or barrels, delivered to any railroad depot here. Address TOPEKA PRODUCE CO., 304 Kansas Ave., TOPEKA, KAS.

The Home Circle.

WHEN JIM WAS DEAD.

When Jim was dead,  
"Hit sarved him right," the nabors sed,  
An' 'bused him for the life he'd led,  
An' him a-lying thar at rest  
With not a rose upon his breast!  
Ah! many cruel words they sed,  
When Jim was dead.

"Jest killed hisself." "Too mean ter live."  
They didn't hev one word ter give  
Of comfort as they hovered near  
An' gazed on Jim a-lying there!  
"Thar ain't no use ter talk," they sed,  
"He's better dead!"

But suddenly the room growed still,  
While God's white sunshine seemed ter fill  
The dark place with a gleam of life.  
An' o'er the dead she bent—Jim's wife!  
An' with her lips close, close to his,  
As though he knew an' felt the kiss,  
She sobbed—a touchin' sight ter see—  
"Ah, Jim was always good ter me!"

I tell you when that cum to light  
It kinder set the dead man right,  
An' round the weepin' woman they  
Threwed kindly arms of love that day,  
An' mingled with her own they shed  
The tenderest tear—when Jim was dead.  
—Frank L. Stanton.

WHEN MY SWEETHEART DIED.

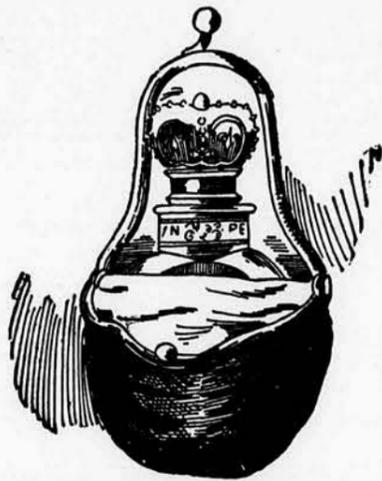
I seemed alone in unknown worlds  
The night my sweetheart died—  
The stars hung in the tree-tops dark,  
Her outboud soul to guide,  
The wind strayed through the orchard calm,  
And laughing down the stream  
Came echoes of a bird-song  
Bewildered in a dream.

Alone I waited—unaware—  
Close by the gate of death,  
While heaven turned her face away,  
And summer held her breath;  
The drowsy roses cheek on cheek  
Forgot the chilling dew,  
The hours at their silent watch  
Were undismayed and true;  
Till morning's shining horn at last  
Blew earth awake again,  
And found my heart a homeless waif  
On foreign shores of pain.  
—Harper's Bazar.

VINAIGRETTE HOLDER.

Chatelaine Attachments the Only Relief  
In These Pocketless Days.

Since women will not have pockets in their gowns, or, more properly speaking, since dressmakers will not permit the existence of these useful adjuncts, there seems no other way for the shopping impedimenta of the gentle sex to be carried about than by being strapped to the belt. The ordinary chatelaine bag becomes a satchel if more than change, purse, handkerchief and memorandum goes into it, yet often more is needed. The suburban woman hesitates, for example, to pass a day in town in the fatigue of a shopping round without her



A VINAIGRETTE PURSE.

bottle of reviving salts, but how to carry it is a problem. A London manufacturer seems to have solved it in the accompanying illustrated salts-bottle pocket, in which the useful vinaigrette may rest and swing from the belt.

Everything is Perfumed Now.

So great has the rage for perfume become that in some of the expensive New York shops perfumed gloves, ribbons and artificial flowers are sold with any desired odor. The perfumed gloves are really excellent, as kid retains a perfume as long as it lasts; in fact, the great perfumers are now putting up their most expensive perfumes in the form of kid; it is called peau d'hellotrope, peau d'violette, or whatever the odor may be, and is sold in squares six or eight inches square, and the merest scraps of this skin will perfume an entire garment thoroughly. The great dressmakers and corsetiers sew strips of it into their confections, and the perfume lingers always.

THE FAD OF FASHION.

Jeweled Censers Which Actually Burn a Dainty Perfume.

The modern woman has taken to burning incense at her own shrine. The latest thing in jeweled smelling-bottles is a veritable censer that swings from milady's chatelaine and when lighted diffuses a delicate perfume and a tiny cloud of incense.

At an operatic matinee the other day a very elegant young woman in a tailor-made gown and a fetching millinery getup produced her whilom smelling salts at the most affecting moment of the performance. As she snapped open the cover and a fine streak of circumambient vapor curled softly up and stole athwart the footlights, there was a craning of necks in her neighborhood for two who'e minutes, while the women tried to investigate the latest idea in elegance.

This new perfume burner, as it is called, has displaced the vinaigrette and



THE FAD OF FASHION.

tiny bottles of aromatic salts so dear to the heart of the swooning maidens of half a century ago. The English matron now swings her censer through the London drawing-rooms as sedulously as she carries her lorgnette rampant.

The perfume burners are also appearing in New York, and are to be found in the shops which make a specialty of imported novelties of the toilet, both in sizes for the chatelaine and for the dressing-table.

The little chatelaine censer comes in out glass and silver in very dainty designs. Its inner mechanism has a nice little device for automatic lighting; extinguishing is accomplished by merely excluding the air by putting on the silver top.

The perfume burner is in reality a tiny lamp, burning, in lieu of a wick, a prepared stick of incense as fragrant as the frankincense and myrrh of Biblical days. Eastern perfumes, such as the pungent, aromatic sweet grasses of India and Ceylon, are favorites for this use.

In a short time the woman who formerly affected musk and attar of roses will float into drawing-rooms, theater boxes and church pews in a cloud of oriental incense; and she of the violet sachets in silken interlinings of every frock will burn violet-essence in clouds or spring odorousness.

And who shall not say that the boudoir incense chats may not rival the club smoke talks of the masculines at social occasions among women fair when the season of lenten solemnity settles down upon the world of fashion?—N. Y. World.

Dainty Stationery for Brides.

For the bride on her honeymoon there has recently been designed a special stationery put up in a white satin circular box. Within are 50 sheets of rather rough cream white paper showing a deep border in satin finish and prepared for stamping with one's newly acquired initial and the address of the house where the honeymoon is to be spent. Both envelopes and paper are tied up with a profusion of white ribbons, through the bows of which are thrust an ivory pen handle with gold point, a thin ivory paper knife, and two sticks of perfumed white wax complete the outfit.

"Success is the reward of merit" not of assumption. Popular appreciation is what tells in the long run. For fifty years, people have been using Ayer's Sarsaparilla, and to-day it is the blood-purifier most in favor with the public. Ayer's Sarsaparilla cures.

Highest of all in Leavening Power.—Latest U. S. Gov't Report.

Royal Baking Powder  
ABSOLUTELY PURE

TWO TESTED RECIPES.

A Rich Pie and Cookies That Are Perfectly Harmless.

Tutti-Frutti Pie.—A delicious fruit pie, which is a sort of mock mince, may be made in the following manner: Take a pound of selected figs (preferably those packed in California, as being cleaner), wash them thoroughly, and stew until swelled to their natural size. Cut off their stems and put them into a chopping-bowl. Add a half pound of seedless raisins, the same amount of prepared currants, a little citron, a sprig of candied ginger, one large juicy apple peeled, and the juice and entire rind of a lemon.

Chop all of these ingredients together evenly, and when minced quite fine stew for five minutes in sufficient liquor of the figs to cover the fruit. Add one cup of granulated sugar, one grated nutmeg, a pinch of cloves and one of cinnamon, bake in a pie with a lattice-top, from paste which is not too rich.

A suitable recipe for such puff paste may be made thus: To a pint of flour, take a quarter of a pound of lard, a pinch of salt, a pint of ice water and one-half of a pound of good butte. Cut the lard into the flour with a knife, add salt and mix the water into this, until a dough is formed. Roll out lightly. Spread the surface with its bits of butter, sprinkle with flour, roll up, proceeding in a like manner until all of the butter is used, perhaps four or five times. This is an excellent pie-crust for such a rich pie, although scarcely "short" enough for an ordinary fruit or custard filling, in which case three-quarters of a pound of butter should be used. This tutti-frutti pie may be made also of stewed prunes, instead of figs, and perhaps to the taste of many persons would be improved by the substitution. It is better when eaten the same day as baked, but will prove palatable the day following also, when quite cold. This quantity will make several pies.

Kindergarten Cookies.—In most of our modern schools for advanced babies, it is required that each shall bring a luncheon for one day in the week, usually on Friday. Bread and butter with jelly, fresh fruit and some sort of light, digestible cakes are advised. During the session, the teacher varies the exercises by training her pupils in the courtesies of the table, and improves their manners thereby. An excellent recipe for light cookies, such as children dearly love to munch, is given herewith: One egg, one and one-half cups sugar, one cup sour cream one even teaspoonful soda, one-half of a grated nutmeg, flour enough to roll out. Sprinkle with sugar when in the pans, and flatten the half of a bleached almond in the top of each. The most fastidious mamma could not object to her child's fondness for these light sweet cakes, containing no butter.—Detroit Free Press.

Pretty Cover for Washing List.

Cases for washing lists are among the new novelties. They make an extremely pretty little gift as well as a useful one. The cover is generally of covered linen, with any design or lettering painted upon it. One seen recently is a little book of blank pages with a linen cover in pale sage green. Painted upon it is a dainty young person hanging out the clothes. At the side of the book a pencil is fastened which has a unique little handle, shaped like a clothespin.

What Becomes of Old Clothes Pins?

There lives a man in Wayne, Me., who three years ago resolved to keep an account of the clothespins he should be called upon to buy. Since then he has purchased 40 dozen, and his wife neither takes in washing nor uses them for kindling.

Influence of the Mind.

It is not only in depressed mental conditions where the mind's influence is potent, but often patients have rallied from dangerous and even fatal diseases by having the bright star of hope ever before them. Just so, too, the imagination can picture an ill worse than it really is:

"The safest way to health say what you will

Is never to suppose we shall be ill,  
Most of the ills we poor mortals know,  
From doctors and imagination flow."

Old-Fashioned Johnny Cake.

One cup of flour, one cup fine yellow corn meal, one-fourth cup of sugar, 1½ teaspoons of salt, two teaspoons of baking powder, one egg well beaten, one cup of milk, one teaspoonful of butter, softened; mix in order given; heat well; pour into a well-greased pan and bake in a moderate oven from 20 to 25 minutes.

DO NOT DESPAIR because you have tried many medicines and have failed to receive benefit. Remember that Hood's Sarsaparilla cures when all others fail to do any good whatever.

HOOD'S PILLS are the best family cathartic and liver medicine. Harmless, reliable, sure.



Dr. J. H. McLEAN'S  
LIVER AND KIDNEY  
BALM

CURES

- Dropsy
- Bright's Disease
- Diabetes
- Female Diseases
- Bladder Troubles
- Urinary Disorders
- Calculus or Gravel
- Boils and Carbuncles
- Gall Stones
- Rheumatism
- Torpid Liver
- Irregular Menses
- Jaundice
- Backache

All who have used it say it is "The Peerless Remedy" for diseases of the Liver, Kidneys and Urinary Organs

Price \$1.00. At All Drug Stores  
THE DR. J. H. McLEAN MEDICINE CO.  
ST. LOUIS, MO.

## The Young Folks.

### THE PASSING OF THE HORSE.

"Ho! ho!" he cries, and mounts his bike,  
"The passing of the horse!"  
Within my breast it seems to strike  
A pang that beats remorse.

No spider frame of bended steel,  
With handle-bar and rubber tires,  
Can throbb beside the strong appeal  
Of throbbing life and keen desires.

I smooth my horse's shapely neck;  
His nostrils sniff the pliny air;  
No pearl from far Tehautepec  
Can match his beauty, standing there!

'Tis joy to stroke his kindly head;  
And thus a fellow learns to feel  
A noble breathing quadruped  
Is more than tube or sprocket wheel.

Let others praise the "silent steed"  
That slides along the well-rolled grounds;  
My heart still yearns with loving greed  
For sounding hoofs and rhythmic bounds.  
—New York Sun.

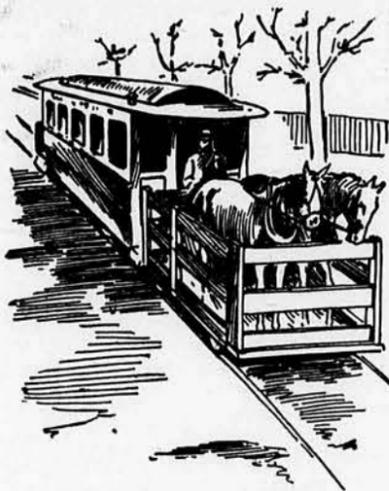
### TOBOGGAN FOR HORSES.

They Get a Free Ride Down Hill Every Day and Like the Fun.

Here is a street car for the accommodation of horses which is the very latest thing in the west. Such a car is now in operation in Denver, and it is pronounced a great success by all able to give an opinion on the subject. The horses themselves are dumb, but if their judgment could be had it would no doubt be favorable.

By the introduction of cable and electric motive power, the bicycle and the automatic carriage, man has done much of late to relieve the afflictions of the equine race. But this latest move, that of taking the horse up off the ground and placing him on board a car so that he may have a ride just like the other passengers is a radical departure indeed.

It must be confessed, however, that these free rides are given in a spirit of



THE CAR HORSES' OWN HORSE CAR.

thrift. The managers of the road find that by this means they save wear and tear on the horses' hoofs, and that they are thus able to remain in the service longer. The plan is a very simple one, and like all other simple things that are new it makes you want to know why it was never thought of before.

The riding car for the horses consists of a platform mounted on small wheels protected at the sides by a sufficiently high railing, while the front and rear are provided with gates. These permit the horse to get on and off the car without backing.

When the regular passenger car has been drawn to the top of the long ascent, the "horse car" is hooked to the forward end, the horses are driven aboard, and by a few deft turns of the brake, the descent is made safely.

At first the horses showed some hesitation about embarking on what appeared to be a perilous adventure. But they soon became accustomed to it, and are said to even enjoy the experience, expressing their pleasure by broad smiles and prolonged whinnies.

There is no reason why this plan should not be adopted with profit elsewhere. There are many car lines which run for almost their entire length on more or less steep inclines. The additional force required to be exerted in drawing a car up hill is turned into a propelling force when the car begins the descent. This force might well be employed in giving the horses a ride, and thus saving wear and tear on their feet.

It might be supposed that the additional pull imparted to this human pas-

senger car, when on the down grade, might cause the brake to slip, but this is not the case. It is only necessary to make the brake a little more powerful than that on the ordinary street car.

Having arrived at the foot of the incline, the gate of the horse passenger car is unfastened, and the animals once more take their places in the traces, drawing both cars behind them up the hill. The entire load is not much heavier than a single car on a level street, as the car in which the horses ride is very light.—N. Y. World.

### THE SHREWD SQUIREL.

Attending Strictly to Business, He Gets the Better of a Hunter.

"Of course," said a hunter, "everybody knows that when a man with a gun comes along the gray squirrel goes around on the other side of the tree; he doesn't get killed if he can help it, and he can help himself pretty well. I remember once coming across a gray squirrel up in a great oak; he was out on a branch about 40 feet from the ground. He saw me as quick as I did him, quicker, I guess, and when I was ready to fire he was around on the other side of the branch. This branch was very small, only a mighty little bigger than the squirrel, but he hugged it so close and he was in such perfect line with me that you couldn't see anything of him at all except a little bit of the tip of his tail that was blown out by a strong wind. I blazed away at him and never touched him. Then I went around on the other side of the tree, thinking that possibly I could get a shot at him from there, but as I went one way he went the other, and by the time I had got over on the other side he was on the side I had come from, and in just as perfect line with me as he was at first, and just as safe. I tried him again, with just the same result.

"Then I pulled a stake out of a rail fence near by and planted it in the ground on one side of the tree and hung my coat on it, and went myself over on the other side; I thought that possibly I might make the squirrel think there were two men there, or put him in doubt long enough to enable me to get a shot at him, but he never paid the slightest attention to the coat. I don't suppose it would have made any difference to him if I'd opened a clothing store there; he knew the man with the gun, and it was the gun that he was looking out for.

"Well, we dodged around that tree for quite a spell longer. There wasn't any other tree near by that the squirrel could go to, and he knew his only safety lay in sticking to the one he was in, and the way he did stick to it and keep around always on the other side of that branch was something wonderful. I fired five or six shots at him altogether and filled the branch under him half-full of shot, but never touched him; when I thought I had wasted time and ammunition enough I left him."—N. Y. Sun.

### KILLED HER OFFSPRING:

Rather Than See Them Captives an Oriole Poisons Her Young.

It has been claimed by observers of birds that some of the feathered tribe will feed their young if they are caged, and if they fail after a certain time to release them they will bring them a poisoned weed to eat, that death may end their captivity, says the Carson Appeal.

About a week ago at the Holstein ranch the children captured a nest of three young orioles, and they were immediately caged and hung in a tree. The mother was soon about calling her young, and in a little while brought them some worms. She continued feeding them regularly for several days, without seeming to pay much attention to persons about.

But on Sunday came the tragic ending that demonstrated the theory relative to birds. She brought them a sprig of green on Sunday morning and disappeared. In less than an hour they all died. The sprig was examined and proved to be the deadly larkspur, a weed that will kill full-grown cattle.

The little creatures lay dead in the cage and slightly foaming at the mouth, victims of their mother's stern resolve that her offspring should die by her own act rather than live in captivity.

### A TRULY HAPPY FAMILY.

I know a happy family of cunning boys and girls,  
Who have such round and rosy cheeks and pretty, golden curls.  
In all that they may have to do they pleasantly agree,  
And everyone of them is kind and good as good can be.

They never call each other names nor pull each other's hair,  
Nor find the slightest bit of fault with what they have to wear.



### A HAPPY FAMILY.

They never cry at night because they have to go to bed,  
Nor ever frown at anyone, no matter what is said.

Not one of them was ever known to try to tease the cat,  
Or even have a wish to do a naughty deed like that.

When they are asked to do a thing they never say "I shan't!"  
Because they're sawdust boys and girls, and so, you see, they can't.

—L. A. W. Bulletin.

### MISTAKEN NOTIONS.

An Important Correction Made by a Medical Authority.

Dr. Hartman, in a recent lecture, stated: "It is thought that when one person has bronchitis, and another Bright's disease, and another dyspepsia, that each one has a disease entirely different and unlike the others. It is a revelation to most people to learn that all these diseases are precisely the same; that is to say, chronic catarrh of the lining mucous membranes. These facts have long been known to the advanced physicians, but the masses of the people, as well as many members of the medical profession, do not seem to understand this very important fact. If consumption was universally regarded as catarrh of the lungs and treated as catarrh would be treated, located anywhere else, it would not only lead to a greater number of cures, but remove a great deal of confusion from the minds of the majority of people."

Pe-ru-na is the one internal remedy that cures catarrh by eradicating it from the system. It cures catarrh wherever located. A free catarrh book of sixty-four pages will be sent by The Pe-ru-na Drug Manufacturing Company, of Columbus, Ohio.

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Display advertising, 15 cents per line, agate, (fourteen lines to the inch).

Special reading notices, 25 cents per line. Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.

Annual cards in the Breeders' Directory, consisting of four lines or less, for \$15.00 per year, including a copy of KANSAS FARMER free.

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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 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.

All advertising intended for the current week should reach this office not later than Monday.

Every advertiser will receive a copy of the paper free during the publication of the advertisement.

Address all orders—  
**KANSAS FARMER CO., Topeka, Kas.**

If you want KANSAS FARMER and Semi-Weekly Capital, send us \$1.50. Or, KANSAS FARMER and Topeka Advocate, send \$1.50.

The official *Holstein-Friesian Register*, the paper of Holstein cattle breeders, published by Frederick L. Houghton, Secretary of the Holstein-Friesian Association of America, Brattleboro, Vt., appeared in a new and greatly improved form, both in contents and appearance, as a thirty-two-page monthly magazine, March 1. The price of the paper is \$1.50 per year, but by a special clubbing arrangement we offer the KANSAS FARMER and the *Holstein-Friesian Register*, both one year, for \$1.65, cash to be sent to this office.

A Kansas hog is the hero of a very amusing story entitled, "Coonie," which President Isaiah G. Fowler, of the Independence City Council, contributes to the *Youth's Companion* of March 26. She was not an ordinary hog, for she refused to get fat, and she kept down her flesh by doing surprising things, all of which Mr. Fowler most entertainingly sets forth. The story was one of the few which the *Companion* chose from its great supply and advertised in its announcement for 1896, and most readers will admit that the honor was well deserved.

Those of our friends who are about to renew their subscriptions will do well to note the following clubbing list—KANSAS FARMER one year and any of the following at prices named: Semi-Weekly *Inter Ocean*, \$1.35; New York *Tribune*, \$1.25; Topeka *Capital*, \$1.50; Topeka *State Journal*, \$1.50; Topeka *Advocate*, \$1.50; Kansas City *Journal*, \$1.30; Kansas City *Star*, \$1.25. Our columns have been so crowded for the last few weeks that it has not been possible to run advertisements of our premium offers. But by referring back a few weeks you will find them. Our subscription list is doing remarkably well, but we can always stand a little more of this kind of prosperity.

The Agricultural Experiment Station at Tucson, Arizona, conducted an experiment with ramie last year and it grew exceedingly well. This comparatively new fiber plant is exciting more attention throughout the United States just now than any other. It promises to become an important crop at no distant day. The one thing now preventing its general culture and manufacture is the need of a satisfactory decorticating machine. The fabric manufactured from this plant is durable and beautiful, possessing a luster much like silk. It might be well to try growing ramie in all parts of the Territory in order to be prepared to grow it in the proper places to secure large returns when the needed machine shall have been invented. A package of the seed will be sent to all applying to the Director of the Station, Tucson.

## THE SAN JOSE SCALE.

Some years ago fruit-growers in California were much alarmed at the ravages of a scale insect which threatened the destruction of the fruit interests of that State. The rapid multiplication and spread of the pest were serious features. First observed in the San Jose valley, in California, the insect took the name "San Jose scale." Where it came from is yet uncertain. It was thought for a long time to be entirely confined to the Pacific States, and Eastern fruit-growers gave themselves little uneasiness about it. It has spread throughout the States of California, Oregon and Washington and has reached the western British possessions. It has also reached Idaho, Nevada, Arizona and New Mexico. But that it is not to be confined to the far West is evidenced by the fact, reported in a recent bulletin of the United States Department of Agriculture, that it has been clearly identified over extensive regions in Florida, at one locality in Virginia, six in Maryland, one in Indiana, two in Pennsylvania, many in New Jersey, one in New York and one in Georgia. There is also evidence of the existence of the scale in Ohio, Alabama, Louisiana and Massachusetts.

It is thought by the writers of the bulletin from which this information was obtained that the scale was brought to the Eastern States in shipments of nursery stock from California and became distributed in the regular course of business of the nurserymen.

The fact that this scale is reckoned as the most damaging of all the parasitic enemies of the fruit interests, gives grave importance to the possibility of its spread to regions now free from it. The usual method of spreading it is in the distribution of infested nursery stock. It were better for the great central part of the United States, now happily free from this pest, that it shall never import another shipment of nursery stock than that the scale shall be introduced. It will be well for farmers and fruit-growers to confine their purchases to the nurseries where there is no scale until such time as it shall be thoroughly exterminated from other sections.

As to remedies, it has been found that some species of ladybugs are especially fond of the San Jose scale as an article of diet. In California, certain washes have been found useful, but these have been much less effective in the East. It is thought that the failure of some of these remedies in the East is due to the rains, which wash them off before they take effect. The effectiveness of these remedies depends largely on winter application. The dry winters of the plains may stand us in good stead in this respect should the scale ever be introduced here. The entomologists of the Department of Agriculture place great reliance, however, on a wash made of soap, preferably whale oil soap, at the rate of about two pounds to the gallon. In summing up they state that for the East, experience justifies the following steps as of highest importance:

"(1) In all cases of recent or slight attack the affected stock should be promptly uprooted and burned. No measure is so sure as this, and the danger of spread is so great that this course seems fully warranted.

"(2) In cases of long standing and wide extent the affected stock should be cut back severely and treated with winter soap wash. Stock badly incrustated with scale should be cut out at once and burned. The lessening of the vitality, together with the poisoning of the sapwood already affected by the scale in such cases, will usually prevent the plant from ever again becoming healthy, and generally it is beyond help. We wish particularly to impress upon the minds of fruit-growers that as soon as this insect is found to occur in an orchard the most strenuous measures must be taken to stamp it out. No halfway steps will suffice. The individual must remember that not only are his own interests vitally at stake but those of the entire community in which he resides. He may think that he cannot bear the loss, but the loss in consequence of the slightest neglect will be much greater. The

fact, too, that there is a community of interests among fruit-growers in this matter must not be lost sight of. Fruit-growers must be mutually helpful in an emergency like this.

"(3) As precautionary measures to prevent the introduction of the scale into new districts the following considerations are important: No orchardist should admit a single young fruit tree or a single cutting from a distance into his orchard without first carefully examining it and satisfying himself conclusively that it does not carry a single specimen of the San Jose scale; he should insist, also, on a guaranty from the nurseryman of such freedom. In addition, no fruit should be brought upon the premises without previous careful inspection. If this course is adopted by every one interested, without exception, the rate of spread of the species may be limited to the comparatively slight natural extension by crawling, by winds, and by the aid of other insects and birds."

## LIQUOR INTERESTS THREATEN POLITICAL DEATH.

Temperance people have often wondered at the tremendous influences exerted by the liquor interest on the policies of political parties. The Chicago organ of the liquor interest is *Fair Play*. In commenting on a bill recently passed by the New York Legislature, *Fair Play* warns Governor Morton that his signature to the bill will "end his political career." It further says that "the German-Americans will go to Albany next [this] week 500,000 strong." Speaking of political penalties, it threatens Governor Morton, of New York, and Governor Matthews, of Indiana, that "all liberal minded people all over the country will teach them both a wholesome lesson should their respective parties honor either one with a national nomination." The liquor organ endorses the prophecy that should Governor Morton sign the objectionable bill "it will ruin the prospects of the Republican party in the Empire State."

The liquor interests are always in deadly opposition to every added restriction, and they owe no political allegiance strong enough to control their action against their "interests."

It is noticeable that in the license State of New York they are more active and more arrogant than in the prohibition State of Kansas. They are like avarice, they never have enough. In Kansas they may send a delegation of possibly a score to influence the Governor, but in New York they threaten to overawe the chief executive with a delegation of half a million.

## WHEAT SUPPLIES AND DEMANDS.

In a review of the world's supplies of wheat for the present season, the Liverpool (England) *Corn Trade News* of March 3, finds that, as compared with last year, the cereal year ending June 30, 1896, will have in exporting countries a surplus for shipment to the importing countries an amount less by about two million quarters, or 16,000,000 bushels, than was actually exported last season. Continuing, the Liverpool paper says:

"If these figures mean anything, they mean that during the current calendar year there will be a large and constant, if not even a clamant, demand for Black Sea and American wheat. We have allowed for only a moderate European consumptive demand of 47,000,000 quarters, say 900,000 quarters weekly—(during the first half of the season the demand has equalled 970,000 quarters weekly), and have estimated the supplies to be obtained from Austria, Hungary, and sundry countries at the liberal total of 3,500,000 quarters, although it would now seem as if Hungarian millers may have to fall to the rear again as wholesale exporters.

"As regards the ability of America and the Black Sea to export the large quantities we have debited them with, seeing that their late crops and present reserves are smaller than in either of the previous seasons, we would only say that it is imperative that they should do so, for at this writing it is impossible to imagine how otherwise western Europe could be fed, and we can only

repeat what we said at the beginning of January, that the prospects are that by the end of the season, July 31, 1896, European reserves and the quantity on passage will be drawn down to the very lowest practical point, and that Russia and America will have shipped out their last disposable bushel."

## FORTY BUSHELS EXTRA FROM SUBSOILING.

The advantages of subsoiling form an attractive theme for those who have used the up-to-date subsoil plows. When Clarence J. Norton, of Morantown, wrote to the KANSAS FARMER that the subsoiler, while turning no furrow, nevertheless, where run in the bottom of the ordinary plow furrow, so loosened the subsoil that the furrow was filled up level full, a good deal of incredulity was expressed by those who had not seen it done. The editor of the KANSAS FARMER is now ready to add his testimony. In preparing land in Barton county for fruit trees, the Perine subsoiler was run about eight inches deep in the bottom of the turning-plow furrow, and it filled the furrow full of finely-pulverized soil. If the subsoiling is done when the ground is dry it is not necessary to subsoil more than every second furrow, and once in three furrows will leave scarcely any unbroken subsoil. The expense of subsoiling need not, therefore, be great. Any one who has never examined subsoiled land will be surprised at the amount of moisture it accumulates as compared with un-subsoiled land beside it.

Mr. L. Short, of Hamilton, Greenwood county, makes an interesting report of his experience with subsoiling last season. He purchased a Perine subsoiler in May. He ran the subsoiler in the lister furrows; then split the middles with the lister, followed by the subsoiler, running the lister five inches and the subsoiler fifteen inches deep. This land was planted to corn with a check-row planter, about the middle of May. Mr. Short's corn ripened with that of his neighbors who planted six weeks earlier, and yielded seventy-five bushels per acre, against thirty-five bushels per acre on the neighbor similar farm. The extra expense of subsoiling was, say \$2 per acre; the extra yield, forty bushels per acre; cost of added yield, 5 cents per bushel. Cheap corn! This was on bottom land. On sixty acres of upland the subsoiler followed the lister and corn was planted, finishing June 4. The average yield from this was forty-five bushels per acre. The subsoiler furrows were forty-two inches apart on the upland and twenty-one inches apart on the bottom land. On good slope land—not subsoiled—planted April 10, the yield was thirty bushels per acre. One hundred acres was subsoiled by three horses, weighing 1,050 to 1,150 each. Experiences differ greatly as to the power required for subsoiling. In our experience four good horses had enough to do. In some parts of the State six horses are used.

Mr. Short will this season subsoil all the land that was in use last season. He finds subsoiling a preventive of washing by heavy rains.

The subsoiler is growing in popularity and we shall doubtless have many reports from this season's experiences.

## ARTICHOKEs.

EDITOR KANSAS FARMER:—Please tell us, in the KANSAS FARMER, something about artichokes—what are the best kind to raise for hogs and other stock, when to plant them, and if they are to be cut like potatoes.

A. J. HOUGHTON.  
Cottonwood Falls, Kas.

For a generation or more the question of the value of artichokes as a feed crop has been frequently propounded, and while an active champion who could tell how profitable they are and the details of their profitable production has been lacking, there has lurked through all the years a supposition that there is profit in them which ought to be easily obtained. If any reader of KANSAS FARMER knows anything about them he will confer a favor by communicating his information, whether it be favorable or otherwise to the development of an artichoke industry.

**EXPORTS AND IMPORTS.**

The monthly summary of finance and commerce of the United States, issued by the Bureau of Statistics of the Treasury Department, is an interesting quarto of 122 pages.

The summary of exports and imports is for seven months, ending with January. In these seven months the account stood:

EXPORTS AND IMPORTS FOR SEVEN MONTHS.	
Exports.	Imports.
Total merchandise.....\$513,903,405	\$478,725,476
Balance of trade in our favor.....	35,177,929
Free of duty.....	231,713,612
Dutiable.....	247,011,864
Gold.....79,940,111	16,621,730
Silver.....34,839,925	8,031,173
Total gold and silver.....\$114,779,136	\$ 24,652,903
Balance exports over imports.....	89,826,233
Total gold, silver and merchandise.....	628,712,541
Total balance of exports over imports.....	125,034,162

How much of these \$125,000,000 went to pay interest on indebtedness abroad; how much, if any, to pay principal; how much to pay expenses of Americans traveling in foreign lands is not shown in the Treasury report and may not be easily determined.

The details of exports and imports are interesting. The account stands under the heading:

MACHINERY FOR SEVEN MONTHS.	
Exports.....	Imports.....
\$7,990,482	1,503,220

But steam engines are not included in the above. There appears to have been none of these imported. Including steam engines, the exports amounted to \$9,657,681 and the balance of trade in machinery to \$8,154,461.

The fact that our manufacturers, under present conditions, export six times as much machinery as is imported, should have some bearing on the question as to whether they need additional tariff protection to prevent foreign manufacturers from compelling American manufacturers of machinery to desist from raising prices on American farmers and other users of machinery.

The showing as to breadstuffs, including grain and flour, stands:

Exports.....	\$83,157,182
Imports.....	1,919,998

So that it is evident a protective tariff on these is not yet a crying necessity. It is worthy of note, however, that more than half of the imports—\$1,062,632—were of wheat.

The account as to dairy products stands:

Exports.....	\$3,967,203
Imports.....	981,182

But our exports of oleomargarine amounted to \$4,924,859. Of our total exports of \$478,725,476, Europe took \$403,915,824, leaving less than \$75,000,000 to go to all the remainder of the world. Of our exports to all countries, the United Kingdom took more than half, or \$243,921,512 worth, while the British possessions in other parts of the world took about \$53,000,000 worth.

The tabulated showing for the CALENDAR YEAR 1895.

	Exports.	Imports.
Merchandise.....	\$824,860,136	\$801,673,307
Gold.....	104,605,023	32,538,736
Silver.....	53,833,153	11,286,007
Balance.....	\$983,298,312	\$845,498,050

What have we received for this great sum, nearly \$138,000,000?

**GRAIN AND GRAIN MARKETS.**

In a review of the grain situation, the Cincinnati *Price Current* of March 19, among other things, says:

"In various districts in Ohio, Indiana, Kentucky, Illinois, etc., there will be considerable of the wheat crop area abandoned to other crops. To what extent this may apply cannot be reliably estimated as yet.

"In various localities corn is being moved with more freedom, but the disposition to hold for better prices widely prevails.

"May wheat at Chicago closed 2 cents below the highest point of the week, 1½ cents above the lowest point, and 1½ cents lower than a week ago.

"Corn at Chicago for May closed ½ cent below the highest point of the week, ½ cent above the lowest point, and ½ cent lower than a week ago.

"Wheat receipts at primary markets were 2,391,000 bushels for the week, against 2,286,000 the preceding week, and 1,850,000 last year.

"Corn receipts were 2,756,000 bush-

els, against 3,121,000 the preceding week, and 1,315,000 last year.

"Closing prices of wheat Wednesday at Chicago for months mentioned compare with two previous weeks and a year ago as follows:

	May.	July.
Yesterday.....	63½	63½
Week ago.....	64½	65½
Two weeks ago.....	66½	67½
Year ago.....	56½	57½

"Closing prices of No. 2 corn Wednesday at Chicago for different months compare with one and two weeks and a year ago as follows:

	May.	July.
Yesterday.....	30¾	30¾
Week ago.....	30¾	31½
Two weeks ago.....	30¾	31¼
Year ago.....	46¾	46¾

**What Ailed the Grapes?**

EDITOR KANSAS FARMER:—I would like to hear from some of the KANSAS FARMER readers in regard to grape culture. I have some 2,000 vines, six years old, and last season something attacked the foliage. While the disease or insect (I don't know what it was) didn't seem to directly damage fruit any, yet when the sun was let to the fruit it was more or less damaged. By what I can find out, I believe it was the black rot. Can any of the FARMER readers give me any information on this subject? Will it pay me to spray my vineyard, and what kind of sprayer is best, and where obtained? Does it pay to spray potatoes in Kansas? Have any of the KANSAS FARMER readers had any experience with D. Y. Hallock & Son's "Great Success Weeders," and if so, are they "O. K.?" Are the weeders, as a rule, successful in potato-growing?  
X. Y. Z.  
Peabody, Kas.

**ANSWER BY PROF. MASON.**

EDITOR KANSAS FARMER:—It is not always safe to prescribe by mail, either for crops or for people, but from the above description I think that the vines were suffering from the attack of some fungous disease, perhaps from several. The combination of wet weather and heat during a part of last summer was very favorable to the spread of such diseases. Both mildew and black rot were often present. Spraying vines and trellis early in the spring with a solution of one pound of copper sulphate or bluestone to fifteen gallons of water, and following, when vines are in full leaf, with Bordeaux mixture every two weeks, or as often as the rain washes it off, will, if thoroughly done, keep these diseases in check and undoubtedly pays.

The best spraying outfit is a good barrel turned down on a small sled, hauled by one horse. A small force pump, fitted with eight feet of half-inch hose and a Vermorel nozzle, completes the outfit. If you want to spray the orchard or potato patch, or help the wife wash the windows, it will be useful for all these purposes, as well as for the vineyard, only adding a lance of small gas-pipe to reach the trees with.

A knapsack sprayer looks well in a picture, and does for a small vineyard, but even then I should prefer to wear it on the hired man. The Douglass, Deming and Galloway are all good knapsacks.

The value of spraying potatoes depends upon the need. In a short time after a heavy rain, followed by hot days, the tops may begin to blight. Prompt spraying with Bordeaux mixture will usually save them. In the greater part of Kansas there is little fear of this disease.  
S. C. MASON.  
State Agricultural College, Manhattan, Kas.

**A Good Stayer by a Good Thing.**

EDITOR KANSAS FARMER:—In renewing my subscription for the fifteenth (I think) time to the "Old Reliable," I want to take advantage of your clubbing offer. Herewith find postoffice money order for \$1.35, for renewal to KANSAS FARMER and the Semi-Weekly *Inter Ocean* for one year.  
R. W. DRAKE.

Anthony, Harper Co., Kas.

The base of Ayer's Hair Vigor is a refined and delicate fluid, which does not soil or become rancid by exposure to the air, and which is as perfect a substitute for the oil supplied by nature in youth and health, as modern chemistry can produce.

**Experiments With Oats.**

Prof. C. C. Georgeson, of the Kansas Experiment Station, has just published a valuable bulletin on his experiments with oats. This bulletin is free to applicants in Kansas. The details of the experiments cannot well be given here, but the following summary of results will be found interesting and valuable:

1. The results of experiments with fall plowing, spring plowing and not plowing land are that the averages for the same years show a gain in favor of spring plowing. It is a question, however, if this gain is sufficient compensation to pay for plowing the ground.

2. March seeding has given a better yield than later seedings.

3. Averages for five years show an increase of two bushels per acre in favor of treating oats with hot water for smut. It is evident that the more smut in the seed oats the more marked will be the effect of the treatment.

4. By separating oats as they come from the thresher into two grades, light and heavy, by means of a fanning-mill, the averages for five years show a yield of two bushels per acre in favor of the heavy grade over the light, and one bushel in favor of the heavy grade over oats not fanned.

5. As to the methods of seeding, the averages for five years are in favor of the shoe drill with press wheels; second, the shoe drill without press wheels; third, the hoe drill; fourth, broadcast.

6. Experiments with different quantities of seed, varying from one to four bushels per acre, indicate from five years' averages that two and a half bushels per acre are better than a less quantity, and in some years the heaviest yields were obtained from four bushels of seed to the acre.

7. An experiment in 1894 showed a loss of 32.30 per cent. in weight of the grain by cutting the oats when in the dough, and a loss of 20.06 per cent. in weight of grain by cutting the oats in hard dough, as compared to cutting when fully ripe.

8. As to a comparison of varieties an average of five years places the following six varieties at the head of the list in the order named: Northwestern White, Belgian, Pedigree Red Rust-Proof, Board of Trade, Golden Sheaf and Brown Winter.

**New Books.**

(Reviewed by Dr. Henry W. Roby.)  
HONEST MONEY.

Kansas was never known to take a back seat, nor to fold her hands and say: "It can't be done." She is more likely to say to the world, "Whatsoever can come to conception in the mind of man can come to execution or fruition in Kansas." After John Sherman, Pierpont Morgan, Rothschild, Carlisle and Cleveland, have uttered what they fondly believe to be the last and highest notes of wisdom on the money question, in walks Mr. Albert Griffin, of Kansas, with a new book under his arm, saying to the world, "Here are your *Key Notes*, gentlemen; here is the basis and philosophy of *Honest Money*," and an expose of all forms of dishonest money. Careful reading and honest reflection upon the book would probably convince all the financial doctors in the country that they had overlooked some very important symptoms in diagnosing the financial ill health of the Republic. Mr. Griffin has made a profound study of the money question, which he claims is the question of paramount importance in American statesmanship to-day. He shows clearly the relations of real money and the so-called "money of credit," and shows the relation that each of them sustains to the business affairs of the country, both public and private.

The writer has been reviewing books for the public prints for many years, and he has seldom found a book so hard to review. When we turn to the introduction, we feel an impulse to copy a large amount of it, the plea for a hearing is so dignified and strong. When we turn to the cause and cure of panics, we find every page so full of facts, with such reasonable conclusions drawn from them and presented in such earnest and honest arguments, so free from the declamatory clap-trap of many writers on the subject, we feel that we are doing our readers a wrong in not giving them the full text of the statement and the argument. When he shows up the folly and stupidity and even the crime of tagging along after John Bull, Rothschild & Co., in the highway of human progress and asking them to step in and manage our monetary affairs for us, he makes such an irresistibly clear and strong showing in favor of having our own money and managing our own affairs, that one

wonders how we could possibly be so childish or asinine as we are. Why should we not with equal propriety ask Great Britain or Spain to supervise our military and naval affairs? Why not consult them about where to plant the defenses of New York and San Francisco, and what kind and number of guns and troops and warships we shall provide for our safety? Why should not the Monroe doctrine apply as well to acquiring possession and control of our monetary and commercial affairs as to our geographical and territorial boundaries? Because of our sycophancy and truckling subserviency we are already practically bound hand and foot to the golden chariot wheels of a more relentless taxer than old Shylock, with our "servants in high places" still kotowing to the old Moloch that is taxing the life and property all away from us. Mr. Griffin shows up the infamy of all these things in such a calm, strong presentation of the case that no one who cares a copper about his personal and material welfare in life can afford to miss reading the book.

The author is a well-known Republican, and claims to present the money question from a true Republican standpoint. But whether the book is Republican, or otherwise, in its doctrines, it lays the ax at the root of the great upas tree of our perpetually panicky financial system and ought to do great good to a great multitude of people.

**PLAIN FACTS FOR OLD AND YOUNG.**  
(By J. H. Kellogg, M. D.)

These 720 pages are crowded with the natural history and hygiene of organic life. Few men have the ability and experience to enable them to write such a book. For years, Dr. Kellogg has been at the head of the great Battle Creek Sanitarium, the greatest institution of its kind in America. His special studies and labors have been along the lines of hygiene and sanitation, along that great frontier where health and disease, like civilization and savagery, are camping and contending. Healthy living has no abler champion than Dr. Kellogg.

If "The proper study of mankind is man," what could be more interesting than a careful, clear presentation of the wonders of organic life, sex in living forms, the origin of the physical man, the conditions best adapted to perfect growth and development, longevity and that perfect living that walls itself in from the assaults of disease?

Since that great work of the immortal Fowler, "Creative, or Sexual Science," came to print, no greater book than Dr. Kellogg's has appeared in this field. And they are not parallel books, though they cover the same ground to a considerable extent. Prof. Fowler discusses chiefly the science of life in its physical and moral relations, while Dr. Kellogg discusses the science of life in relation to the science of health. And while probably no careful student of life and health will agree with all that Dr. Kellogg proclaims, yet there is enough in the book upon which all students and philanthropists can and must agree, to make the book of great moment and value to any thoughtful reader. Those who earnestly desire a "knowledge of self" will find much of paramount interest in this book.

**Angora Goats.**

EDITOR KANSAS FARMER:—Can you inform me where I can get Angora or Cashmere goats, full-blooded?  
J. W. HENDERSON.

Medford, Okla.

**A Splendid Business Offer.**

The FARMER takes pleasure in calling the attention of its readers to Perine's subsoil plows. That subsoiling is no longer an experiment has been satisfactorily proven and demonstrated. Mr. A. B. Perine, of this city, is the inventor, manufacturer and patentee of the original Perine's subsoil plow. No higher compliment could be attributed to the popularity of the plow, than the fact that other plow companies are trying to profit from its success, by attempting to imitate Mr. Perine's invention. During the months of February, March and April, 1895, Mr. Perine was not nearly able to supply the demand for his plows, and present indications are that he will experience another rush this season. He has enlarged his plant and secured additional machinery. But as a special inducement for early orders he will include a year's subscription to either the KANSAS FARMER or *Topeka Advocate* to those who will purchase a plow before February 15, 1896.

The prices of the genuine Perine subsoil plows are as follows:

No. 1 plow, for four horses.....	\$12.00
Extra points.....	2.25
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Extra points.....	2.00

Address all communications and make remittances payable to

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Send \$1.35 to KANSAS FARMER office for one year's subscription to KANSAS FARMER and *Chicago Weekly Inter-Ocean*.

## Horticulture.

### NOTES ON MUNSON'S HYBRID GRAPES.

By Prof. S. C. Mason, State Agricultural College, read before Kansas State Horticultural Society.

Of hybrid grapes produced by Mr. T. V. Munson, of Denison, Tex., twenty varieties were tested in the experiment station vineyard. A portion were set in 1890, the remainder in 1891, so we report the results of three and four years of bearing.

The parentage given by the originator is shown in the following list; the pistillate parent is named first:

Bell, Blanco=Elvira×Delaware.  
Beagle=Elvira×Ives (Black Eagle).  
Early Market, Rommel=Elvira×Triumph.

President Lyon=Elvira×Lindley.

Ruby=Elvira×Brighton.

Conelva=Concord×Elvira.

Brilliant=Lindley×Delaware.

Gold Coin=Cynthiana×Martha.

Munson's No. 85 (unnamed), No. 98 (Blood), No. 111 (Sweet), No. 122 (Letoney), No. 129 (Carman)=V. Lincecum×Herbemont.

No. 76 (Fern Munson)=V. Lincecum×Triumph.

No. 88 (unnamed)=V. Lincecum×Rupestris.

No. 92 (Pulpless)=V. Lincecum×Elvira.

No. 130 (Texas Highland)=V. Lincecum×Agawam.

No. 104 (Isadora Bush)=Herbemont×V. Lincecum.

Taking the first list of hybrids, we find Bell=Elvira×Delaware, showing a much freer growth of vine than either parent, but with canes bearing more resemblance to Delaware in its smooth, hard, brown wood; the foliage partakes somewhat of the Delaware character. The fruit ripens in late August, is yellowish white, resembling the Missouri Riesling, with the characteristic flavor of the Taylor family, to which Elvira and Missouri Riesling belong.

Blanco, of same parentage, has the character of Amber of the Taylor family, and nothing in common with Delaware. The fruit, as in Bell, ripens during late August, and is a pale waxy yellow in color, with a shade of amber in the sun. In flavor and texture it is an all-round Taylor, and could readily be accounted for as a plain Elvira seedling.

Beagle might, with equal truth, be regarded as a straight Elvira seedling. It is a Taylor in vine characters, the fruit is small, black and early (August 15), has little else to commend it. It has the peculiar flavor of the Taylor family, and lacks the pleasing sprightliness a table grape must have.

Of the two varieties ascribed to Elvira×Triumph, if Early Market be of such a cross, it certainly shows more the character of Triumph. Here we find the vine and foliage characters are those of the Taylor family. The fruit, though ripe by August 1, is small, black, poor in quality and small in bunch.

Rommel, of same parentage, shows some leaf and vine characters which refer it to the *V. Riparia* side of Elvira, yet lacks vigor, has scanty foliage and is quite tender during winter, points all common to Triumph. Fruit produced in small, uneven bunches, is medium to large in berry, round, clear pale yellow, tender skinned, juicy, sweet, pleasant in flavor, though lacking the fine qualities of Triumph and in sprightliness. While not with us worthy of general introduction, it is interesting in the study of hybrid effects.

President Lyon=Elvira×Lindley, has hardy, free-growing, splendid vines, showing many Taylor characters. Ripe by the middle of August, medium size, rather compact, shouldered bunches, berry about size of Delaware, purplish red, a fair early table grape, quickly past flavor, overripe and shriveled. It is worth further trial by amateurs.

Ruby=Elvira×Brighton, shows less of the Taylor characters in vine and leaf, but the medium-sized, round, dull yellow berries, striped with amber or dull red, has the characteristic flavor of the Taylor class and none of the fine

qualities of Brighton. Bunch small and uneven.

Summing up this class having Elvira as pistillate parent, we find traits belonging to the Taylor family in all the vines and *paramount* in all but two. In the fruit Taylor again predominates, only two showing marked characters of the pollen-bearing parent, and both of these are hybrids of *Vitis Vinifera*, Lindley and Triumph. All are hardy but Rommel and Ruby, and it seems probable the tenderness is referable to *Vitis Vinifera* blood.

In Conelva we have Concord as the pistillate parent, fertilized with Elvira. This vine is more like Concord in habit; a medium-sized black fruit, having neither the tough pulp and foxiness of Concord, nor the characteristic flavor of the Taylor; decidedly flat and lacking in refreshing qualities. Hardiness alone recommends it.

In Brilliant, which is from Lindley×Delaware, we have one of the finest red grapes yet offered, of a brighter, more attractive red than Brighton, a more brisk and less heavy juice, with a trifle of harshness next the skin not noticed in Brighton. It would be difficult to trace the character in this more to one parent than the other. A free grower, it needs winter protection with us.

Gold Coin is a curious study, a grape of more value to wine-growers than for the table. With Cynthiana for pistillate parent, pollinated by Martha, we may reasonably expect some positive characters resulting, and are not disappointed. The vine shows *A. Estivalis* characters and habits of growth; the leaves are more of the Cynthiana character than of Martha or other *Labrusca* varieties, though the tendrils show a compromise between the intermittent tendrils of *A. Estivalis* and the continuous ones of the Concord family, in having them partly intermittent and partly continuous. The fruit partakes much of the Martha characters, bunch of that habit, berry large as Concord, golden yellow, pulpy, not tough or stringy, flavor sweet, lacking sprightliness; seeds with markings of *A. Estivalis*.

In Mr. Munson's Post Oak hybrids we find a class of grapes wholly distinct from our Northern types. Of the ten containing Post Oak blood all bloom late, after *Labrusca* and *riparia* varieties are out. Of the five from *Vitis Lincecum*, or Post Oak grapes, fertilized with Herbemont, No. 82 has least value. No. 98 (Blood), No. 111 (Sweet) and No. 122 (Letoney), all have handsome, compact bunches, of small, black, very juicy, pleasant fruit. Small size and abundance of seeds will prevent them being popular. Carman has fruit large as Ives, bears abundantly, bunches handsome, flavor fair, lacks in sprightliness, with too many seeds for a first-class grape, well worth extensive trial. Vines of all show much Herbemont in character, and are strong growers.

No. 130, Texas Highland—Post Oak×Agawam—showing much of Post Oak in growth of vine and leaves; bears scantily, fruit of fine size, black, juicy, rich and pleasant; best flavored of the lot.

In No. 76, Fern Munson, Post Oak×Triumph, the effects of Triumph producing a lack of vigor with thin foliage is apparent. Bunches of Triumph type, less compact than Herbemont, black, with heavy bloom, and tough pulp, with suggestions of *Labrusca*,

though a very fair fruit. Ripens late.

No. 92, Pulpless—Post Oak×Elvira—shows Post Oak vine, but we trace Elvira in the fruit. Bunches handsome, compact, berry medium, purple, with a pulp like thin jelly, wholly wanting in pleasing flavor when ripe.

No. 88—Post Oak×*Vitis Rupestris*—still shows the Post Oak vine; fruit small, black, juicy, too harsh and wild to be valuable.

No. 104, Isidore Bush—Herbemont×Post Oak—we have a Herbemont type of vine and a small black fruit of no merit.

Summarizing: All the Post Oak hybrids are tender in our climate and need winter covering; all are vigorous growers except the Triumph hybrid; all are late in blooming and ripening. Blood, Sweet and Letoney give a delicious juice for canning, and would make fine wine. Carman is a fair table grape. Texas Highland a better, but does not bear well. We have others of this class to report later.

From this brief glance at these hybrids, we may infer that the pistillate parent exercises a stronger control over the character of the vine than the pollen-bearing parent, while the predominating influence of the pollen-bearing parent can oftener be detected in the fruit; and further, that the strong tendency to tenderness from a *V. Vinifera* cross is not escaped in the third generation.

### The Children's Gardening.

EDITOR KANSAS FARMER:—Last spring my brother and I were wanting something to do, when papa said: "Why don't you get some seed of Mr. Barteldes & Co.?" And we thought it was a good plan and sent at once to the Kansas Seed House, at Lawrence, Kas., for some seeds. Then we began to dig up the back yard and prepare it for the seeds. This took us a long time, but at last we got the seeds all planted. They all came up wonderfully. My brother often said: "O, they are good seeds, ain't they? They come up even where the ground is hard." And so they did.

But as we had chickens, and as chickens and garden do not agree, we did not get as much as we expected. But our tomatoes did very well and so did all the other plants. We raised lettuce, radishes, beets, peas and tomatoes. We sold our lettuce and radishes almost entirely to mamma for our family use, but still some went to seed.

I think they would have done still better if it had not been for the dry weather. We cannot get water where we live, so we have to go without or bring it from the nearest well, which



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## Avoid Complications

As you would avoid a plague. A complicated grain harvester is a plague. Truer words were never written than those of the late Dr. Holmes, when he said "The more wheels there are in a watch or in a brain, the more trouble they are to take care of." The simplicity of McCormick Harvesting Machines has won for them thousands of friends. The new Open Elevator is the simplest of harvesters and is not subject to the disorders and disarrangements resulting from the complicated construction of so many so-called grain cutting machines. There's nothing complicated about McCormick Mowers, either. They need oiling occasionally, but they don't bind, clog-up and "go to smash," after the manner of the ordinary mower. Same is true of the McCormick Corn Harvester. Its construction embodies the only correct principle—the only principle that will work in a Corn Harvester.

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and the name and address of two of your friends who grow flowers, I will send, postpaid, the complete collection, one pkt. each of the ten varieties (enough for any ordinary garden.) This is a BONAFIDE offer, made to introduce my home grown flower seeds to new customers and which I guarantee to please you or the amount paid refunded and the seeds given as a present.

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is about a block away. We have a barrel which we use when we wish to bring a good deal of water. My brother and I hauled one barrel for our garden, but it was too hard work for us, so we had to do the best we could without water.

HARRY AND ELLA COWGILL.  
Topeka, Kas.

Johnson Grass--Grapes.

EDITOR KANSAS FARMER:—I have been a reader of the FARMER for the past year and think it a valuable paper for the Western farmer. Some time ago some one contributed several articles on weeds that bothered the farmer, but failed to mention what is known as Johnson grass. My experience as a farmer of near three score years of age is that this pest stands at the head of the list, Canada thistle not excepted. I have had, the past five years, experience with the evil, and think every farmer should be posted on it, especially in southern Kansas.

I wish to plant some grapes and plums the coming spring, and wish the advice of the horticultural experts as to the four best varieties of grapes besides the Concord. Wish some earlier and some later than the Concord, everything considered. Also the best kinds of plums for home use and market, and about the price of said vines and trees per hundred.

If none of your correspondents have had enough experience with Johnson grass I can give my experience and may save some from starting it and ruining their farms and their neighbors', as I see it listed in one of the quarterly reports of the Kansas Agricultural Board as being more valuable for hay than red clover.

Howard, Kas. J. C. WEATHERS.

In the Dairy.

Conducted by A. E. JONES, of Oakland Dairy Farm. Address all communications Topeka, Kas.

Kansas Butter at the Iowa Convention.

At the National Butter and Cheese Makers' Association, held at Cedar Rapids, Iowa, last month, there was exhibited 192 tubs separator and eighteen tubs gathered cream butter. Thos. Milton, St. Paul, Minn., scored highest in separator, 97.82. F. M. Stine, Stillman Valley, Ill., scored highest in gathered cream, 96½. O. B. Ross, Spencer, Iowa, took the silver cup for State having most entries, score 96 4-5. There were but nine cheeses entered. Thos. Johnson, Boaz, Wis., scored highest (score not reported). Thirteen lots of Kansas butter were entered. Mr. J. H. Ratzlaff, Canton, took the highest score, 96½. All the Kansas exhibits were in the separator class. The lowest score on Kansas butter was 90 4-5. The butter-maker winning first prize at the Newton, Kas., meeting in November, was next to the lowest among the Kansas exhibitors at Cedar Rapids. Two lots of Iowa butter scored less than any from this State. One tub of butter was entered from Elberton, Wash., and one from Black Hawk, Miss. Cornish, N. H., had one exhibit, and the score was the same as that on the best tub of Kansas manufacture. The average of the Kansas exhibit was one point above that of Wisconsin, and a little over one point above the Iowa average, a fraction above Illinois, and less than a point below Minnesota, that took first prize. The average of five exhibits from South Dakota was only excelled by Kansas and Minnesota. Kansas led in the score over Indiana and Ohio and was beaten only by Minnesota.

James DeCoursey and his sons propose engaging in a new enterprise in Leavenworth in the near future. They will build a big creamery with all the modern machinery and improvements for handling milk and making butter. A location for the plant has not yet been agreed on, but several buildings have been examined. Mr. DeCoursey is making a tour of the town in search of a suitable location. For many years the DeCourseys have been engaged in the dairy business in the western part of the city. There was a time when they had most of the local milk trade. Mr. DeCoursey has concluded that a



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first-class creamery would be a paying investment. Creameries in other places pay and there is no reason why one here would not. James DeCoursey, Jr., who has been engaged in the business in Kansas City for the past four years, will be associated with his father in the new enterprise.

The Art of Milking Cows.

Milking cows should be practiced according to the following prescriptions:

1. Work rapidly; slowness causes loss of cream.
2. Milk thoroughly, to the last drop, because the last milk is the best.
3. Milk at the same time every day.
4. Milk crosswise—that is to say, one fore teat on the right and a hind teat on the left, and vice versa; the milk thus flows more copiously than by parallel milking.
5. Milk with five fingers, and not with index and thumb, a fault too common with milkers.
6. Do not employ any kind of milking machines.
7. To milk young restive cows, raise one of the fore feet. Never strike them.
8. Always keep the hands clean, and also the cow's udder and dairy utensils.
9. During milking avoid distracting or disturbing the cow.

Those who neglect any of these prescriptions infallibly lose milk.

Dairy Notes.

One of the regulations of the Illinois State Board of Health is that dairy cows shall be cleaned every day.

The best farm institutes are held in the dairy sections. That speaks well for the intelligence of the dairymen.

Twenty-two States in the Union now have laws prohibiting the sale of oleomargarine when colored in imitation of butter.

New York city consumes over three-fourths of a million quarts of milk per day. Last year the daily average was 768,560 quarts.

Good feeding should not be governed by the price of dairy products. Neither should the enthusiasm of the dairymen fluctuate with the market. Constancy is needed in both cases.

The makers of oleomargarine claim that they have as much right to color their product as have butter-makers. This is a fallacy, for butter is not colored in imitation of any other product.

Considerable excitement has been caused in Ohio by the enforcement of the anti-oleomargarine law. The men engaged in the sale of that product have been arrested and fined, but still continue to transgress the law.

An unerring test of an easy milker is flat ends in the teats. Cows having flat-ended teats milk easy, the outlet being large; those having pointed ends to their teats milk hard, because the outlet is small, and much squeezing is required to force out the milk.

According to a bulletin issued from the Cornell experiment station all cream separators being now used are very effective in doing the work intended. Prof. Wing says: "The results of our experiments show that it is possible to separate the cream from milk with a loss of not more than one-tenth of one per cent. of fat in the skimmed milk. In all probability there

is nearly as much difference in efficiency of separation between different machines of the same make as there is between the different makes themselves.

Don't hire at any price a man who has a bad temper; he will ruin your cows. Don't hire one who is not a good milker; he will dry off your cows. Don't employ a man or boy who is not willing to learn or carry out your instructions.

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Largest stock in America, including Colorado Blue Spruce and Douglas Spruce of Colorado. Also Ornamental, Shade and Forest Trees, Tree Seeds, Etc. E. DOUGLAS & SONS, Waukegan, Ill.

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Perfect seeds grow paying crops. Perfect seeds are not grown by chance. Nothing is ever left to chance in growing Ferry's Seeds. Dealers sell them everywhere. Write for

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for 1896. Brimful of valuable information about best and newest seeds. Free by mail. D. M. FERRY & CO., Detroit, Mich.

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To the persons making the largest yield from VINELESS GOLD COIN PROLIFIC ONION this year. Here is a chance to MAKE MONEY EASY, besides getting the best Sweet Potato on earth. Send for 1896 Catalogue.

Yellow Globe Danvers, postpaid, 70c. per lb. Red Wethersfield, 80c. per pound.

MELON SEEDS, all leading varieties. 35c. per pound, postpaid. Can you beat this?

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SPECIAL OFFER Made to secure 500,000 new customers. 8 PKGS. Seeds sure to grow and blossom. Note Postpaid for 10 cts. the

varieties—Pansy 50 colors, Phlox 20 varieties, Pinks 15 finest shades, Petunia 12 latest colors, Balsam 10 grand sorts, Poppy 10 elegant shades, Mignonette, sweet, very fragrant, and Everblooming Sweet Alyssum.

E. U. Kimbark, Evanston, Ill., writes: "It is a pleasure to plant Buckbee's Seeds—they always grow." Add three cents extra to cover postage and receive New Instructive and Beautiful Seed and Plant Book.

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SPRAY PUMPS 21 STYLES. BEST AND CHEAPEST. Catalogue and full treatise on spraying fruit and vegetable crops mailed free. Address WM. STAHL, QUINCY, ILL.

SPRAY PUMPS EXPRESS PAID Satisfaction Guaranteed or Money Refunded. Endorsed by Leading Entomologists. 60,000 in use. We are U. S. Headquarters for Spray Pumps and Insecticides. Catalogue, Spray Calendar, and full Treatise on Spraying, FREE. \$17 SPRAYING OUTFIT \$5.50 EXPRESS PAID, FOR P. C. LEWIS MFG. CO., Box 76 Catekill, N.Y.

J.I.C. DRIVING BIT Still King THE BIT OF BITS. Will control the most vicious horse. Sales Greater Than Ever. Sample mailed XC for Nickel, \$1.50. Station Bits 50 cts. extra. RACINE MALLEABLE IRON CO., RACINE, WIS.

FRENCH BUHR MILLS 28 sizes and styles. Every mill warranted. For All Kinds of Grinding. A boy can operate and keep in order. "Book on Mills" and sample meal FREE. All kinds mill machinery Flour mills built, roller or buhr system. Reduced Prices for '96. NORDYKE & MARION CO., 285 Day Street, Indianapolis, Ind.

HANDY COBBLER MEND YOUR OWN boots, shoes, rubber goods, harness, etc., at home. Outfit \$3 pos., good substantial tools, \$3.00. Only complete family outfit made. Catalog free. Agents wanted. KUHN & CO., Box 13, Moline, Ill.

"DO IT YOURSELF!" Pat. Oct. 8, 1904. With Root's Home Sewing Machine and Sewing Foots, Shoes, Husbands, Harness, Tires, etc., No. 1, 40 Items, \$3; No. 2, 32 Items, \$2. Send for FREE and also describing these and "Root's Simplicity Process" for home sewing. Carpenters and Blacksmiths' tools, etc. Agents wanted. The Root Sewing Co., Box 3, Plymouth, Pa.

SOLD ON TRIAL! Imperial Pulverizer Clod Crusher, Roller and Leveler. Plainly described in circular—SENT FREE. Farmers may try it before buying. PETERSON MFG. CO. : KENT, OHIO.

Market Gardeners Recommend Matthews & New Universal Model Hand Seeding and Cultivating Implements. A dozen styles. THE BEST Latest Designs. Goods. Only combination One and Two Wheeler made. One wheel for seeding insures most finished work. Write for circulars and address of nearest supply agent. AMES FLOW CO., Boston & New York.

Men We will send you the marvelous French Preparation CALTHOS Free, and a legal guarantee that CALTHOS will restore your Health, Strength and Vigor. Use it and pay if satisfied. Address VON MOHL CO., Sole American Agents, Cincinnati, Ohio.

Chichester's English Diamond Brand PENNYROYAL PILLS Original and Only Genuine. SAFE, always reliable. LADIES ask Druggist for Chichester's English Diamond Brand in Red and Gold metallic boxes, sealed with blue ribbon. Take no other. Refuse dangerous substitutions and imitations. A Druggist, or send 4c. in stamps for particulars, testimonials and "Relief for Ladies," in letter, by return Mail. 10,000 Testimonials. Name Paper. Chichester Chemical Co., Madison Square, Philadelphia, Pa. Sold by all Local Druggists.

**The Sunny Slope Farm Swine Sale.**

Last week, on Tuesday and Wednesday, the public sale of pedigreed Poland-China swine took place, as advertised, at Sunny Slope farm, near Emporia, Kas., and it resulted in a success that was a record-breaker.

The top of the sale was made on the two-year-old sow, Faultless Queen Corwin 29798, that went to Bundshuh Bros., Fremont, O., for \$750. She with five of her pigs brought \$1,100. The top bar, Hadley Jr. 13314 S., went to H. M. Kirkpatrick & Son, of Connors, Wyandotte county, Kansas, for \$555. Thirty-two of his pigs brought an average of \$77.76. C. M. Irwin, of Wichita, Kas., was the most liberal buyer as to prices in the aggregate, his draft of ten head, Lady Longfellow 34099 S., at \$500; Lady Tecumseh J. H. 2d, \$300; Martha Washington J. H. S. 35999 S., \$305; Esmerelda 34181 S., \$265; Lady Tecumseh J. H. 1st 36586 S., \$250; Miss Hadley 36593 S., \$105; Martha Washington 9th 29804 S., \$75; Black Daisy 3d, by L's Tecumseh 12017 S. and out of Black Daisy 2d 29565 S., \$65. Also boars, Sir Charles Corwin 33095 O., at \$155, and Harry Faultless by Hadley Jr. 13314 S. and out of Faultless Queen Corwin 29798 S., at \$155. The price of the ten head aggregated \$2,370, or an average of \$237. The total number of animals put up was 145, both sexes and all ages, which brought a total of \$11,014, and made an average of \$76. Buyers present and bids sent in came from ten States. The largest draft to any one State went to Kansas, with Missouri, Ohio and Texas following the lead. The reader may ask, why don't every swine breeder have better success, or something like this instance of Mr. C. S. Cross, the owner of Sunny Slope farm herd? It's easily answered and perhaps to all satisfactorily, too. In the first place, Mr. Cross and his manager, Mr. Liebfried, in buying their foundation stock, whether Herefords or Poland-Chinas, always endeavored to get the best possible, both as to individuality and breeding, regardless of cost. Then following by an intelligent mating, based on blood lines, and after farrowing or calving time "grow 'em out right," and then, having "got the stuff," advertise liberally, giving the live stock newspaper field man royal entertainment and patronage and, last of all, make every visitor feel on sale day that to be a success you must go at it right, keep at it right, never forgetting that there is always room at the top.

W. P. BRUSH.

**The Rock Creek Hereford Sale.**

According to announcement, the dispersion of the noted white-face herd took place last Thursday and Friday, at Burlingame, Kas. Buyers were present and bids sent in from Nebraska, Iowa, Illinois, Missouri, Texas, Indian Territory, Colorado and Kansas. The sales-day book showed fifty-six buyers for the pure-breds. Geo. H. Adams, of Crestone, Colo., led in the purchases. He secured forty-seven head and topped the sale on the bull Ashton Boy 52058 at \$310. C. S. Cross, of Emporia, tied with W. R. Slaughter, of Salisbury, Mo., with twenty-six of the choicest cows, and topped the female list with Vena Pilla 41482 at \$200. H. M. Hill, La Fontaine, Kas., secured ten head; A. H. Warner, Pierceville, Kas., ten; C. D. Perry, of Englewood, Kas., bought twenty-five of the best, and J. R. Slaughter, of Columbia, Mo., took nine that suited him, and U. S. Campbell, of Bates City, Mo., found eight that he thought worth fighting for in the competitive sale ring. The remainder of the 240 head of pure-breds went in small lots to buyers scattered throughout the above-mentioned States and Territory. One hundred and twenty-eight cows, some of which were past their prime, brought \$11,990, making an average of \$93.67. Fifty heifers, mostly under 1 year, brought \$2,810, an average of \$56.20. The sixty-two bulls, of which more than 80 per cent. were under 12 months of age, brought \$7,610, an average of \$122.74. The general average of the 240 pure-breds was \$93.67. The grades that went from the block brought \$3,301, making a total of \$30,711. About \$2,000 worth of grades were not sold from the block but after the close of the public sale, making a total of \$32,711. Col. F. M. Woods, the auctioneer, announced at the close of the sale that it was the most successful cash sale of Hereford cattle ever made in the United States. Taking into consideration that the cattle were not in the usual sales ring condition, the prices realized were satisfactory.

W. P. BRUSH.

FOR COUGHS, ASTHMA AND THROAT DISORDERS "Brown's Bronchial Troches" are an effectual remedy. Sold only in boxes.

Smooth roadway. Quick time. Perfect passenger service. Uniformed train porters for the convenience of first and second class patrons. Through sleeping cars between Chicago, Buffalo, New York and Boston. Unexcelled dining car service. No change of cars for any class of passengers between Chicago and New York city via the Nickel Plate Road. J. Y. Calahan, Gen'l Agent, 111 Adams street, Chicago, Ill.

**You All Need It.**

The SOLDERING PLATE, advertised in our columns under the title of "B your own tinsmith" and "Ladies mend," will do what is claimed for it. Here is what the publisher of the leading agricultural paper of Iowa, the *Homestead*, says of it: "We would not believe it until we tried it and it is nearly as easy as putting on a postage stamp. We mended four holes in three tin pans in less than five minutes, and did it only with the aid of a heated kitchen poker." If you have leaky pots, pans, boilers or anything that solder will mend, don't throw them away, but send 25 cents to the People's Supply Co., and get a plate and save an outlay for new utensils. Each plate contains 192 quarter-inch squares, and will do mending that a tinsmith will charge you \$9.60 for. It is sent by mail, postage prepaid.

Among the manufacturers of portable well-drilling machinery who, by honesty and fair dealing, have earned a well-deserved reputation, may be named Kelly & Taneyhill, of Waterloo, Iowa, whose advertisement appears elsewhere in this paper. Their machines are meeting with good endorsement wherever they are in use, as seems only natural when one stops to consider that they are sold under a positive guarantee of quality and working power. This firm has the advantage of long experience, having been in business since 1887.



WELL-DRILLING MACHINERY.

Manufactured by Kelly & Taneyhill, Waterloo, Iowa.

Those of our readers who contemplate the purchase of such machinery will do well to correspond with our advertisers. Ask them for their illustrated catalogue.

**Unequaled Service**

Denver to Chicago via Kansas City is given via the UNION PACIFIC and Chicago & Alton railways.

Through Pullman Sleepers, Pullman Dining Cars and Free Reclining Chair Cars leave Denver Daily. The Union Pacific is the great through car line of the West. Ask your nearest ticket agent for tickets via this line.

E. L. LOMAX,  
Gen. Pass. and Ticket Agent,  
41 Omaha, Neb.

**Popular Low-Price California Excursions.**

The Santa Fe Route personally-conducted weekly excursions to California are deservedly popular with travelers who seek a wise economy in cost of railroad and sleeper tickets without sacrifice of any essential comfort. About one-third saved, as compared with first-class passage.

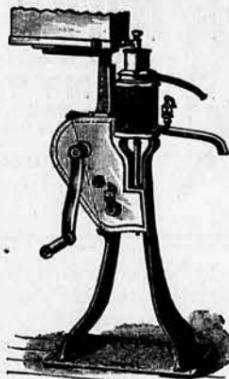
The Pullmans occupied by these parties are of the latest pattern and afford every necessary convenience. A porter goes with each car, and an experienced agent of the company is in charge. Ladies, invalids, elderly people, etc., will appreciate this personal care.

The Santa Fe's California line passes south of the region of severe snow storms and is remarkably picturesque.

The daily service is same as above, except as regards agent in charge.

For descriptive literature and other information address G. T. Nicholson, G. P. A., Monadnock Building, Chicago.

**FACTS**



like the following are what make our competitors writhe so in the agony of defeat:

I have no trouble in convincing others of the superior merits of the Improved United States Separator, as anyone can ascertain by enquiring in this section, as I have sold to my neighbors 10 Improved U. S. Separators, seven of these in my own town, where there have been in the last five months placed on trial, 5 DeLaval's, 4 Sharples and 1 Empire, and at the present time no one in town owns any other Separator than the Improved United States. W. N. DUNKLEE.

South Vernon, Vt., Mar. 7, 1896.

I have placed nearly 20 Improved United States Separators in 30 days, and have not had one complaint. C. E. HULBERT.

Downsville, Del. Co., N. Y., Dec. 30, 1895.

Cornell University Bulletin No. 105, page 109, gives 19 tests of the Improved United States Separator, running through February and March. The average of all being only 0.05 of 1 Per Cent. of fat, excelling all dairy Separators at the Station.

Send for Catalogue. VERMONT FARM MACHINE CO., Bellows Falls, Vt.

**The Fertile Valley of the Nile.**

Salzer's great fodder plant, teosinte, yields on the fertile Nile 600,000 pounds green fodder per acre. It is leafy, bushy, grows eighteen feet tall in ten weeks, and can be cut time and time again. Shades of Egypt! Think of that for a yield, and best of all, cattle fight for it, so eager to eat! Salzer's catalogue is full of rare things!

If you will cut this out and send it with 10 cents, postage, to the John A. Salzer Seed Co., La Crosse, Wis., you will receive their catalogue and ten packages grasses and grains, including teosinte, free.

**Ho! for Cripple Creek.**

Remember that the Chicago, Rock Island & Pacific is the only line running directly from the East to Colorado Springs, the natural gateway for the Cripple Creek district.

Colorado Springs lies at the foot of Pike's Peak at its eastern base, and Cripple Creek is part way down the southwest slope of Pike's Peak and near its western base.

Two all rail routes from Colorado Springs

**THE STRAY LIST.**

**FOR WEEK ENDING MARCH 12, 1896.**

Riley county—James R. Young, clerk.

HEIFER—Taken up by N. G. Salberg in Jackson tp. (P. O. Randolph), one red heifer, 3 years old, white in forehead, white under belly, white tip to tail; no marks or brands; valued at \$12.

**FOR WEEK ENDING MARCH 19, 1896.**

Lyon county—M. Q. Starr, clerk.

STEER—Taken up by O. W. Kirby, in Center tp., P. O. Elco., one red and white spotted steer, coming 3 years old, tip off left ear, swallow-fork in end of right ear, indistinct brand on right hip, an appearance of brand on left hip, dehorned, medium size.

Cowley county—S. J. Neer, clerk.

HORSE—Taken up by J. W. Searle, in Dexter tp., P. O. Dexter, March 3, 1896, one bay horse, weight 900 pounds, splits in right ear.

**FOR WEEK ENDING MARCH 26, 1896.**

Cowley county—S. J. Neer, clerk.

HEIFER—Taken up by R. J. Stewart, in Otter tp., (P. O. Cloverdale), about September 1, 1895, one small red yearling heifer, white spot in forehead, white on belly, bush end of tail white, blind in left eye, no brand.

Crawford county—John W. Eckes, clerk.

COLT—Taken up by A. J. Wilson, of Pittsburg, March 5, 1896, one dark bay two-year-old horse colt, both hind feet white; valued at \$10.

Cherokee county—T. W. Thomason, clerk.

MULE—Taken up by J. S. Michie, in Pleasant View tp., (P. O. Opolis), February 26, 1896, one dark brown horse mule, fifteen hands high, weight between 900 and 1,000 pounds, supposed to be 6 or 7 years old, slit in left ear, pigeon-toed in front feet, harness marks; valued at \$25.

Osborne county—W. F. Vawter, clerk.

STEER—Taken up by Joseph Hirst, in Jackson tp., (P. O. Cheyenne), February 5, 1896, one red steer, 2 years old, branded R on right hip and notch in right ear; valued at \$17.35.

Woodson county—W. O. Eades, clerk.

STEER—Taken up by N. H. Hagerman, in Everett tp., four miles west of Neosho Falls, February 16, 1896, one red steer with white face, white belly and some white on back, dehorned, branded on right hip with horseshoe, supposed to be 4 years old, weight about 1,100 pounds; valued at \$35.

**DOGS.**

HIGHLAND KENNELS, TOPEKA, KAS.—Great Danes and Fox Terriers. The first prize and sweepstakes winner, Great Dane King William, in stud. Dogs boarded and treated for all diseases; also, remedies by mail. Correspondence solicited.

**LIVE STOCK AUCTIONEERS.**

LiveStockAuctioneer. JAS. W. SPARKS, Marshall, Mo. Sales made everywhere. Refer to the best breeders in the West, for whom I sell. Satisfaction guaranteed. Terms reasonable. Write before claiming dates. Mention KANSAS FARMER.

ELI ZIMMERMAN, Hiawatha, Kansas, Live Stock and General Auctioneer. Pedigreed and registered live stock a specialty. Write for dates. Sales conducted anywhere in the country. Best of references and satisfaction guaranteed.

S. A. SAWYER, FINE STOCK AUCTIONEER—S. Manhattan, Riley Co., Kas. Have thirteen different sets of stud books and herd books of cattle and hogs. Complete catalogues. Retained by the City Stock Yards, Denver, Colo., to make all their large combination sales of horses and cattle. Have sold for nearly every importer and noted breeder of cattle in America. Auction sales of fine horses a specialty. Large acquaintance in California, New Mexico, Texas and Wyoming Territory, where I have made numerous public sales.

**Short-horns for Sale!**

I have for sale four Short-horn bulls—three coming 1 year and one coming 2 years old—all eligible to record. One yearling Poland-China boar, Sunset-bred, a good one. Also Light Brahma and G. L. Wyandotte eggs \$1 per fifteen. Write. J. A. WORLEY, Sabetha, Kas.

**Carnahan's Tree Wash and Insect Destroyer**

Destroys the bore worm and apple root louse, protects the plum from the sting of the curculio and the fruit trees from rabbits. It fertilizes all fruit trees and vines, greatly increasing the quality and quantity of the fruit. Agents wanted everywhere to sell the manufactured article. Address all orders to John Wiswell, Sole Mfr., Columbus, Kas.



Just received, a car-load of BEE-HIVES, SECTIONS, COMB FOUNDATION,

And everything needed in the Apiary. Write at once for my Beautifully Illustrated Catalogue.

HENRY L. MILLER, 355 Shawnee Ave., Topeka, Kas.

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DR. U. B. McCURDY, Veterinary Surgeon. Graduate Ontario Veterinary college, Toronto, Canada. Can be consulted on all diseases of domestic animals at office or by mail. Office: 114 West Fifth Street, Topeka, Kas.

HENRY W. ROBY, M. D., SURGEON.

Office 118 Sixth Ave. West, TOPEKA, KAS.

The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER.

SICK SOW.—I have a sow suckling pigs that does not eat much and is constipated and seems to be weak in the back.

Answer.—Feed less corn and give the sow a heaping tablespoonful of Epsom salt in swill, twice a day, increasing the dose if necessary, to keep her bowels open.

TUMOR ON BOAR.—My boar has a hard lump just behind the jaw. Every two or three weeks it breaks and bloody matter is discharged.

Answer.—It is quite likely an abscess caused by an injury and the walls are becoming fibrous. Split the skin and dissect it out.

SICK COW.—(1) I have a Short-horn cow that has looked rough in the hair for a long time. Her bowels are loose and at times she scours.

Answer.—(1) Your cow has symptoms of tuberculosis and should be examined by a veterinarian, as if it proves to be so she is unsafe for milk and unfit for breeding.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

Union Pacific Route.

What you want is the through car service offered between Denver and Chicago via the Union Pacific and Chicago & Alton railroads, which is unexcelled by any other line.

Unsurpassed Facilities

are offered to passengers traveling via the NICKEL PLATE ROAD to all points East. Parties arriving in Chicago in the morning via any of the western roads can leave at 1:30 p. m., arrive at Cleveland the same evening at 11:30, Buffalo the following morning at 6 o'clock and New York at 6:30 p. m. and Boston at 8:45 p. m.

A Look Through South Missouri for Four Cents.

The Kansas City, Fort Scott & Memphis Railroad Company has just issued a magnificent book of sixty or more photo-engraved views of varied scenery in south Missouri.

Horse Owners! Try



GOMBAULT'S Caustic Balsam. The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action.

When you write mention Kansas Farmer.

MARKET REPORTS.

Kansas City Live Stock. KANSAS CITY, March 23.—Cattle—Receipts since Saturday, 4,146; calves, 111; shipped Saturday, 761 cattle; 1 calf. The market ranged from steady to 10c higher.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include SHIPPING AND DRESSED BEEF STEERS.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include TEXAS AND INDIAN STEERS.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include TEXAS AND INDIAN COWS.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include COLORADO STEERS.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include COLORADO COWS.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include COWS AND HEIFERS.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include STOCKERS AND FEEDERS.

Hogs—Receipts since Saturday, 5,128; shipped Saturday, 384. The market was 10c higher and active.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include various hogs and sheep.

There was a rather small attendance at the horse and mule market this forenoon. The buyers will probably be more numerous by tomorrow and an active market is expected as the receipts are light.

Chicago Live Stock. CHICAGO, March 23.—Cattle—Receipts, 9,500; market 10c higher; fair to best beefs, \$3.60 @ 4.50; stockers and feeders, \$2.75 @ 3.80; mixed cows and bulls, \$1.50 @ 3.75; Texas, \$3.00 @ 4.00.

St. Louis Live Stock. ST. LOUIS, March 23.—Cattle—Receipts, 3,000; market 10 @ 15c higher; native steers, \$3.50 @ 4.50; Texas steers, \$2.70 @ 3.93.

Chicago Grain and Provisions. Table with columns: March 23, Opened, High'st, Lowest, Closing.

Olander & Isaacson, Live Stock Commission

Special attention given to the feeder trade. Kansas City Stock Yards, Kansas City, Mo. Rooms 65 and 66, first floor Stock Exchange.

HALE & McINTOSH, LIVE STOCK COMMISSION MERCHANTS

Correspondence and consignments solicited. Market reports free to prospective shippers. Rooms 252-3-4 Exchange Bld.

Kansas City Grain. KANSAS CITY, March 23.—Wheat was nominally steady here. There was no improvement in the demand and offerings were as small as ever.

Receipts of wheat to-day, 37 cars; a year ago, nothing. Sales were as follows on track: Hard, No. 2, nominally 61c bid, 62 @ 63c asked.

Corn was very firmly held. The trade was slow. Offerings were light. Prices continue nearly a cent above a shipping basis.

Receipts of corn to-day, 37 cars; a year ago, 22 cars. Sales on track by sample: No. 2 mixed, 11 cars 23c; No. 3 mixed, nominally 22 1/2 @ 23 1/2c.

Oats sold slowly. Prices were nominally steady. More samples of mixed oats were offering.

Receipts of oats to-day, 12 cars; a year ago, 13 cars. Sales by sample on track: No. 2 mixed, nominally 16 @ 16 1/2c; No. 3, nominally 15c; No. 4, nominally 14 @ 14 1/2c.

Hay—Receipts, 51 cars. Market very firm. Timothy, choice, \$11.00 @ 11.50; No. 1, \$9.50 @ 10.50; No. 2, \$8.50 @ 9.50; No. 3, \$4.50 @ 6.00.

St. Louis Grain. ST. LOUIS, March 23.—Receipts, wheat, 29,000 bu.; last year, 5,000 bu.; corn, 28,000 bu.; last year, 20,845 bu.; oats, 46,000 bu.; last year, 31,200 bu.; shipments, wheat, 5,755 bu.; corn, 70,211 bu.; oats, 18,219 bu.

Kansas City Produce. KANSAS CITY, March 23.—Butter—Creamery, extra separator, 19c; firsts, 17c; dairy, fancy, 15c; fair, 12c; store packed, fresh, 10 @ 11c; packing stock, 7c; country roll, fancy, 13c; choice, 11c.

Eggs—Strictly fresh, 8c per doz. Poultry—Hens, 6 1/2c; spring, 8c; broilers, 9 to 2 1/2 lbs., from \$2.50 @ 3.00 per doz.; roosters, 15c young, 17c; turkeys, hens, 11c; gobblers 10c; ducks, 8 1/2c; geese, fat, 5 1/2 @ 6 1/2c; pigeons, 90c @ \$1.00 per doz.

Fruits—Apples, fancy, \$3.25 @ 3.75 per bbl.; choice, \$2.00 @ 3.00.

DROVERS COMMISSION COMPANY

Kansas City, Mo., Stock Yards. MONEY LOANER. G. W. CLAWSON, LOANS. A. T. MUSTON, CATTLE. J. P. McMURRAY, SALESMEN. SAM M. WEST, HOG SALESMAN. J. W. T. GRAY, OFFICE.

HORSES SOLD AT AUCTION

on Tuesday, Wednesday and Thursday of each week. Private sales every day at the Kansas City Stock Yards Horse and Mule Department. The largest and finest institution in the United States. Write for free market reports.

W. S. TOUGH & SON, Managers, KANSAS CITY, MO.

KANSAS CITY FRUIT & PRODUCE COMPANY

Produce and Commission Merchants, 106 East Fifth street, KANSAS CITY, MO.

Will receive all Farm Produce and sell to best advantage. Butter, Eggs, Poultry, Fruit and Potatoes. Prompt cash returns made. Have choice Northern and Home-grown Early Potatoes for sale. Correspondence solicited.

GROWERS OF AND DEALERS IN Cattle, Hogs and Sheep

MAKE YOUR CONSIGNMENTS TO Ben. L. Welch & Co. COMMISSION MERCHANTS, STOCK YARDS, KANSAS CITY, MO.

Stockers and feeders bought on order. Liberal advances to the trade. Write for market reports and special information.

Consign Cattle, Hogs and Sheep to LONE STAR Commission Company

For best results. A new company. Capital \$100,000. Telephone 1106. Market reports furnished. Write us. KANSAS CITY STOCK YARDS.

FOR GOOD RESULTS SHIP TO THE Larimer-Bridgeford Live Stock Commission Co.

Rooms 205 and 206 Live Stock Exchange, KANSAS CITY, MO.

CONSIGN YOUR SHEEP TO KNOLLIN & BOOTH, Sheep Commission Merchants.

Rooms 304-305 Exchange Bld., KANSAS CITY, MO. Direct all mail to Station A. Market reports furnished free to all sheep feeders or breeders on application. Correspondence solicited and prompt reply guaranteed.

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The popular restaurant. Opposite Kansas - City - Stock - Yards. P. S. RITER, Proprietor.

Kansas Tannery ESTABLISHED IN 1889.

Does a general tanning business, including robes, rugs, etc. Tanning Galloway hides for robes a specialty. First-class work, reasonable prices. All kinds of leather in stock—best quality. Have you any oak bark? Good prices paid for it. Write me. M. C. BYRD, Lawrence, Kas.

Piles Cured for \$25

Without Knife or Ligature. CURE GUARANTEED OR NO PAY. Book on Rectal Diseases, with Testimonials, Free—Sealed. Call or address 10 West Ninth St., DR. GIBBS & CO., Kansas City, Mo.

HOME-SEEKERS' EXCURSION! VIA Missouri Pacific Ry.

FROM All Stations in Kansas TO All Stations in Arkansas, Indian Territory, Texas and Southern Missouri. RATE One fare plus \$2 for the round trip. Minimum rate \$7. DATE OF SALE April 7, April 21, May 5.

For further information call on nearest Missouri Pacific ticket agent or write H. C. TOWNSEND, G. P. & T. A., St. Louis, Mo. F. E. NIPPS, Agent, Topeka, Kas.

Right Here in Kansas

The OKOLO COMPANY is located right here in Kansas. It sells the best remedies that science has ever produced for Curing Catarrh.

It charges only \$3.35 for a three months treatment. The treatment consists of an instrument called Okolo, through which the right medicine is inhaled. There are 12 different kinds of medicine. These 12 remedies cover every sort and condition of trouble that arises from Catarrh. In order that the right medicine be sent you, it will be necessary to write us and tell plainly how you suffer. Just where the trouble appears to be. Our physician will go over your letter thoroughly and select the proper remedy. This and the Okolo Inhaler will then be sent you for \$3.35. You know where your money is going. You are not asked to send it away off to New York or some other distant city. It stays right here in Kansas, where we can be held responsible. Our home reference is Geo. S. Murphey, cashier of the First National Bank.

The sooner you write us the quicker we can cure you. It will cost only \$3.35 to be well again. OKOLO COMPANY, Manhattan, Kansas.

# The Poultry Yard

## NEW CHOLERA CURE.

How a West Virginia Physician Cured a Lot of Chickens.

Several subscribers have asked us for a cholera cure, and we suspect the disease is quite prevalent. We take pleasure in giving the following letter from a valued correspondent in West Virginia. He says: "I am a physician, a country doctor, with two acres of land and several hobbies, one of them chickens. Four years ago cholera broke out among my flock, and I tried every remedy I could think of. Finally, I took some antiseptic tablets, consisting of 7 3-10 grains corrosive sublimate and 3 4-5 grains of citric acid in each and dissolved one in one gallon of boiling hot water and gave as a drink. Cholera-stricken fowls will drink if they do not eat. From that on I lost but one or two that were too far gone to drink, and in another instance, where I found it present, I repeated the treatment with equal success. Since then I usually give it once a month as a preventive, continuing it for three days. If occasion offers, I would like you to try the remedy, and if it is a success in your hands it could be incorporated in a future edition of the Biggle Poultry Book. The tablets are a deadly poison—used, as of course you know, as external applications in solution in surgical cases. The good, if I am correct in their doing this good, lies in the antiseptic action of the corrosive sublimate—the citric acid merely favoring the solubility of the tablet; the tablets I advise because of the dosage being certain."—Farm Journal.

## A FEEDING EXPERIMENT.

Why the Professor's Chickens Died, One After the Other.

This may not be new, but it was new to the reporter who overheard it on a Boston car, so it is likely that there are others who have never heard it. The young man who told it was evidently a collegian, as was his companion:

"I heard a good one on Prof. —, of Andover," he said.

"What was it?" queried the other.

"Well, you know he was married during the winter and went to house-keeping just outside the village. Last spring he thought he would add a few hens to his stock; he already had a dog. He set a couple of hens, and in time had two large broods of chickens. He was very proud of them, but in a week or so the chickens began to die. He called in a neighbor to look at the chickens and offer advice. They were certainly a pretty scaly lot of chickens that the neighbor viewed. They were skinny looking and apparently without ambition.

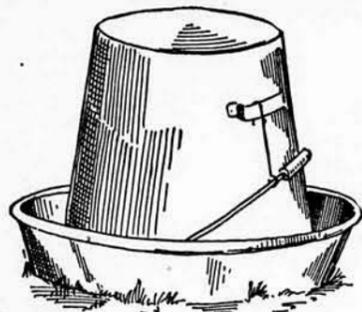
"What did yer feed 'em?" asked the neighbor, after a brief survey.

"Feed them?" responded the professor, as though he didn't hear aright. "Why, I don't feed them anything. I thought the old hens had milk enough for them."

## WATERING POULTRY.

How It Can Be Done in a Cleanly and Effective Manner.

Watering a large flock of poultry can be accomplished in a cleanly manner by carrying a pailful of water to the poultry quarters and inverting it in a pan, as shown in the sketch. This prevents the fowls getting into the water, while the water is let down as fast as needed. A couple of sticks should be laid across the bottom of the pan or a hole made in the pail an inch from the top, that the



water may rise in the pan. With this arrangement there is little danger of the hens upsetting the water dish.

which in cold weather makes such trouble in the poultry house. Moreover in cold weather a pail of water will keep warm much longer when inclosed in this way—an important advantage.—American Agriculturist.

## AMONG THE POULTRY.

Over-fat hens are in danger of apoplexy.

Wheat is among the best foods for laying hens.

Keep the hens scratching if you would keep them laying.

Generally it is not a good plan to feed stimulating food to poultry.

Except for feeding soft food troughs should not be used. Always scatter grain.

While sour milk is relished by the hens, it should not be made to take the place of water.

The goose will lay about as many eggs as the turkey and can be raised to maturity at about one-half the cost.

Ducklings are much more easily fed than chickens. Nothing seems to disagree with them as long as it is sweet.

A goose is not fully matured at one year old, but sometimes breeders will couple old males with young females. Avoid getting them too fat, and give them plenty of opportunity for exercise.—St. Louis Republic.

## How to Treat Overfed Hens.

When a flock of hens will not range over the fields in fair days, but sit under trees or bushes, making no effort to exercise or seek food, it indicates that they are overfed and too fat and will not produce eggs. The best treatment is to give no food for a week, so as to compel them to exercise and reduce their flesh. It is useless to attempt to secure many eggs from very fat hens, as they are then out of condition for laying.—Rochester Post Express.

## Charcoal Is Good for Poultry.

Charcoal is one of the most essential articles of food to successful poultry farming. The best way to secure this is to place an ear of corn in the fire until it is entirely charred and then shell off to your fowls. You see an eagerness developed and a healthy condition brought about. All pale combs will become bright red, and the busy song which precedes laying will be heard, and the average yield of eggs greatly increased.

## Nothing Can Beat It

is the verdict of thousands who are using them.



Send for "Proof of the Pudding," and read what is said by purchasers.

WEIGHS only 350 lbs but warranted strong enough for any requirement. for much less than other sulkeys but its work and construction are fully guaranteed.

ROCK ISLAND PLOW CO., Rock Island, Ill.

## SHOEMAKER'S POULTRY BOOK

96 pages, printed in 6 colors. Birdseye view of largest Poultry Farm. Tells all about Chickens, Prices of same, their Diseases, remedies, poultry buildings, etc.; finely illustrated. Price only 15c. C. C. SHOEMAKER, Freeport, Ill., U.S.A.

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Best in the world, hot water, pipe system. Will hatch chicks when others fail. Catalogue Free. Shoemaker Incubator Co., Freeport, Ill. U.S.A.

## BATS THEM ALL!

Eggs turned without opening the machine. Send for circular of the best INCUBATOR, also book of plans to make the same. Price of book \$1. JACOB YOST, Arkansas City, Kas.

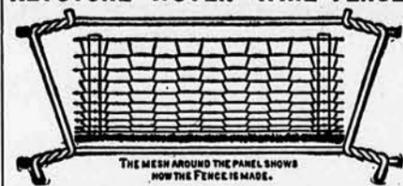
## HATCH Chickens BY STEAM—

With the MODEL EXCELSIOR Incubator. Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made. GEO. H. STAHL, Illus. Catalogue. 114 to 122 S. 6th St. Quincy, Ill.

## SUCCESSFUL INCUBATOR

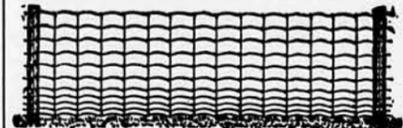
Our magnificent new catalogue giving full information regarding artificial hatching & brooding and treatise on poultry raising sent for 4c stamps. Circular free. Write now. Des Moines Incubator Co., Box 88 Des Moines, Ia.

## KEYSTONE WOVEN WIRE FENCE



Will turn your stock. Perfectly safe. 25 to 58 inches high. If interested drop us a card and we will mail illustrated catalogue.

KEYSTONE WOVEN WIRE FENCE CO., 12 Rush St. PEORIA, ILL. When you write mention Kansas Farmer.



## BRITISH GOLD COMING BACK

On Feb. 17th we received an order from an English Railway for another ten miles of fence, also a remittance in £. s. d. for the last ten miles. This third order proves that the favorite American fence suits the Englishman also.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich. When you write mention Kansas Farmer.

## FENCING

For HOGS, POULTRY, and all fence purposes.



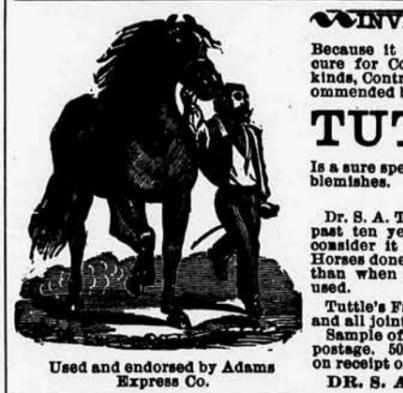
Thousands of Miles in Use. Always gives satisfaction. Sold by dealers. Freight paid. Take no other. Catalogue free. McMULLEN WOVEN WIRE FENCE CO., CHICAGO, ILL.



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Because it is always reliable. It is a speedy, safe and positive cure for Colic, Curb, Splints, Bruises, Shoe Bolls, Callous of all kinds, Contracted and Knotted Cords, etc. Used and highly recommended by prominent horsemen.

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Is a sure specific for lameness. It never produces any soars or blemishes. Warranted to satisfy. Readville Trotting Park, Mass., March 23, 1893. Dr. S. A. Tuttle, V. S.—Dear Sir: I have used your Elixir for the past ten years, in the diluted form, for a leg and body wash. I consider it the best wash for keeping horses from sores up. Horses done up with this wash are much less liable to take cold than when done up with witch hazel or any other wash I ever used. Tuttle's Family Elixir cures Rheumatism, Sprains, Sore Throat and all joint affections. Sample of either Elixir sent free for three 2-cent stamps to pay postage. 50 cents buys either Elixir of any druggist, or sent direct on receipt of price. DR. S. A. TUTTLE, 27 G. Beverly St., Boston, Mass.



## PROFITS IN POULTRY!

Our Eleventh Annual Poultry Guide and combined catalogue tells how to earn these profits. What others are doing you can do. One hundred and forty-eight pages of valuable, practical matter. INCUBATORS AND BROODERS! The Improved Reliable is Warranted to Hatch 80 percent of the fertile eggs. Hundreds of recent testimonials. Sixteen popular kinds of THOROUGHBRED FOWLS FOR SALE, also full line of Poultry Supplies. Price of Guide 10c. in stamps—worth one dollar. Reliable Incubator and Brooder Co., Quincy, Ills.

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	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts for 1895.....	1,689,652	2,457,697	864,713	52,607	103,368
Slaughtered in Kansas City.....	922,167	2,170,827	567,015		
Sold to feeders.....	392,262	1,876	111,445		
Sold to shippers.....	218,805	273,999	69,784		
Total Sold in Kansas City, 1895.....	1,533,234	2,346,202	748,244	41,588	

**CHARGES:** YARDAGE, Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head. HAY, \$1 per 100 lbs.; BRAN, \$1 per 100 lbs.; CORN, \$1 per bushel. **NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED.**

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"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time, will be inserted in this column, without display, for 10 cents per line, of seven words or less, per week. Initials or a number counted as one word. Cash with the order. It will pay. Try it!

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DUROC-JERSEY RED MALE PIGS—Six months old, at \$9, recorded, crated and on cars. November farrow at \$7.50. If you want pigs, send draft or postoffice order at once. This offer will not appear again. M. H. Alberty, Cherokee, Kas.

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AUBURN POULTRY YARD.—Eggs for sale from prize-winning B. Langshans and S. S. Hamburgs. B. Langshan pen headed by first premium cock at the State poultry show at Topeka, 1896; first on Hamburg breeding pen. A few cockerels left for sale. Write for prices. Address W. E. McCarter & Son, Auburn, Kas.

EGGS! EGGS!—S. C. White Leghorn, \$1 per fifteen, from prize-winning stock. Knapp strain, scoring 93 to 95%. No inbreeding; free range. Mention FARMER. Elwood Rush, Shaw, Kas.

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FOR SALE OR EXCHANGE FOR HORSES OR CATTLE, a new DeLaval hand separator, capacity 600 pounds per hour. Address Drawer V, Junction City, Kas.

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MILLET SEED, CANE SEED, RED AND WHITE Kaffir corn, bought and sold in any quantity. If for sale send samples; state quantity. Kansas City Grain & Seed Co., Station A, Kansas City, Mo.

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YELLOW MILO MAIZE, RED AND WHITE Kaffir, Amber sorghum, Golden millet, each 35 cents per bushel, sacked. Black rice corn, 75 cents per bushel, sacked. Golden Beauty seed corn 40 cents. Willis K. Folks, Wellington, Kas.

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EGGS FROM PRIZE-WINNERS.—Langshan, Leghorn, Plymouth Rock, Minorca, Wyandotte and Hamburg fowls, bred in the purple. A few more pedigreed Yorkshire boars for sale. James Burton, Jamestown, Kas.

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FOR SALE—Dwarf broomcorn seed, German millet and Red and White Kaffir corn seed. Evans Bros., Sterling, Kas.

LIGHT BRAHMA EGGS FOR SALE—From fine stock, \$1.50 per fifteen. Bert Killough, Richmond, Kas.

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STRAWBERRY PLANTS—Best varieties, \$1.50 per 1,000. J. C. Banta, Lawrence, Kas.

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PASTURE—For 200 horses and cattle. Good feed, plenty pure water and shade. Frank Dickinson, Valencia, Shawnee Co., Kas.

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FOR SALE—Cane, millet, Kaffir and Jerusalem corn in large or small lots. Hubbard & Hackney, Medford, Okla.

WANTED—Buyers for Large English Berkshire gilts, bred or ready to breed to son of imported boar. Bargains! O. P. Updegraff, North Topeka, Kas.

FOR SALE—Red Kaffir corn and cane seed in large or small quantities. Write for prices. A. D. Arnold, Longford, Clay Co., Kas.

THE SENECA NURSERY—Will still accept orders at one-half of wholesale rate price during March. Order quick while stock is on hand. Send name on postal for catalogue. S. J. Baldwin, Seneca, Kas.

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