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TOPEKA, KANSAS.

OFFICE STATE SUPT. OF PUBLIC INSTRUCTION, TOPEKA, KAS., January 16, 1889.

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Agricultural Matters.

Corn Culture—Preparation of Soil, Time to Plant, etc.

Address of J. T. Sturm, before the Farmers' Convention, held at Wellington, March 2, 1889.

First, Preparation of the soil. Too little attention is paid to the proper preparation of the soil. It is very essential that the soil should be well plowed and thoroughly pulverized, for corn must have a loose arable soil.

What I am about to say will sound to many of you so much like paper-farming, that I fear you will distrust me. (What I mean by paper-farming is, the "farmer" who sits in a cosy office, and with his pen plows eighteen inches deep, and plants his corn away out of season; does everything in grand style; has separate stalls for his chickens; and all this theoretical and nonsensical stuff. I detest it, and, as it was said of Horace Greeley, his turnips cost him \$1 apiece.)

Last year I cultivated 110 acres of corn, ninety acres of which I plowed from nine to thirteen inches deep. Some one said at our last meeting that thirteen inches was very deep plowing. This is true; but I know what I am saying, I knew what I was going to say before I said it. I cross-harrowed it, and then reharrowed it, then put on a clod crusher, crushing the remaining clods, and smoothing the ground completely. On the 19th of March, I commenced planting with a check-rower, and finished planting as soon thereafter as the state of the weather would permit. I cultivated thoroughly, but not deeply, five times, and am certain that the result justified the extra labor bestowed.

Part of the corn was raised on ground that had been cultivated for seventeen consecutive years, without artificial manuring; although I have plowed under several green crops of after-growth, a thing that no farmer can ignore without impoverishing his land. Indeed, I regard this as the chief means of keeping up the fertility of the soil where we farm so largely. But the manure pile should not be neglected. It is a source of wealth to every farmer who uses it properly. Last year I spread upon my farm over 300 wagon loads of manure, partly from my own barn-yard, and partly from neighboring farms, whose owners kindly gave me their manure piles. The manuring had a three-fold effect. It furnished something to keep

myself and my boys out of mischief during the winter days; it kept my mules from kicking the stable down; and, I think, added at least ten bushels of corn per acre. Each farmer should study carefully the character of his soil, and plant early or late according to the warmth of the soil.

I am not a believer in the theory that hedge leaves should be as big as squirrels' ears before planting should begin. In this climate the ground may be deeply frozen the last of February, but a couple of weeks of warm sunshine will warm the ground, and while trees and shrubs that root deep will not have budded forth, yet the ground is sufficiently warm at the surface to germinate the corn, and its age will date from the time of its germination. Consequently, the earlier you get your corn to germinate, the earlier will your corn attempt to ear, and the conditions being more favorable early in the season than later, the chances for a crop are thereby enhanced. I am willing to admit that late planting will come up more quickly and grow more rapidly, and if fodder was the object, would be preferable. But the corn will not mature so early, nor be as heavy or oily. Many fields of corn are damaged by cultivating too deep in laying by. The last cultivation should be thorough, but so to break as few roots as possible. Ordinarily, three good plowings are sufficient; nevertheless, sometimes more are required.

We should have two things constantly in mind, the procuring of the present crop, and putting the ground in condition for the next. Every farmer should have his mind made up as to what crop is to follow the present one, whether wheat, oats, millet, or corn, and have his ground in the best possible condition for that particular crop. If corn is planted with a lister, use ground that has been well plowed the previous year, plant early and not very deep. List north and south, when at all practicable, and don't expect to get corn without labor. Use the best tools. A clod crusher is almost an indispensable implement.

And now to sum up briefly, use the best implements, use all the fertilizers you can command, plow deep, plant early, select good seed, cultivate thoroughly, and your labor will be rewarded with many well-matured yellow golden ears, your granaries will be filled, and you may smile when the snows of winter and the rains of summer enrich your homes.

Potatoes Worth More Than Wheat.

EDITOR KANSAS FARMER:—In reading the communication in your paper of the 14th ult. on potato growing, I wish to add a few more thoughts on the subject to what I wrote a few weeks ago. I had an impression that your farmers, as in some other States, do not value the potato crop as they should. The letter of Mr. Ziller confirms the correctness of my thought. The importance of potato culture is seen in the famines that afflicted nations when the crop failed, as in Ireland in 1646-47. The comfort of the poor in all civilized lands, and the pleasure of the rich in the same, are greatly dependent upon the potato. To the first named it is often meat, bread and life. One year ago our own country would have been much oppressed, the crop being short here, had it not been for the ship loads that came from the old countries. After paying 15 cents duty per bushel, the shippers made money, and the middle men here, who had bought the farmers' crops, were prevented from cruel extortion by the fleets of potatoes coming. Should not Kansas, with other States, turn its at-

tention to potato growing, so that these fleets from other lands need not come to give us relief and take our money away? When God has given to us the garden of the world to cultivate, and if developed will more than feed and clothe the world, should not the farmers who are the feeders and clothers of all, so unite and manage that consumers generally may be saved from the evils which all suffer from the middle men; and push from our grand country all selfish trusts and monopolies which are followed by oppression, want, misery, ruin and death.

Humbolt says the ground that grows thirty pounds of wheat will grow 1,000 pounds of potatoes. He may have made the experiment in a more favored climate and better soil than we have. It is safe to say, however, that the land that will average twenty bushels of wheat to the acre will yield 200 bushels of marketable potatoes; leaving seed and feed potatoes to pay the expense of raising the crop. Deducting the expense of raising the wheat, and a bushel of potatoes will bring about what a bushel of wheat brings; the potatoes from one acre would thus bring ten times that of wheat. Successful farming means the raising of all marketable products, but most of that which pays best.

V. F. BOLTON.
Glen Gardner, New Jersey.

Potato Culture.

EDITOR KANSAS FARMER:—I heartily agree with J. E. Ziller, of Hiawatha, in deep fall plowing if possible for potatoes, and by all means, thorough pulverization of the soil, whether fall or spring plowing. My method has been practically the following for main crop, whether fall plowed or not: Wait till weeds start, then plow perfectly with two-horse plow, and harrow down smooth, then plant with corn planter as described in another letter, then reharrow. When potatoes begin to come up, harrow again. As soon as plants are seen well in rows, plow with two-horse cultivator, using the shield; cultivate thoroughly every week till blossoms appear, or potatoes begin to set on, using a diamond plow or large single shovel for last plowing in center and not too close to vines.

Following this method, I've planted the weediest ground on farm, and never had to go over with hoe or pull weeds, and they were clean at digging time. The harrow and thorough cultivation does the work while the weeds are coming up. Should bugs bother, use Paris green in solution. I am out of all patience with London purple; to kill the bugs, I had to make it so strong it blistered the leaves. If bugs are very bad, and patch large, take a barrel, fix a faucet with a sprinkling nozzle near bottom, make a two-horse cart, if you don't have one, so barrel will just pass over tops of potato vines when placed on it; let horses straddle the row, turn on the solution and let her go, Paris green, the bugs will die.

In digging, I use the Common-Sense potato digger, first pulling or mashing down vines with harrow. Should dirt stick to tubers, let them lie in sun till dry. In picking up, assort and keep all small ones to themselves, and cook and feed to hogs and poultry through winter. Should the others be too unequal in size, assort again. Until tried it is difficult to realize the benefit of carefully grading sizes in marketing; but it pays big.

As to varieties, we all differ, each having his own fancies; in fact, seasons and localities have their influence. Then the potato is more capricious than corn, wheat, oats, etc. I always select the largest, and those that conform nearest the ideal type of the variety in

question. Put them away in the fall, and keep each kind to itself. Cut one eye in a piece, discarding the seed eye. By using only large tubers and cutting properly, pieces will be as large as the small potatoes, and all the strength goes to make one strong, quick-growing plant. Space them eight, twelve and fourteen inches, according to growth. Being a firm believer in true science, I have tried to be a close observer and careful student of nature, but have my weakness for planting in the ground instead of the moon. I am delighted to find the old Peach Blow and Early Rose doing well here. S. B. JACKSON.
Tribune, Greeley Co., Kas.

EDITOR KANSAS FARMER:—I just want to say a few more words about milo maize and Kaffir corn. I have just as much to say in favor of them as ever I had. They have so many good qualities that it is unnecessary to make any false claims for them. One of your correspondents thinks they are chinch bug proof, but they certainly are not. But it is hard for the bugs to kill it; they can't do it unless they start in on them while very small. Wheat is looking well as far as heard from all over this county; although we have failed to receive half the moisture which I am told Prof. Blake promised us in his "Tables." R. B. BRIGGS.
Great Bend, Kas.

Patents.

The following list is reported through the official records for the week ending April 2, 1890, by Higdon & Higdon, Patent Lawyers, office rooms 55 and 56 Hall Building, Kansas City, Mo., and room 29 St. Cloud Building, Washington, D. C. By applying to them at either office a printed copy of any patent here named can be obtained for 25 cents.

MISSOURI.

Cutting apparatus for harvesters—Robert J. Robinson, Linneus.
Vapor burner—Charles H. Shultz, St. Joseph.
Vehicle spring—Luther Stouffer, St. Joseph.
Steam pumping engine—Frank Steinman, St. Louis.
Self heating soldering iron—Gustave S. Heidel, St. Louis.
Dinner pail—Perry L. Crossman, Granby.
Adding machine—John G. Smith, Albany.
Switch device for electric currents—Joseph A. Turner, St. Louis.
Shutter worker—John F. Shatsick, St. Louis.
Gate—Thomas Tyson, Mound City.

KANSAS.

Conduit for cable railways—Elwood C. Phillips, Garden City.
Lubricator—Lawrence M. Fleshman, Wichita.
Corn plow—Guilan & Dike, Almena.
Clevie—Arthur W. Rumsey, Kiowa.
Wagon brake lever—William A. Haney, Media.
Combined harrow and drag—George W. Mullennix, Yates Center.
For week ending March 26:

MISSOURI.

Grain crushing mill—James Curtis, Moscow.
Letter box—Robert J. Mitchell, Seneca.
Dough kneader—John H. Bowers, Mound City.
Tempering saws—Joseph Pelts, Vincit.
Annunciator—Ira S. Bunker, Nevada.
Station indicator—Orestes E. Michaud, St. Louis.
Grip pulley wheel—Richard P. Walsh, St. Louis.

KANSAS.

Egg count, register—Alvin F. Harrison, Greeley.
Reversible eccentric—William W. Lockwood, Freeport.
Sash fastener—Albert N. Bender, Manhattan.

TRADE MARK.

A dark-colored rectangular background containing spots of a different color from the background and resembling fever sores—Harriet A. King, Salina, Kas.

Great Little Men.

Some of the greatest men that ever lived were of small stature and insignificant appearance. The reader will readily recall many instances. Very small are Dr. Pierce's Pleasant Purgative Pellets, but they are far more effective than the huge, old-fashioned pills which are so difficult to swallow and so harsh in their action. The "Pellets" are gentle and never cause constipation. For liver, stomach and bowel derangements they have no equal.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

APRIL 23-24—G. & J. Geary, Aberdeen-Angus Cattle and Shire, Yorkshire Coach and Cleveland Bay Horses, Dexter Park, Chicago.

Raising Hogs.

EDITOR KANSAS FARMER:—As this is the time of year that the crop of hogs is forthcoming for next year's market, perhaps a few words in regard to their care and management will not come amiss. In the first place, I would like to impress it upon the minds of farmers the advantage of raising good stock for breeding. It certainly don't take any more to keep them, and I claim it don't take as much, and they will be ready for the market any time after 8 months old, and that is an all-important item, with the cholera making its ravages in our herds as it has been in the last few years. Any person that knows the price of a bushel of corn can tell how much more it will cost to feed a pig until he is 15 months old, than to feed one until he is 8 months old. And then, the chances are that your scrub, if he has been lucky enough to escape the cholera all that time that you have been waiting for him to develop into a hog, will not be worth as much as your thoroughbred or high-grade would at 8 months.

But some men can make very mean scrubs out of fine hogs in a very short time. To such persons I would say, never invest your money in fine hogs without you first change your mode of taking care of them.

One bad mistake that a great many farmers make is in breeding stock too young. The boar should be not less than 8 months old, and the sow from one to two months older. The sow when bred at that age, with proper care, could be kept growing right along, which is not the case where they are bred at the age of 6 or 7 months. Never turn the boar in with the sows and let him run; he will not do near the amount of work that he would if he was turned in with each sow as she comes in. One service is plenty; the sow should be penned until she goes out of heat. The sows during the winter should not be fed too much corn. Give them plenty of oats. Bran and shorts are good. Watch the herd and see that each one comes for their feed. Sows heavy in pig are liable, I think, to become costive; this ought to be guarded against, or you are liable to have a case of cholera on your hands. In that case I always use oil cake. Give them a feed of it three or four times a week. The sow should be penned a few days before farrowing time, so as to get her reconciled to her new quarters. She should have light feed of some kind of slops a few days before farrowing, and for a week afterwards, gradually increasing the amount until you have her on full feed. As the pigs get older the drain on the sow will be greater, and the quantity and quality should be increased. She should have plenty of slops made from ground oats, middlings and bran, and afterwards what corn she will eat up clean. As soon as the pigs learn to eat, they should be fed in trough what soaked corn and oats they will eat up clean. Never feed them sour slops, and never let your swill barrel get sour. Keep two of them, using one while the other is airing after being thoroughly cleaned. Keep their place of sleeping clean; disinfect with carbolic acid, and sprinkle sulphur and slacked lime in their bedding to keep them clean of lice. Don't let the care of them get to be an old thing by the time they are 6 weeks old,

and think they can shift for themselves, but stay right with them, for eternal vigilance is the price of the good pig. I don't think it a good policy to ring hogs, unless you still hold on to that relic of the past ages, that could drink out of a jug and could turn over more sod in a day than your hired hand could with four horses and a gang plow. Then you should by all means ring, or cut their noses off close to their ears, so they cannot root. Our improved breeds of hogs seem to be more docile, don't seem inclined to study mineralogy nor to emigrate to the other side of the globe by going straight through. Let them root, give them plenty of good nourishing food, a dry, warm place to sleep in winter, a good, cool shade for summer, with plenty of good, cool water, but no mud-hole to wallow in, and they will soon root the mortgage from off the farm and root you clean out of debt. J. A. W.

Hiawatha, Kas.

FROM PIG TO PORK.

I cannot find words strong enough to impress upon your minds the profit of hauling your grain to market in a different form from the one most of you use at present, and I know of no better, easier or more profitable way than in hogs.

The raising and fattening of hogs is the best paying live stock investment in the world. This is not only so in the United States but in all other countries. There is no country blessed with a better climate or soil for the production of corn—the cereal that makes the hog—than the United States. What the farmers of Custer county want is a good stock of hogs, and after that you want to stay with them. No matter what the price of corn is, or the price of hogs, stay with them and they will stay with you.

Don't get disgusted with corn-raising because prices are low at present, but stay with the corn and hogs. Do more chores and less and better farming, and you cannot help but prosper in the great corn county of Custer.

From the time a pig is 4 weeks old it needs, wants and must have something better than the mother's milk if you want it to do well. It is not only an advantage to the pig itself, but to its mother, as the food and care you give it is a great relief to the mother and tends to keep her in a more vigorous and stronger condition.

I raised over 300 pigs last year—April pigs. From the time they were 4 weeks old I fed as follows: Ground corn, or ground oats and corn, mixed with milk and water, and I fed them in a pen where the larger ones could not get. When they were 10 weeks old I weaned them and fed them as before, on the ground feed, also giving them soaked corn until sweet corn was fit to feed, then I fed it, also boiled pumpkins, squashes, potatoes, etc. In September, October and November, I fed boiled feed but once a week, but fed them all the corn they could eat, and kept them in a lot by themselves, with plenty of shade, shelter and fresh water. I weighed one with the following results: October 5, 155 pounds; October 19, 182 pounds, a gain of 26 pounds in 15 days; October 26, 197 pounds, a gain of 15 pounds in 7 days; November 3, 213 pounds, a gain of 16 pounds in 6 days; November 18, 245 pounds, a gain of 12 pounds in 15 days; December 2, 267 pounds, a gain of 22 pounds in 14 days; January 1, 306 pounds, a gain of 38 pounds in 30 days; January 20, a gain of 15 pounds in 19 days. I also weighed two August pigs: January 20, one weighed 114 pounds and the other 120 pounds.

By keeping account I found that one

bushel of corn made thirteen pounds of meat.

I have 160 September, October, November and December pigs that I feed as follows: Every morning I make about two-thirds of a barrel of mush out of ground corn. I stir the meal in boiling water and then let it boil fifteen or twenty minutes. I also put in one and one-half pints of ground flax seed and a bucketful of mashed potatoes. After putting it in the barrel I mix two or three buckets of milk and what swill we have with it. I feed it to them warm, and in a place where the larger pigs cannot go.

I teach small pigs to eat when 3 or 4 weeks old, by putting a low trough near where their mother's camping ground is. There I fix a pen so larger pigs cannot get in. It is some trouble to teach them, but it is of short duration, as they soon learn and then follow you wherever you go with the bucket. It is time well spent.

I have a warm place for my pigs to sleep, and have it fixed so the larger ones cannot lie on the smaller ones. This winter I have lost but two pigs in this way, and that was my own fault, because I did not give them sufficient bedding. Give all your hogs, as well as your pigs, plenty of bedding, so they can put their noses under it and they will not pile up enough to kill any. But you should clean out their sleeping places at least twice a month.

Feed your pigs as well as your larger hogs plenty of salt and ashes; also mix ashes and sulphur and feed it to them at least once a month. Be sure and throw your ashes in your hog lot or pen, no difference what you burn.

Should your pigs get to coughing give them three or four spoonfuls of sulphuric acid to a bucket of swill, which will stop the cough in a few days.

Crowd your pigs "from the word go," or from the time you commence feeding them, when they are 3 or 4 weeks old, until you can turn them off for pork, and you cannot help but make money on them.

CARE AND TREATMENT OF BROOD SOWS.

Never breed a sow until she is 9 months old, and 12 is better. A sow well cared for from the time she is 4 weeks old until she has attained the age of 9 months can be bred with a considerable degree of success at that age; yet it would be better if she was not bred until she was 12 months old. One not well cared for should not be bred until she is 14 months old. Those bred at 6, 8 or even 9 months, get more or less stunted, and the result is that the pigs, as well as herself, will not mature so early. A sow only 9 months old has attained only two-thirds of her natural growth. That being the case, how can you expect her to give you a litter of strong and well-developed pigs?

The general result of breeding so young, I have found to be as follows:

First.—The sow never gets as large, almost invariably will be found harder to keep, and it takes her two months to regain what she lost suckling five or six pigs.

Second.—The pigs will not have as strong constitution and take longer to mature.

Third.—When you sell your sow and pigs you will find that they fall short in weight, in spite of the fact that you have fed them two or three months longer than would have been required had your sow been two to four months older.

Select only the best, and stand by them, and you will find that you are the possessor of a herd of hogs that will make you money, let corn or hogs be high or low.

There are only two things that can prevent you from making money, and

they are the utter neglect on your part to properly care for your hogs, or disease among the herd.

Keep sows in good condition, especially while they are suckling pigs. In the spring and summer see that they have something better than corn, such as grass, clover or oats. Fix a pasture of some kind for them if you haven't got one already. Buffalo grass is much better for them than blue-joint and they like it better. See that they have good wallowing places. Do not shut them up in a dirty little pen and leave them for hours without food and water, because you have no time as you say or think. Take time, for you have nothing on your place that it pays you better to look after than your brood sows. Do less farming and you will prosper better. I know it to be so. I am speaking from experience.

Do not pen up your pigs when you wean them. A better plan is to pen up the sows and let the pigs run at large, after they know their feeding place, as they can do very little damage.

The coyote is the worst enemy we have to contend with. I think the best way to prevent coyotes from carrying off pigs is to put all your sows and pigs together. Then they seem to be too much for Mr. Coyote.

When the pigs are from 3 to 4 weeks old I feed the sows all the corn they can eat. I also feed them oats and see that they have plenty of green food, but in autumn I feed them slop and boiled pumpkins, squashes and water-melons, etc. I mix ground corn and oats with the boiled stuff, and about a handful of ground flax seed to the bucketful of slops. Do not fail to keep flax seed on hand to feed your pigs, both young and old. If you have no way to grind it, or cannot buy it already ground, boil it into a jelly and put a half pint of it into a bucketful of slops. If a sow has a fever you cannot feed her anything better than flax seed prepared as I have said. I use flax seed because it is about as cheap as oil cake would be shipped here from Omaha, and much better.—F. H. Zimmerer, in *Nebraska Farmer*.

The Common Lot.

There is a place no love can reach,
There is a time no voice can teach,
There is a chain no power can break,
There is a sleep no sound can wake.

Sooner or later that time will arrive, that place will wait for your coming, that chain must bind you in helpless death, that sleep must fall on your senses. But thousands every year go untimely to their fate, and thousands more lengthen out their days by heedful, timely care. For the falling strength, the weakening organs, the wasting blood, Dr. Pierce's Golden Medical Discovery is a wonderful restorative and a pro-longer of strength and life. It purifies the blood and invigorates the system, thereby fortifying it against disease. Of druggists.

The President's Message.

The inaugural address of the Great "Rock Island Route," Chicago, Kansas & Nebraska railway, is to announce that two through vestibule trains run each way between Chicago and Denver, Colorado Springs and Pueblo, via Kansas City and St. Joseph, without change of cars, making close connections west-bound with all trains for Salt Lake, Los Angeles, San Francisco, Portland and other Pacific coast points, and at St. Joseph and Kansas City, east-bound, with all trains for Chicago, St. Louis, and points east, north and south. These royal trains, consisting of Pullman sleeping cars, restful and handsomely-appointed reclining chair cars, and magnificently furnished day coaches, were built expressly for this service by the Pullman Palace Car Co., and are unquestionably the finest ever turned out by this famous establishment. The reclining chair cars are models of elegance and comfort, and are free to all holders of first-class tickets, and a courteous attendant with every car will see to the wants of our patrons. Ask your nearest ticket agent for a ticket via the Great "Rock Island Route," or write to
JOHN SEBASTIAN,
Gen'l Ticket and Pass. Agent,
Topeka, Kas.

In the Dairy.

AROMATIC BUTTER AUTOMATICALLY PRODUCED.

Paper read before the Wisconsin Dairy Association, February 22, 1888.

The aroma in butter, so much sought after and prized by the lovers of fine butter, depends upon several different causes and conditions, one largely dependent upon the other.

First—The fundamental source of supply originates exclusively in the milk itself.

I have found the aromatic principles very pronounced, abundant and most delicate in the milk taken from fresh cows, that is, cows that have but recently calved.

We find it in diminished quantity in the milk from cows that have become pregnant, and, as the period of gestation advances, the aroma decreases until little or no trace is to be found.

If the milk does not fundamentally possess these aromatic principles, it is utterly impossible to supply the deficiency by any human ingenuity.

I find, in my experience, that the effect of lactic ferment in the cream is to develop the aromatic principles in the butter, and although these principles are very difficult of analysis, they are plainly beyond question of a very volatile nature, as they are quickly dispelled or consumed by the action of other acids which follow the lactic acid stage, and are mainly the result of exposure to the air.

I am aware that this is not in accord with the oxygen theory, but I don't hesitate to say that, in my opinion, that same oxygen theory has cost the country millions of dollars. To its agency I can trace ninety-nine one-hundredths of the bad butter made from good cream in the United States. Nor does my experience agree with some prominent dairy authorities in the statement that a full development of lactic acid impairs the flavor of the butter, but think that these authorities ascribe to the action of lactic acid effects and results which are produced by other acids of an entirely different nature.

Early in my investigations I discovered that to bring the milk or cream in contact with air to produce the proper acid condition necessary for churning, was not only a very uncertain method but also a very unsatisfactory one, as it always introduced the element of decay and produced a deteriorated condition of the product. The longer the cream was exposed the poorer the product became.

Second—The food consumed by the cows has more or less influence over the production, and also over the character of the aromatic principles in milk and butter.

Third—Manipulation, which is really the most important factor of all in the manufacture of fine butter. For the simple reason that, notwithstanding the milk may fundamentally contain a full supply of the finest aroma, faulty manipulation may dissipate every particle of it, and the butter, when produced, be as devoid of aroma as pure oleomargarine. This is owing to the fact that the proper chemical condition of the cream is not understood or defined, and that no adequate appliances have been introduced to produce that condition with any degree of reliability.

The difficulties in the way of improvement in this line were enhanced by the fact that popular ideas and prejudices relating to the manipulation of cream, dating back for a long period of years (and in some cases emanating from persons who have been considered good

authority), have been very much at variance with the best management.

One great stumbling block in the way of advance has been the much-vaunted theory, industriously spread all over the country as a valuable discovery, that cream required to be "oxygenated" or "aerated" to produce the much-coveted aroma in butter.

Another popular but equally erroneous idea was, that stirring improved the cream and produced untold benefits.

The fact is they are twin brothers, born of error, and should be consigned to oblivion as speedily as possible; but perhaps the greatest difficulty of all arises from the fact that no one professor, layman, theorist, or practitioner, could or would define the best possible condition for the cream before churning, yet all are and have been trying to produce that condition.

The truth is, the exact condition was and is largely left to chance and circumstances, and is not measurable by any well defined rule. That this defect in the art of butter-making is a serious one, may be gathered from the fact that it is the cause of the bad flavor, or want of flavor, in butter to the extent of 99 per cent.

I have been for a long time trying to work out this problem. To formulate a set rule, simple and easy of performance, that would, without prejudice to the keeping quality of the butter, produce a uniform chemical condition in the cream and still retain all the original aromatic principles in its composition.

I soon learned by experiment that to produce the necessary chemical condition with any degree of uniformity, and at the same time make the process practical, it would be necessary to have the requisite implements automatic.

This led to the development of my automatic fermenting can, which by purely mechanical action and without exposure to the air, produces a lactic ferment rich in lactic acid and without the admixture of any of the destructive elements which go to neutralize the fine aromatic principles of the milk and cream.

By the use of this simple implement in a set manner, any novice can produce a lactic ferment of one chemical condition, true and uniform in its action, every day in the year, regardless of seasons or climatic changes. With absolute certainty, the ferment will invariably be found ready for use in this essential one chemical condition.

A certain proportion, relatively quite small, of this lactic acid ferment, is thoroughly mixed with the cream, the latter having first been brought to the proper temperature in my non-conducting self-regulating cream vat, when the vat is immediately closed or covered up tightly so as to effectually exclude the air.

The lactic ferment immediately commences to work through the entire mass of cream. This action, owing to the construction of the cream vat, is continuous and uniform throughout the entire contents of the cream vat, always producing the desired chemical change necessary to perfection preparatory to churning. The lactic ferment so acts upon the aromatic principles of the cream as to call them out in full development, leaving them in the butter when churned. The result is as uniform as machinery can make it, and the product of the finest quality.

Thus the art of butter-making is reduced to a mechanical operation, one by which a uniform product is obtained with the least possible labor, and with a certainty heretofore unknown even in the best regulated establishments.

JOHN B. YD, Manufacturer,
199 Lake street, Chicago.

Home-Made Cheese.

In these days of co-operative dairying, when cheese is so generally made at factories, it is impossible to compete with them in the cost of manufacturing by any home dairy, yet it is nice to have a few old-fashioned home-made cheese, to recall the good old times when we used to eat the cheese made by our grandmothers. This is the plan of a Massachusetts lady, who makes rich, fine and delicately-flavored cheese. The night's milk is strained into pans till morning, when the cream is taken off, and the milk warmed to blood heat, when the cream is returned to the milk and thoroughly mixed. This prevents the melting of the cream, that would otherwise run off with the whey. The whole is then put into a tub with the morning's milk, and set for the cheese, with rennet, enough to form the curd in about thirty minutes; and here much care is thought to be necessary in cutting and crossing the curd, and much moderation in dipping and drawing the whey from it, that the white whey (so-called) may not exude from it.

When sufficiently drained, it is taken and cut with a sharp knife to about the size and form of dice, when it is salted with one pound of fine salt to twenty-five of curd. It is then subject to pressure, moderate at first, gradually increasing it for two days, in the meantime turning it twice a day, and substituting dry cloths. It is then taken from the press and dressed all over with hot melted butter, and covered with thin cotton cloth, and this saturated with the melted butter. It is then placed upon a shelf, and turned and rubbed daily with the dressing until ripe for use.—*Farm, Field and Stockman.*

It is more of a question of suitable food and care than time, or anything else. There is no profit anywhere in a dairy without extra food—that is, an excess of food beyond living, and all the food a good cow can digest and assimilate beyond the demands of her living, furnishes the margin of profit, and there can be no profit without an excess, and this increased by a longer time of doing it.

"Ayer's Hair Vigor is a most excellent preparation for the hair. I speak of it from experience. Its use promotes the growth of new hair, and makes it glossy and soft. The Vigor is a sure cure for dandruff."—J. W. Bowen, Editor *Enquirer*, McArthur, Ohio.

BEST EVERGREENS FOR KANSAS.
See Tincher's cedar ad. in two-cent column.

The Union Pacific has added another round to its ladder of popularity by placing a buffet service for its sleeping car patrons in the Pullman sleepers run on the regular overland trains.

Consumption Surely Cured.

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

The through vestibuled sleeper of the "Chicago Vestibuled Limited" now leaves Topeka via the Union Pacific at 2:53 p. m., arriving in Chicago via the Chicago & Alton at 8 a. m. next morning. This train is vestibuled from end to end, and is composed of smoking cars, palace reclining chair cars, Pullman palace buffet sleeping cars and dining car. The only through sleeper between Topeka and St. Louis leaves Topeka via the Union Pacific at 2:53 p. m., arriving in St. Louis at 6:40 a. m. next morning. No other line offers such unusual facilities for comfortable travel or for quick time. Tickets may be obtained of F. A. Lewis, city ticket agent, 525 Kansas Ave., or of J. F. Gwin, at the depot.

WELLS, RICHARDSON & Co's

IMPROVED Butter Color.

EXCELS IN STRENGTH PURITY BRIGHTNESS

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

TO MONTANA, OREGON AND WASHINGTON.

If you are going West, bear in mind the following facts: The Northern Pacific railroad owns and operates 987 miles, or 57 per cent. of the entire railroad mileage of Montana; spans the Territory with its main line from east to west; is the short line to Helena; the only Pullman and dining car line to Butte, and is the only line that reaches Miles City, Billings, Bozeman, Missoula, the Yellowstone National Park and, in fact, nine-tenths of the cities and points of interest in the Territory.

The Northern Pacific owns and operates 621 miles, or 52 per cent. of the railroad mileage of Washington, its main line extending from the Idaho line via Spokane Falls, Cheney, Sprague, Yakima and Ellensburg, through the center of the Territory to Tacoma and Seattle, and from Tacoma to Portland. No other transcontinental through rail line reaches any portion of Washington Territory. Ten days stop over privileges are given on Northern Pacific second-class tickets at Spokane Falls and all points west, thus affording intending settlers an excellent opportunity to see the entire Territory without incurring the expense of paying local fares from point to point.

The Northern Pacific is the shortest route from St. Paul to Tacoma by 277 miles; to Seattle by 177 miles, and to Portland by 224 miles—time correspondingly shorter, varying from one to two days, according to destination. No other line from St. Paul or Minneapolis runs through passenger cars of any kind into Idaho, Oregon or Washington.

In addition to being the only rail line to Spokane Falls, Tacoma and Seattle, the Northern Pacific reaches all the principal points in northern Minnesota and Dakota, Montana, Idaho, Oregon and Washington. Bear in mind that the Northern Pacific and Shasta line is the famous scenic route to all points in California.

Send for illustrated pamphlets, maps and books giving you valuable information in reference to the country traversed by this great line from St. Paul, Minneapolis, Duluth and Ashland to Portland, Oregon, and Tacoma and Seattle, Washington Territory, and enclose stamps for the new 1889 Rand-McNally County Map of Washington Territory, printed in colors.

Address your nearest ticket agent, or CHAS. S. FEE, General Passenger and Ticket Agent, St. Paul, Minn.

The "Eli" Once More.

The Burlington Route (Hannibal & St. Joseph R. R.) once more leads all its competitors, in restoring the fast train service between Kansas City and Chicago. The train so well known a year ago as the "Eli," and so deservedly popular with the traveling public, has once more been put on. It is a solid vestibule train with sleepers, free chair cars and coaches, and makes the through run between the two cities in about fourteen hours. Leaving Kansas City in the evening the passenger takes supper on the dining car and arrives in Chicago for breakfast, and vice versa on his return. This is a great saving of time, and the Burlington's action in restoring this service meets with the hearty approval of all business men and the public generally.

The Burlington's new St. Louis line increases in popularity every day, and now holds a high place in public favor.

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

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

All of the above trains are in every way models of comfort and convenience. A. C. DAWES,
General Pass. & Ticket Agent, St. Joseph, Mo.

An appetizing lunch which can be enjoyed at leisure in the Pullman buffet sleepers run on the regular overland trains of the Union Pacific is one of the many inducements offered Pullman sleeping car patrons to take the "Overland Route."

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

Correspondence.

What a Farmer Knows About Banking as Conducted in Kansas.

EDITOR KANSAS FARMER:—I have taken much interest in the perusal of Farmer Kollock's able and exhaustive essay read before a recent Farmers' Institute held at Peabody, and published in a late issue of the FARMER. Without attempting to imitate our essayist's cultured style, I beg your indulgence to make a few comments suggested by his paper. At the outset I plead guilty to defects of education of which his production bears no traces; but perhaps I can exhaust my subject fully as well, though by traveling a longer route and in a clumsier manner.

I know Farmer Kollock very well, perhaps better than he knows me. I pass his well-cultivated fields on my way to the neighboring town of Peabody, and occasionally I meet him in his carriage, driving a sleek, well-fed, nicely-groomed brown horse, as he vibrates between his office in the First National Bank of Peabody (of which he is President) and his well-stocked, highly-cultivated farm. I belong to the class of farmers to whom the remarks and advice of the essayist are addressed; that class who win their bread by a hand-to-hand conflict with mother earth, and as such I will enter a plea of guilty to many of his indictments. His suggestions on specialization and the distribution of risks are excellent and highly commendable. But not all farmers are so fortunate as to have national banks behind their farming operations; they are oftener in front of us holding our notes drawing 18 to 24 per cent. interest and 12 per cent. after maturity, and for this reason we have not achieved the same measure of success at farming that Farmer Kollock has.

Two reliable citizens of Peabody have lately told me that Mr. Kollock's farming has reached such a degree of perfection that, during the year just ended, his farm has given a better return on the investment than has his bank stock. Now if there is anything in general farming and stock-raising as conducted on the plan of distribution of risks that yields a better return than money at 18 and 24 per cent. interest, the farmers of central Kansas may be my witnesses, Farmer Kollock holds the only key to the secret. I am at this time paying the First National Bank of Peabody 18 per cent. on borrowed money, and during a portion of the year have paid 24 per cent. on a part of the same money. The town of Peabody, with 2,000 inhabitants, has four banks; Walton, with less than 300 souls, has one; and Newton, with a population of, say 8,000, has six with the seventh nearly ready for usurious occupancy; and in addition to these, each of these towns has its curbstone, flaty-faced 2 and 3 per cent. skimmers.

I am not going to offer any apology for the farmers. As a general rule, it is the farmer's own fault that he is at the mercy of the greed and avarice of these people. I forbid any one whom the coat does not fit from attempting to wear it. It is the prevailing system of usury and extortion that my shafts are aimed at. All banks and bankers are pretty much alike. Their only difference is in the degree of extortion. They "toll not," but they are spinning a web around the farmers of Kansas from which many will never be able to extricate themselves. Chinch bugs, grasshoppers, hot winds, "specialization," or any combination of these have not had the far-reaching influence in producing the present depression and hard times of which we hear such widespread complaint as has usurious interest.

I regret the failure of our essayist while quoting from the national banking act to give all the excellent provisions of that wise law. For the benefit of farmers on whom he bestows his advice so lavishly, I will supply, with your permission, some of the more important of his omissions. Section 5179 of the Revised Statutes of the United States provides that national banks may take interest at the rate allowed by the laws of the State in which such banks are doing business. Section 5198 of the Revised Statutes of the United States provides that the taking, charging or receiving of a rate of interest greater than that allowed by law, when knowingly done, shall be deemed a forfeiture of all interest. The same statute fur-

ther provides that the person paying such interest may sue such bank and recover twice the amount of interest paid. The idea of the framers of this law evidently was to create, under government supervision and patronage, places of safe deposit for the people's money, and their officers, bound by oath and the fear of the penalty, would not dare to do a practically illegitimate business with the people of this government. Let the Bank of England attempt to extort usury from the English people and in a short space of time that island will shake from center to circumference with revolution. Or let the Bank of France try the experiment and there will rise up Robespierres and Dantons, guillotine in hand, ready to do their bloody work. FRANK PERRY. Peabody, Kas.

Kaffir Corn.

EDITOR KANSAS FARMER:—Ever since my first article appeared in the KANSAS FARMER of January 24, I have been receiving letters making inquiries about Kaffir corn. I can endorse the main part of A. J. Abrahams-n's article in your issue of February 28. There are many that commend Kaffir corn besides those that have it for sale. This I know to be a fact. I got two good crops of fodder from my corn last year, and the last crop was as good as the first. I find that from four to five pounds is plenty on an acre. Would be pleased to have some of your readers tell us something about African millet, its feed qualities as a forage plant and also how to cultivate it. I find the FARMER to be a good advertising medium, the best I have found this year. ROBERT TURNER.

Lone Oak, Bates Co., Mo.

Make War on Sparrows.

EDITOR KANSAS FARMER:—There is one pest that threatens serious injury to the crop interests of Kansas to which I have never seen reference made in your columns. The English sparrow is pushing out from the cities, where it has been introduced, and multiplying rapidly in all directions, threatening great destruction to our crops in future years unless prompt measures are taken for its extermination. In England the loss occasioned by this bird is reckoned at many million pounds sterling per annum, and in our Atlantic States they have found it necessary to encourage its destruction by payment of small bounties. With our short winters and abundance of grain on every hand for the sustenance of these birds the damage to our crop interests is much greater than in the more Northern States. As is well known, these little pests live principally if not wholly on grain. They drive away the beautiful songsters which feed upon insects and thus serve to protect our crops. If let alone they multiply with alarming rapidity and are voracious feeders. A fight should be made upon them at every point. T. E. BOWMAN.

Topeka, April 1, 1899.

Prevention of Drought.

EDITOR KANSAS FARMER:—I have spent the most of my time for several years in traveling through Kansas, and have heard many discussions on the prevention of drought. In fact, it is the chief topic of conversation in the northern and western portions of the State. An article in the Kansas City Times of April 1, by C. C. Blake, is attracting considerable attention at the present time, and while there is a great deal of truth in this theory, it does not seem possible to subsoil plow the whole of the territory from the "Alleghanies to the Rockies."

I have heard one proposition discussed which I have never seen in print, but which seems to me to be the most feasible plan to prevent the ever-dreaded hot winds. Kansas has more miles of streams of water within her borders than any other State of the same dimensions. The Kansas river (originally the "raging Kaw") running through the center from the east to the west boundary line; the Republican fork, reaching the northern boundary and extending into Nebraska; the north and south forks of the Solomon river and the Smoky Hill river covering all the central northern portion of the State, while the Arkansas and its tributaries cover the south and southwest portion and the Neosho river the east and southeast portion.

It is true that for a great portion of the

year nearly every one of these streams and their tributaries are nothing but a bed of sand and sand-bars with now and then a pool of water connected by small streams through the sand-bars, while for a short time they are the channels for conveying away the much-needed spring rains and precipitating vast bodies of water on the lowlands of the South.

It has been clearly demonstrated that wherever in the eastern portion of the State this mighty Kansas river has been dammed and back-water produced, the lands are much more productive than formerly and the hot winds much less frequent. Now if a dam could be built at the State's expense wherever there is a fall and the water brought to a level with four or five feet at the dam, and wherever that level will make one or two feet of water another dam built, and in that way a succession of dams from the mouth to its source and along each of the tributaries there could be collected every spring an immense volume of water that would be constantly evaporating, thus furnishing dampness to the ground and to the atmosphere that would effectually stop the much-dreaded hot winds and at the same time furnish an immense water-power that could be utilized by the State and made a source of revenue that would soon pay the cost of constructing all the dams necessary to hold an average of five feet of water the whole length of the Kansas river and of each of its tributaries. This may be a "chestnut" in Kansas for all I know, but as I have never noticed it in print I take the liberty of suggesting it for the consideration of those more interested in the State than I am. W. N. BITT.

Chicago, Ill.

Plant Your Potatoes and Tree Seeds With the Corn-Planter.

EDITOR KANSAS FARMER:—Being a casual reader of the FARMER, I have noticed a number of interesting articles on the potato, but no one so far has given my plan for planting, which is practical, having been a potato-grower in no small way in central Iowa for years and tested it thoroughly. Planting largely, I was anxious to do so more speedily and effectively than by hand. On investigating the Aspinwall potato-planter, I found it all right but too expensive for me. Necessity (the mother of invention) prompted me to think and act, which resulted in utilizing the corn-planter thus: Take two joints of discarded stove-pipe and make tunnels that will be six inches in diameter at large end and about three inches at the small (by ripping them open and cutting out an acute triangular strip nearly their entire length, then riveting together. Fasten them securely on back of the hoppers with wire, cords, or staple and clasp, letting the small ends of the funnels rest in the heel of the runners about an inch from bottom. Remove the dropper's seat and place a board in its stead, suitable for two persons to sit on, who sit back to back while dropping; they should wear large aprons to help hold potatoes in lap. Fill hoppers, take up handful and drop through funnel made by stove-pipe one piece at a time, fill and have other hand ready so there will be no balk in the dropping. Thus, two boys, girls or grown persons can plant a row each with ease as fast as a team will walk, and quickly learn to drop quite accurate any desired distance. Let horses walk slow at first till droppers learn. It is best to have ground harrowed smooth. Have potatoes placed in barrels or sacks at convenient distance, as in sowing wheat. This method gives the following advantages: 1st—Can use whole or cut potatoes. 2d—Speed; one operation drops, covers and marks for next rows as fast as planting corn. 3d—Covering any uniform depth desired, regulated by driver's weight on planter. 4th—Plants are even in rows and admit of earlier and closer cultivation than when scattered in broad furrows by hand. 5th—The uniform width of rows in digging. 6th—Ease of work in planting and cultivating. 7th—Cheapness; having the planter and old stove-pipe, it does not cost a cent.

As I've used this simple attachment for cane, popcorn, melons, pumpkins, etc., I know it can be effectively used on tree claims in planting walnuts, box-elder, and every kind of seed. Reader, try it; it will save you lots of hard work and be worth many dollars to you, and costs you nothing

by simply being a subscriber to the best farmers' paper on earth—the KANSAS FARMER. S. B. JACKSON. Tribune, Greeley Co., Kas.

Thoughts on Sugar-Making

EDITOR KANSAS FARMER:—Now that it has been demonstrated that sugar can be made from sorghum and on a paying basis, I would suggest some thoughts on the subject for the consideration of all thinking men in the country, especially those in the West. We need a more profitable diversification of crops. But the question arises, How shall or how can it be effected? I answer, by entering on a system that will enable us to produce all our sugar instead of importing it as we do now. This I believe can be done to the great advantage of our entire country. But it will require an effort, and a united effort. It will require a union of capital and labor. It will be asked, how are we going to get capital enlisted? I answer again, let the government offer such inducements as will satisfy capitalists that investment in the enterprise will be a paying one. Let the government pay a bounty of 1 or 2 cents per pound on sugar made from sorghum and beets, and a reasonable bounty on the sorghum and beets raised and manufactured into sugar. In that way a channel will be opened for an outflow of capital and for the employment of many hands who need employment, and for the farmer for lifting the mortgage from his farm, and that would directly benefit many farmers and manufacturers and capitalists, and also many thousand laborers, and ultimately and in the near future our entire country. We would soon produce all our sugar at home and save the \$100,000 that we are now paying to other countries, beside commissions and other expenses incurred by importation, and which is to constantly increase with the increase in our population. Nor is this all. I believe if this enterprise could be properly encouraged by a liberal bonus for a few years, that the year 1900 would find us able to compete successfully in the markets of the world. To do this let the revenue derived from the duty on sugar be applied as a bounty on sugar as above and for experimentation in machinery and manufacture. This accomplished and there is no conception of what the prosperity of Kansas may be. My faith in the ultimate success of the sorghum industry is almost unbounded. D. J. BISSELL.

Anamosa, Iowa.

P. S.—Allow me to advise the flat, shallow culture for sorghum. Don't think that because it roots deep that it don't need lateral roots. Give it a chance and the soil will be filled with laterals and their fibers, and the yield increased. D. J. B.

A Help With Late Crops.

EDITOR KANSAS FARMER:—In some localities late crops prove very uncertain on account of the risk of drouth. In consequence of this late cabbage, tomatoes, potatoes, cucumbers are not planted as largely as they otherwise would, or if they are planted the work is done reasonably early in the spring. In a favorable season potatoes can be planted the first of June, cabbage can be set out in July, and cucumbers be planted as late as the first of August, and yet mature crops before frost will injure the plants. When this can be done it is easier to secure a second crop. That is, nearly or quite all these crops can be planted after the earlier crops have matured, so that if the soil is rich and in a good tilth a good crop or yield can be secured. Mulching the plants will often aid in maintaining a good growth during a dry season. With potatoes the mulch can be applied as soon as the seed is planted. The soil should be in a good tilth and the seed be covered very shallow. Wheat straw is the best material to use as a mulch, taking pains to spread evenly over the surface. With tomatoes and cucumbers the better plan is to let the plants make a good start to grow, stirring the soil frequently in order to aid in this, and then mulch before a drouth sets in. Sorghum bagasse is a good material to use for this purpose. For vines of all kinds, melons, squash, cucumbers, pumpkins and tomatoes, bagasse is one of the best materials that can be used for this purpose. Apply evenly over the surface. A mulch of this kind does not draw moisture to any considerable extent, but aids to retain moisture that is already in the soil and prevent it

from evaporating. With cabbage the best plan to keep the surface stirred, not deep, not over two or three inches at best, and if this can be done as often as once a week a good growth can often be secured when otherwise the plants would make a very unsatisfactory growth. Thorough and frequent stirring of the surface of the soil acts as a mulch and aids the soil to retain moisture and secure to some extent at least a supply by capillary attraction. If proper care is taken with either mulching or cultivating, a good growth can often be obtained when otherwise the plants would suffer for moisture. N. J. SHEPHERD.
Eldon, Miller Co., Mo.

Farmers and Crop Statistics.

EDITOR KANSAS FARMER:—In your reply under head of "Inquiries Answered" to census reports, on page 11, issue of March 28, you say the assessor is provided with blanks and is required to ask these questions, and that the farmer is expected to answer them honestly and cheerfully. Now let any farmer stop one moment and think on this subject, and see if he can afford to answer these questions cheerfully. I say he can't afford to. I view this matter as an extreme gross injustice for the following reasons: First—The most unscrupulous gamblers, known as the Board of Trade, get the acreage of all farm produce. Second—They know the average yield per acre and have only to watch the weather during the season to know to a very small fraction the bushels, tons, etc., of all the product of the whole country. Third—The above being known (and through the honesty and cheerfulness of the farmer) they, the aforesaid gamblers, make the price which the said honest and cheerful farmer is compelled to take for his produce.

Let us have a new deal. I here propose the following (will the farmers accept one or both): 1. The farmers to organize and put a price on their produce and keep it there. 2. Put a price on what they have to sell, also on what they have to buy.

It is but fair that the farmer should have his innings. The other side have had their price on farm produce, also they have put prices on all manufactured articles that the honest and cheerful farmers have to buy. Give us a chance. WM. KINNE.
Jackson Co., Kas.

WEATHER PREDICTIONS.

By Prof. C. C. Blake, Topeka.

[Parties interested in this Weather Department will please send their subscriptions for the KANSAS FARMER to C. C. Blake, Topeka, Kas. See advertisement of Blake's Weather Tables on another page. Send two new annual subscriptions for the KANSAS FARMER and get the book as a premium.]

THE WEATHER.

This is most excellent weather for wheat and oats, but death to chinch bugs, as repeatedly predicted. Part of the corn which has been planted too far north may rot in the ground and have to be replanted. But as soon as the present rains and the following cold spell are over corn should be planted in all latitudes with all possible speed; and in those sections where the "Tables" show the greatest drought will occur ninety-day corn should be planted.

1890.
For several months we have been at work on our calculations for 1890, and we have progressed far enough to know what the general nature of the seasons will be, though it will take us several months more to work out the details in full. It is more interesting than a thrilling novel, as the weather is always developing some unexpected plot. Before we commence our calculations for any year, we always use the best judgment we can at guessing what the weather will be in each State for each month. We then record these guesses so as to compare them with the result of our calculations. In no instance have the guesses been anything like the results of our calculations, and we never use any part of the guesses in our predictions, always depending entirely upon the calculations. For years the results have shown that our guesses do not make a verification of 10 per cent., and we are satisfied that no living man can guess the weather for a year in advance and make a verification of 10 per cent. But our calculations have made a verification of 90 per cent. on the average for the past fourteen years. We now find that our guesses for 1890 are most decidedly wrong, as the weather in

nearly every part of the country for most of the year is to be entirely different from what we expected. Our book for 1890 will be a large volume, much larger than any we have published, as it gives the maximum, minimum and mean temperature for all parts of the United States and the principal nations of Europe for each month. It also gives the probable amount of rainfall in inches for each month for 154 sections, including nearly all parts of Europe, India and Australia. In the United States all the Territories are given and all the large States are sub-divided into from two to six parts. As we have before said, we do not expect all these details to be fully verified, but by a glance at all the tables it will be seen what part of the country will have the greatest and what the least amount of precipitation, and what part of the year will be the wettest and what the driest.

The price of the book will be \$2 per copy, and the price will be uniform without regard to the number of copies bought. That is, if fifty copies are ordered the price will still be \$2 per copy.

As it will be several months before we can have the book completed and printed, and as many parties will want to know soon as to whether it will be advisable to sow winter wheat this fall, and as many parties have already written to know how soon they can get the book, and as the weather of next year will have a very important bearing upon the present plans of farmers and others, we have concluded to offer it for sale now, with the understanding and agreement that as soon as we receive an order for the book, with the remittance, we will write a letter to the one ordering and in the letter give him confidentially the substance of what the weather will be for 1890, so that he may now know whether it is best to seed largely with winter wheat this fall, and if so how early, or whether it will be best for him to sell all his wheat instead of sowing it and depend upon other crops next spring. The answer to these questions is clearly indicated by the result of our calculations for 1890, and is so emphatic that thousands of people will make bad mistakes unless they are advised soon. Our calculations added at least 100,000,000 bushels to the corn crop of 1888; they will add nearly as much to the wheat crop of 1889 in the United States, and will probably double the corn crop of this year over what it otherwise would have been. If our patrons will work as hard and act as promptly as we do still greater results in profits and salvage from losses will be apparent before the end of 1890.

Weather Crop Bulletin

of the Kansas Weather Service, in co-operation with the United States Signal Service, for the week ending Saturday, April 6, 1889:

Precipitation.—There has been an average rainfall in the east-central counties (in Franklin, Miami, Johnson, Douglas, Shawnee and Osage there was an excess) which rapidly diminishes north of the Kaw river, and gradually diminishes to the south. In Cherokee, Labette and Montgomery there is a slight deficiency which increases to the West. An average precipitation in Harvey and McPherson, while west of these in the counties along the Arkansas river there is an excess which becomes quite pronounced in Ford, Gray and Haskell. In the northern, northwestern and west-central counties there was a general absence of rain. On the 30th a hail storm in Edwards and Haskell.

Temperature and Sunshine.—The temperature has ranged from 1 to 7 deg. above the average. The highest for the week occurred on the 2d, when it reached 90 deg. in many counties, but the succeeding days lowered it materially. Though there has been a goodly measure of sunshine, yet the high variable winds partake more of March than April.

Results.—The season is reported generally five to ten days in advance of the average spring. In the northwestern and extreme western counties, though there has been no rain, the winter grains are in excellent condition; of wheat by far the largest acreage ever sown is reported. In Mitchell the oats are coming up and trees leafing out. In the counties along the Arkansas all crops are doing remarkably well, the ground is in fine condition, and south of the great bend a large acreage of corn is being planted. Early peaches, apricots and some apples in full bloom in Harvey. Peaches, plums,

pears and cherries in full bloom in Summer and the counties east, where plowing was delayed a few days by the rains of the 30th and 31st. Johnson reports on a basis of 100—wheat 125, grass 120, rye 130, oats 100. In Pottawatomie, Nemaha, Marshall, Trego and Ness the absence of rain is being felt, which is increased by the high winds of the past few days. T. B. JENNINGS,
Signal Corps, Assistant.

Topeka Weather Report

For week ending Saturday, April 6, 1889:

Date.	Thermometer.		Rain fall.
	Max.	Min.	
March 31.....	62	42	.89
April 1.....	76	34	..
" 2.....	90	40	..
" 3.....	78	37	..
" 4.....	69	23	..
" 5.....	67	31	..
" 6.....	59	38	..

Inquiries Answered.

Painting apple trees is useless if not actually harmful. Washing them with a preparation of soap and kerosene is said to prevent the work of borers, if the work is done early in the spring and on trees in which no boring has already been done. We do not believe painting a tree would work any better than painting a horse.

The biennial report of the State Board of Agriculture can be obtained, if at all, through the members of the Legislature. The bill appropriating money to pay for its printing and binding provides that 100 copies of it be delivered to each Senator and sixty copies to every member of the House. That disposes of 12,160 of the 20,000 copies. A large number are to be distributed among the various officers of the State; about 800 are required to supply the newspaper offices of the State, and the Secretary is allowed some for distribution at his discretion. It is a fact that while these very valuable reports are prepared and published as agricultural reports, they are of little value as aids to agriculture, and few farmers comparatively ever see one—not one in forty.

Farmers' Alliance Notes.

J. H. McDowell, Vice President of the National Alliance, writes that his public address at Meriden, Kas., on April 15, will commence at 1 p. m., instead of 3 p. m. as heretofore announced.

It is an encouraging sign to see that every member of the Alliance is making an effort to become a subscriber to the "old reliable" KANSAS FARMER, as its readers well know it is the only State paper that is working solely in the interests of the farmer and is constantly fighting their battles.

J. B. French, Burton, Kas., State Secretary of the Farmers' Alliance and Co-operative Union, reports twenty new Alliances formed last week at the following post-offices: Birmingham, Oskaloosa, Arkansas City, Latham, Augusta, Garden Plain, Meriden, Newton, Menoken, Valley Falls, Grantville, Holton, Silver Lake, Osawkie, Groveland, McPherson, Superior and Cedarvale. Secretary French reports the work very encouraged and he is almost deluged with correspondence.

Sunnyside Farmers' Alliance No. 709, Lyons, Kas., at a recent meeting adopted the following resolution: "Resolved, That we, the members of this Alliance, believing in justice and equity, and in view of the fact that a twine combine has been formed by which it is proposed to extort from us an exorbitant price for binding twine, hereby pledge ourselves to use no twine the coming harvest rather than pay more than a fair price for it." G. W. Hill, Secretary.

The most potent remedies for the cure of disease have been discovered by accident. The first dose of Dr. Shallenberger's Antidote for Malaria was given, as an experiment, to an old lady almost dying from the effects of Malaria, on whom Quinine acted as a poison. One dose cured her; and a single dose has cured thousands since. It is the only known Antidote for the poison of Malaria. Sold by Druggists.

Bulls for Sale.

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

Do not storm and fret. Be quiet and kind, and the horse will be so too, in most cases.

Gossip About Stock.

David Doran, Agenda, reports everything fine in the way of crops in Republic county; also states stock have wintered well, and most of the cattle are dehorned.

Notice the stallion service advertisement of Zeta, owned by Wm. M. Cocks. This desirable sire will make the season at the place of Sexton, Warren & Offord, Maple Hill, Kas.

John Buch, Poland-China breeder, Miltonvale, Kas., reports a number of sales as a result of his Breeder's Card. He thinks the FARMER of more value to the Western farmer than any paper published.

Abe Bourquin, Nokomis, Ill., who has a Breeder's Card of Brown Swiss cattle, reports fair sales. The cattle are a valuable breed which are attracting much attention. He will give any of our readers desired information.

James Elliott, Enterprise, Kas., reports the receipt of a fine trio of Minorcas from Indiana, which sustain their reputation for laying big eggs. Mr. E. appreciates the numerous orders he is receiving from our readers. Send for his circular.

We are in receipt of the sale catalogue of Aberdeen-Angus cattle to be sold at auction at Dexter Park, Chicago, April 23 and 24, by Messrs. G. & J. Geary, George Hendrie and Hon. Counts-Marjoribanks. This is a dispersion of very choice animals and fanciers should not fail to be present and secure bargains.

In a recent issue of the *Live Stock Indicator*, S. C. Orr, V. S., Manhattan, gives his experience with various devices and dehorning chutes, in which he gives unqualified endorsement of the Webster dehorning chute as the best device for effective and harmless dehorning. In the same issue another dehorner, J. H. McVicker, Garden City, Mo., who dehorned 365 cattle with a Webster chute, is loud in its praise as the best device. These unsolicited testimonials are gratifying to the Kansas dehorner and inventor, E. P. C. Webster, Marysville, Kas.

NEW ADVERTISEMENTS.

- Barteldes & Co. F..... See unclassified ads. p. 18.
- Brayton, A. W..... Horn Destroyer.
- Bonner Spr'gs Nur'ry. Trees, plants and shrubs.
- Centennial Mfg Co..... Salesmen.
- Cent'l Detect. Bureau. Private detectives want'd.
- Caton, Dr..... Ladies.
- Cadwallader Bros..... Trees and plants.
- Dye, William..... Cane seed.
- Eastern Mfg Co..... Turkish Hair Grower.
- Harden, W. I. F..... Early seed corn.
- Hubbard, C. E..... Eclipse Seed House.
- Hunter, C. C..... Topeka garden tools.
- Layson Lumber Co..... Lumber.
- Phillips, Maxwell..... Norman colt for sale.
- Reeve, Chas. E., Atty..... Chance for somebody.
- Reay, E. B..... Eggs for setting.
- St. Joseph Apiary..... Bees and honey.
- VanBuskirk, Mrs. N..... Light Brahma eggs.
- Rook Island Route..... To Oklahoma.

August Belmont, the proprietor of a fine breeding farm in Kentucky, claims that he has kept his horses free from disease and in remarkable good health by giving them a dose of quinine regularly. It is said to be particularly effective in case of pink-eye.

ST. JACOBS OIL
For Horses and Cattle.

Recent, Prompt, Good Results.

- Swellings.** Keosauqua, Ill., May 21, 1889.
My mare caught cold; result: swelled hind leg; limped between 2nd-legs and inflammation. Cured her with St. Jacobs Oil. L. O. GARDNER.
- The Arms Falise and Stock Car Co.,**
The Best. St. Clair Bldg., Toledo, O., June, '88.
We cheerfully recommend St. Jacobs Oil as the best for general use on stock. H. ARMS & CO.
- For 10 Months.** Winsboro, Texas, June 30, '88.
My horse was hurt on hind leg; suffered 10 months; was cured by St. Jacobs Oil; has remained permanent. W. J. CLINE.

AT DRUGGISTS AND DEALERS.
THE CHARLES A. VOGELER CO., Baltimore, Md.

A Planters Experience.

"My plantation is in a malarial district, where fever and ague prevailed. I employ 150 hands; frequently half of them were sick. I was nearly discouraged when I began the use of

Tutt's Pills

The result was marvellous. My men became strong and hearty, and I have had no further trouble. With these pills, I would not fear to live in any swamp." E. RIVAL, Bayou Sara, La.

Sold Everywhere.
Office, 44 Murray St., New York.

The Home Circle.

To Correspondents.

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

The Infinite Mother.

I am mother of Life and companion of God!
I move in each mote from the sun to the sod,
I brood in all darkness, I gleam in all light,
I fathom all depth and I crown every height;
Within me the globes of the universe roll,
And through me all matter takes impress and soul.
Without me all forms into chaos would fall;
I was under, within, and around, over all,
Ere the stars of the morning in harmony sung,
Or the systems and suns from their grand arches swung.

I loved you, O earth! in those cycles profound,
When the darkness unbroken encircled you round,
And the fruit of creation, the race of mankind,
Was only a dream in the Infinite Mind;
I nursed you, O earth! ere your oceans were born,
Or your mountains rejoiced in the gladness of morn.
When naked and helpless you came from the womb,
Ere the seasons had decked you with verdure and bloom,
And all that appeared of your form or your face
Was a bare, lurid ball in the vast wilds of space.

When your bosom was shaken and rent with alarms,
I calmed and caressed you to sleep in my arms.
I sung o'er your pillow the song of the spheres
Till the hum of its melody softened your fears,
And the hot flames of passion burned low in your breast
As you lay on my heart like a maiden at rest;
When fevered, I cooled you with mist and with shower,
And kissed you with cloudlet and rainbow and flower,
Till you woke in the heavens arrayed like a queen,
In garments of purple, of gold and of green,
From fabrics of glory my fingers had spun
For the mother of nations and bride of the sun.

There was love in your face, and your bosom rose fair,
And the scent of your lilies made fragrant the air,
And your blush in the glance of your lover was rare
As you waltzed in the light of his warm yellow hair,
Or lay in the haze of his tropical noons,
Or slept 'neath the gaze of the passionless moons;
And I stretched out my arms from the awful unknown,
Whose channels are swept by my rivers alone,
And held you secure in your young mother-days,
And sung to your offspring their lullaby lays,
While races and nations came forth from your breast,
Lived, struggled and died, and returned to their rest.

All creatures conceived at the Fountain of Cause
Are born of my travail, controlled by my laws;
I throb in their veins and I breathe in their breath,
Combine them for effort, disperse them in death;
No form is too great or minute for my care,
No place so remote but my presence is there.
I bend in the grasses that whisper of spring,
I lean o'er the spaces to hear the stars sing,
I laugh with the infant, I roar with the sea,
I roll in the thunder, I hum with the bee;
From the center of suns to the flowers of the sod
I am shuttle and loom in the purpose of God,
The ladder of action all spirit must climb
To the clear heights of love from the lowlands of Time.

'Tis mine to protect you, fair bride of the sun,
Till the task of the bride and the bridegroom is done;
Till the roses that crown you shall wither away,
And the bloom on your beautiful cheek shall decay;
Till the soft golden locks of your lover turn gray,
And palsy shall fall on the pulses of Day;
Till you cease to give birth to the children of men,
And your forms are absorbed in my currents again—
But your sons and your daughters, unconquered by strife,
Shall rise on my pinions and bathe in my life
While the fierce glowing splendors of suns cease to burn,
And bright constellations to vapor return,
And new ones shall rise from the graves of the old,
Shine, fade, and dissolve like a tale that is told.

—James G. Clark.

WOMAN SUFFRAGE.

It is the general opinion that a woman who advocates equal suffrage has short hair, sallow complexion and wearing apparel ancient in style, with no other ambition than to cast a ballot or occupy the Presidential chair. If she has a family, which is sometimes the case, she is supposed to neglect it, and if her children are small it is said they are left at home to weep or console themselves as best they may, by eating jam and smearing the best furniture with buttered bread. Her poor hen-pecked husband is the

most dejected of men. How could he be otherwise, when only cold meals await him and squalling children to cheer his drooping spirit (?) while his wife is out making speeches, talking politics, attending caucuses, wire-pulling, and rallying the faint-hearted and weak-minded to her support with a courage born of the determination to vote and hold office or die. The advocate of woman suffrage is strong-minded, not one weak or tender point in her character, and she thinks little or nothing of her personal appearance. She would not wear bangs or otherwise give way to the trifling vanities so common to the fair sex. When this short-haired, strong-minded person returns to her cheerless home as the twilight shadows deepen, she finds her unhappy husband sadly washing the supper dishes or vainly trying to hush the youngest child to sleep by singing in a broken voice—"Mamma will be home to you, by-and-by." This is what the sterner, and oftentimes gentler, sex say of those who work earnestly and generously for the rights of woman. But O! how great is their error.

It is the kind and loving mothers, daughters and sisters whose cheerful presence and willing hands bless and beautify the home, whose good deeds and tender words make light the hearts of those around them, that work so diligently for this great cause. They not only crave what they believe to be the rights of woman, but they earnestly want to bring about their cravings and in so doing elevate humanity. It is not for woman alone that Susan B. Anthony dedicated her life to public service with its attendant persecutions and ridicule of society, but for the good of all mankind. There is scarcely a town from New York to San Francisco which has not heard the thrilling voice of this true and noble woman. Although in the past she had been sneered at and mercilessly persecuted, she now becomes one of the most honored and revered women in the nation. Even newspaper men dwell upon the fact that at last a woman has arisen who is brave enough to grow old battling for woman's rights, and after more than a half century has passed over her head, she can of truth say that day is dawning and the goal of her ambition is fast approaching. May the story of her discouragements and successes kindle new hopes, new ambitions and still loftier aspirations in the hearts of the thousands of women who are now laboring for a like cause.

It must not be supposed for a moment that because a woman would have a word and hand in making the laws by which she must be governed and abide, that her heart becomes less tender toward those she loves, that her home will be less bright, the household less orderly, or that she is less willing and capable of cooking a good meal or to perform the duties of domestic life.

The time may perhaps never come when the lack of interest in spring bonnets, pull-backs, winter cloaks, etc., will be noticed, but the day is not far distant when equal suffrage will be extended to all regardless of sex, and that she will then be man's equal politically as she is now his superior in all that applies to elevation of mankind. With woman granted the right of franchise, the wrongs that now exist will cease, and where vice now reigns purity will be given a chance to assert its divine influence, and what is now a "den of thieves" will be transformed into a "house of prayer." The children, instead of being confronted on every hand with a saloon, will be permitted to enjoy going to school and become educated to do the right, eschew the wrong, and grow up to manhood and womanhood noble characters, with purposes of life such as will redound to the credit of those who so zealously labored to bring about this important change in our country's history.

In conclusion: We are going to vote at election. O, how it troubles the men. They think under woman's direction they'll never hold office again. And they ought not, for from the foundation of our government they have held sway, and instead of doing better they have at all times, as a rule, permitted the vices rather than attempted to suppress them. With woman in power these will necessarily cease, for she will not permit them.

EMMA RIZOR.

Use Hall's Vegetable Sicilian Hair Renewer and your thin gray locks will thicken up and be restored to their youthful color, vigor and beauty.

Selecting Meats.

We hear much said about our tough beef and the poor meat in general that comes to us from the market. It seems just possible that the meat would be much more palatable if the cooks understood thoroughly the best ways to cook the different pieces so that they would come to the table in their tenderest, most appetizing shape. There is something to be learned, too, by the one who does the marketing. Meat for a certain purpose should be cut from a certain part. If a roast is wanted, it is better that it come from the loin. If an inferior roast be bought, cook it as a pot roast, and see how much more tender it is.

When steak is bought, many people will broil or even fry anything the butcher gives them. A lady who knew a little about meat once asked in a shop for a beefsteak, and upon seeing the piece from which the butcher began to cut, she said, "Why, that isn't steak, is it?" whereupon he answered, "No; but I can make steak out of it." Too many people know no difference if the meat be cut in slices. If they would realize that what makes a very poor piece of meat broiled would often be delicious if braised or simply baked in a closely-covered dish; or, cut up and cooked, then made into a meat pie; or if, failing to get just the piece of meat wanted, they would take the one they could get and cook it the way it is best,—not spoiling a good stew to make a poor roast,—they would find more digestible as well as more palatable meats.

It should be remembered, too, after the outside of the meat is seared over to prevent the escape of juices, that a slow fire does better work than a very hot one. Intense heat hardens fibrin, while slow heat softens it. All housekeepers should learn to know the parts of meat by the names given them by the butchers, be able to ask for what they want in the market, and to know that they are given what they order.

There are only a few choice cuts of beef, and everybody cannot have the best. It is the part of wisdom to be able to make "best" from "second best" by cooking in such a way as to make each piece of meat appear to the very best advantage. In this way, if housekeepers look out for their own tables, they will find that, in spite of poor meats, tough beef and scrawny chickens, savory dishes may be prepared, and the family enjoy good living.—Mrs. Kedzie, in *Industrialist*.

Care of the Hair.

It is noticeable that of the majority of women few have abundant heads of hair, and quality gives way to quantity; the finer the hair, the less there is apt to be of it. It is also a matter of comment that the abundant tresses that crown the heads of many girls, become conspicuously scant as they approach their thirtieth year. The cause of this deterioration can be traced, in many cases, to the rage for blonde hair. That not blonde by nature becomes blonde through art; and sapped of its vitality by injurious washes, soon deadens and falls out.

But another cause of this early loss of hair is without doubt the failure to give it proper care, and as the vigor of youth departs, the growth of the hair perceptibly weakens.

There are heads of hair of such vigor, that no matter what is done or not done to them, they seem ever to thrive, and even when silvered throughout, as are heavy and long as in their youth. The fortunate possessors of such heads need not concern themselves about treatment. The object of this article is to give information for the invigoration and beautifying of weak, thin hair.

No comb, fine or coarse, should be used upon the hair except when necessary in dividing or arranging it. Combs break the young hair, and irritate the scalp without cleansing it. The fine-tooth comb, so often used to scrape out dandruff, is destruction itself to the hair. The place of the comb should be supplied by a good stiff brush, with bristles deep enough to penetrate the hair to the scalp. A thorough brushing with such an implement will make the hair as smooth and free from tangle as a comb, clear out dust and dandruff, stimulate the growth of new hair, promote a supply of natural oil, and leave the scalp glowing and invigorated. Hair of any color, under such treatment, must be beautified from its cleanliness and lustrous gloss. A new growth will soon be observed, and the falling out

High-Pressure

Living characterizes these modern days. The result is a fearful increase of Brain and Heart Diseases—General Debility, Insomnia, Paralysis, and Insanity. Chloral and Morphia augment the evil. The medicine best adapted to do permanent good is Ayer's Sarsaparilla. It purifies, enriches, and vitalizes the blood, and thus strengthens every function and faculty of the body.

"I have used Ayer's Sarsaparilla, in my family, for years. I have found it invaluable as

A Cure

for Nervous Debility caused by an inactive liver and a low state of the blood."
—Henry Bacon, Xenia, Ohio.

"For some time I have been troubled with heart disease. I never found anything to help me until I began using Ayer's Sarsaparilla. I have only used this medicine six months, but it has relieved me from my trouble, and enabled me to resume work."—J. P. Carzanett, Perry, Ill.

"I have been a practicing physician for over half a century, and during that time I have never found so powerful and reliable an alterative and blood-purifier as Ayer's Sarsaparilla."—Dr. M. Maxstart, Louisville, Ky.

Ayer's Sarsaparilla,

PREPARED BY

Dr. J. C. Ayer & Co., Lowell, Mass.

Price \$1; six bottles, \$5. Worth \$5 a bottle.

become less and less, though months, and even years, must pass before the full effect of the brushing process will be seen.

All washes of soda, hartshorn or borax, and dyes for turning the hair golden, are injurious to its vitality, and cause, sooner or later, according to the ability of the hair to resist, a bald head. Once a fortnight is often enough to wash well-brushed hair, despite the charms Amelle Rives pictures of "A woman's hair daily washed." Frequent washing keeps the hair too dry for vigorous growth. Use tepid water and old castile soap. Divide in the back, plait loosely, and after soaping and dipping the head in the water, rub the scalp thoroughly with a nail-brush, or the hands. Rinse all soap out in clear water, and comb smooth while wet with a coarse comb. Dry over the shoulders in the sun, or with the back to a fire, taking care not to sit too close, and do not put up till dry.

A fine tonic for the hair is one-half water and one-half bay rum, made bitter with quinine. This must be rubbed into the scalp twice a day. But it is thought to darken the color of the hair.

The best brushes for use are those with unbleached bristles. Cheap brushes are too soft and thin to benefit the hair. A good one to last will scarcely cost less than \$1.50. Brushes and combs should be kept scrupulously clean. Leave them fifteen minutes in a basin of water with a tablespoonful of hartshorn, and every atom of dust will be taken out. Prop the brush so that only the bristles are in the water, as the hartshorn will injure the handle and back. This can be done by putting the smallest toilet china in the basin with it. Dry well before using.

The head should be protected from dirt in sweeping and dusting with a dust-cap.

Clipping the ends of the hair once a month is beneficial. Professional hair-dressers are said to clip dexterously every hair, but amateurs must content themselves with slightly trimming the hair evenly when brushed smoothly down the back.—*Good House-keeping*.

Famous Women.

It is a significant fact that most of the women who have achieved fame in art, literature, or "affairs," have enjoyed vigorous health. This shows that the mind is never capable of the severe and continued application necessary to creative work, unless the body is at its best. The woman who aspires to fill an exalted place among her associates, must be free from nervous debility and female weakness. Dr. Pierce's Favorite Prescription will banish these, and it is warranted to restore those functional harmonies which are indispensable to health. As a specific for all those chronic weaknesses and ailments peculiar to women, it is unequalled.

The Young Folks.

Stop and Think.

My boy, when they ask you to drink,
Stop and think!
Just think of the danger ahead,
Of the hearts that in sorrow have bled
O'er hopes that were drowned in the bowl,
Filled with death for the body and soul!

When you hear a man asking for drink,
Stop and think!
The draught that he drinks will destroy
High hopes and ambitions, my boy,
And the man who a leader might be
Is a slave that no man's hand can free.

O this terrible demon of drink!
Stop and think
Of the graves where its victims are laid,
Of the ruin and woe it has made,
Of the wives and the mothers who pray
For the curse to be taken away!

Yes, when you are tempted to drink,
Stop and think
Of the danger that lurks in the bowl,
The death that it brings to the soul,
The harvest of sin and of woe,
And spurn back the tempter with "No!"
—Temperance Banner.

The Dearest Ties of Home.

"The hand that rocks the cradle," a power
that rules the world,
The voice that sings its sweetest songs in
loving lullaby,
The banner, bearing child-love, in flowing
folds unfurled—
A hand, a voice, a banner, whose memories
never die.

The heart that beats in unison with child-like
faith and fear,
The eye that marks child-coming, and grows
brighter when they come,
The ear that opens to childhood charms and
holds them ever dear—
The heart, the eye, the ear that know the
Dearest Ties of Home.
—Good Housekeeping.

ELECTRIC CARS IN TOPEKA

Our younger readers will doubtless be interested in a description of the new railroad system in Topeka on which the motive power is electricity. There are several different lines of road, about fifteen miles in all, belonging to the same company, all operated by the same power. This is the longest mileage operated by electricity in the world. This is not half the railroad mileage of Topeka, but the rest is operated by horse and steam power. Last Tuesday a trial trip was made and the following description of it appeared next morning in the *Capital-Commonwealth*:

At 3 o'clock sharp, the first of the motors appeared coming down Jackson street from the Rapid Transit station on Twelfth street, followed at short intervals by three others. The four motors drew up in line in front of the Capitol and were quickly filled. There were about 100 guests in all, including the managers and chief officials of the Topeka City street railway, the East Side Circle railway and the West Side Circle road. The four motor cars were well filled without crowding and in the presence of an immense and admiring throng on the streets, on the Capitol steps and at the windows of the Santa Fe building, the gongs rang the signal for the start.

The cars moved off like a charm and from an almost imperceptible motion at starting glided down the smooth track at a speed of eight miles an hour so gracefully and easily that the passengers involuntarily applauded, and the crowd responded. All along the line, crowds lined the streets and at one or two polling places passed they were very large. No circus parade could have attracted mere attention. Hats and handkerchiefs were waved as the cars sped along and here and there cheers greeted the unusual sight. It was a great day for Topeka. True, the day of enslavement to the old-fashioned, old fogy, slow-going mule car had long passed away and given place to the horse car and the steam motor, but now for the first time something had come which was a novel relief. Everybody rejoiced to see the cars move, for rapid transit for Topeka means a new era of increased prosperity, means happy people and comfortable homes, means the growth of the city—means a Topeka with 100,000 people within a few years.

There was not a single hitch to mar the pleasure or perfect success of the trip. The cars kept close together and climbed the Fourth street grade as easily as they ran along level ground. In turning the short curves by the Santa Fe shops, there was a noticeable absence of the violent jerking characteristic of the old steam motor. Although the streets and avenues were filled with teams everywhere the procession went, it was noted that few horses appeared to be frightened, while not a single runaway was observed.

There was a general expression of admira-

tion as Oakland was neared and the excursionists caught sight of the vast amount of improvement going on there. There must be now at this terminus of the Rapid Transit system a town of not less than 1500 people, and on its blocks houses are springing up like magic. One man is building ten in a row, and on the opposite side of the street another is erecting twenty handsome dwellings, now nearly complete. It is said there are at least 300 new homes in Oakland which have been completed since last fall, and scores of others are just being begun. And this activity in building—the very existence of the little city itself—is the natural outgrowth of the Rapid Transit enterprise inaugurated two years ago.

A stop of a few minutes was made at the entrance of Oakland park for cider and cigars, and, circling about the belt, the cars took the back track. At the switches an occasional horse-car would be encountered, and a comparison made with the motors. It was the old story of before and after.

"The poor horses will soon be relieved," said one passenger.

"Yes, and thank heaven the people of Topeka will, too," said another one.

"There is room for several good rapid transit companies," said a third one, "and the City Street Railway company will soon follow suit. What a grand thing electricity would be on the Avenue."

On the return trip the cars were stopped at the power plant which supplies the electric current for operating the street-cars. The plant is located on the corner of Second and Jefferson streets. The building has a frontage of 100 feet and a depth of 85 feet, and one-half of it is two stories high. The entire structure is built of brick and is an ornament to the city. At the rear of the building is a massive brick chimney, 125 feet high. The power plant is built on solid masonry, resting on bed-rock. The two engines are of the Corliss type, and were built by E. P. Allis & Co., of Milwaukee, Wis., subject to a special order by Mr. L. H. McIntire, the mechanical engineer, who designed and constructed the entire plant. The smaller engine develops 300 horse-power and has a fly-wheel twenty feet in diameter, weighing 26,000 pounds. The larger engine develops 600 horse-power, and has a fly-wheel twenty feet in diameter and weighs twenty tons. The smaller engine is located in the northwest corner and the larger in the southwest corner of the building, and the two are belted to a main shaft which runs the entire length of the building. Each engine rests on a foundation consisting of a concrete base upon which is placed large blocks of stone laid in cement to the thickness of about ten feet. These foundations are entirely independent of the building, so that when the engines are in motion there is no jar communicated to the building. The speed of these engines is eighty revolutions a minute, which is a very rapid motion indeed for such ponderous machinery. When in operation the engines run as quietly as any of the slower speed type engines.

The battery of five boilers, which supplies the steam for these engines, is located between them in a brick enclosure, which entirely isolates it from the engine and dynamo rooms. These boilers are built of the best quality of steel, are six feet in diameter and are each sixteen feet long. They are arranged so they can be run separately or in series. The feed water for these boilers is taken from driven wells sixty-five feet deep. The water is first pumped into an exhaust heater, and the temperature is raised to 212 deg. Fah. A peculiarity in this exhaust heater is that the water enters at the top and is received by a crescent-shaped pan. From this pan the water runs over the edges, following the bottom, until it reaches the center of the pan, when it drops into a second similar shaped pan, and so on into another pan, until it passes into sixteen different pans. By this arrangement the exhaust steam strikes the water as it drops from pan to pan sixteen different times, and removes all the impurities that can be taken out with the above-mentioned temperature. This water is then delivered by a special pump, fitted for handling hot water, into a super-heater which is placed above the boilers. This heater is twenty-six feet long and contains twenty-four pans like those used in the exhaust heater. Live steam from the boiler is kept at full pressure upon this super-heater, which carries the temperature up to 320 deg. This high temperature to

ONE OF THE BEST TELESCOPES IN THE WORLD. THE BEST DOUBLE-BARRELED SHOT GUN.

FREE In order to introduce our goods, we will until further notice, send absolutely free, to one locality, one of our Grand Double-Barreled Shot Guns made. We are able to make this wonderful offer for the reason that our goods are of such merit that, when a person possesses them, in any locality, their fame spreads, and many people purchase; a large and profitable trade always results. We can supply free only one person in each locality. Those who write at once, will make sure of their reward, while those who delay will lose the chance. Best Gun, Grand Telescope. No space to explain further here. Those who write at once will secure prompt delivery. State your express-office address. Address, H. HALLETT & CO., Box 330, Portland, Maine.

which the feed water is subjected causes the lime, iron, magnesia and other impurities to collect on the bottom of these pans. This scheme of ridding the water of impurities originated with the fine exhibition which is afforded in the Mammoth Cave of Kentucky. It might be supposed that the impurities referred to would collect on the inside of the pan, but such is not the case. They collect upon the bottom, forming a hard substance, which would otherwise pass into the boilers and soon destroy them, to which many manufacturers in this section of country can readily testify.

The floor of the boiler room is paved with hard brick. A track for a coal car runs in front of the furnace doors, enabling the fireman to readily transport coal from without the building to the furnace.

At this station are also five dynamos. These being driven by power from the engines, furnish the current, producing magnetism in the field magnets of the large generators; and the armatures in the large generators, also driven by power from the engines, produce the current of electricity used on the line for driving the cars.

There must be a circuit in order to transmit electric power. There are several methods of securing a circuit for street railways. The outgoing current runs through an overhead wire, and the return current comes through the rails. The overhead wire is copper and three-eighths of an inch in diameter. It is suspended at a height of about sixteen feet above the rails, all along the line. At each 100 feet on the line two poles, one on each side of the street, hold a cross wire, in the center of which is a porcelain insulator. To this insulator the copper wire is attached. The wire runs directly over the center of the track, and also similarly in case of all sidings or switches, for the same method of transmitting the electric force to the car motor on one track must prevail on all. Where sidings or switches occur in the track they occur also in the overhead wire. Each works automatically. The return current comes through the rails. The rails are the ordinary street-car rail, and in order to make the connection absolute a copper wire connects the rails at the joints. The outgoing current starts from the large generator and the return comes into it, thereby making the circuit perfect.

How does the car move? This is an interesting question. The outgoing current in the overhead wire is transmitted to the motors in the car, and thence also through the rail back to the generator whence it came. This circuit is uninterrupted or the car stops; that is, if the connection be not broken, sufficient force is constantly transmitted to drive the car. On the roof of the car is an upright bar, perhaps an inch and a half square and two feet and a half high. At the top of this upright is fastened another, perhaps six or eight feet long and known as an arm. So far as the upright and the arm are concerned, they resemble the old-fashioned well-sweep. The upper end of the arm bears a deeply-grooved wheel, which fits the half-inch copper wire overhead, and from the nature of its work is called a "traveler." This traveler seldom leaves the wire, but whenever it does it is replaced immediately by pulling it down by a cord and slowly releasing it upward. At the lower end of the arm is a set of springs for the purpose of pressing the traveler upward and against the overhead wire just evenly enough to make it run smoothly. For instance, though the overhead wire is intended to be at a uniform height above the car, suppose it is higher; the springs raise the traveler end of the arm upward as far as it is necessary to follow the wire. Suppose it sags; then the traveler end of the arm is

depressed and the springs at the lower end of the arm extended. Thus uniform pressure and sure connection by the grooved traveler against the overhead wire are always secured.

The current comes from the wire and through the traveler, arm and upright, to the ceiling of the car. From the bottom of the upright the current is conveyed to the motor by a copper wire inside a flexible rubber tubing.

The motors used in the cars are of ten horse-power each, but they are capable of doing three or four times this amount of work. Either motor is alone sufficient to run the car, so that if one of them accidentally gets out of order or is lifted from the rails, the other one alone propels the car alone. The brushes used are of carbon and will stand years of wear.

The machine is extremely simple and can be taken apart in a few minutes. All parts are accessible, so that it is easy to keep everything in good trim. Every motor is so proportioned that it can only take its part of the current, and thus not interfere with the other motors in the circuit, and at the same time it is unable to take more current from the source than it needs.

The whole principle of this thing, in a nut-shell, is based on the discovery that motion of any kind can be converted into electricity, and that electricity in a precisely similar way can be converted into motion. Down at the power station all that is done is to convert the motion of the steam engine into electricity. Then the electricity goes over the wire, and when it gets to the car, the car just reverses the operation and takes the electricity and converts it into motion. And another valuable thing about it is that a car uses up only so much electricity as it actually needs; that is, if it needs one or two horse-power on a level, it takes that much, and the rest is on hand for other cars; or if it requires a dozen or fifteen horse-power on a heavy grade or curve, it takes the quantity needed as in the other instance.

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JOHN MILLARD writes from Odessa, Ind., Nov. 20.—Dyke's Beard Elixir has produced a heavy mustache on my upper lip in 4 weeks. My hair was a little thin, smooth, and dark.

DYKE'S Beard Elixir grows the heaviest beard and hair in 4 weeks. One Fla. doctor writes: "Guaranteed new, four times the growing strength of any remedy known. Price 25c. each, 4 for \$1.00, stamps, mailed. SMITH'S MFG. CO., Palestine, Tex."

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ESTABLISHED IN 1868.

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

A good good rain visited this part of Kansas Monday last.

Chinch bugs are visible occasionally, but their numbers are not yet alarming.

BUSINESS—We are in receipt of an essay on "Business," part of which will appear in the *KANSAS FARMER* next week.

"The Codling Moth," an essay read by N. P. Deming, before the Douglas County Farmers' Institute, last Saturday, will appear in our Horticultural Department next week.

It is said there are several times as many persons on the line of Indian Territory as can get claims when they rush into Oklahoma. There is not land enough to go round.

We are in receipt of a copy of the fourth annual report of the Kansas Bureau of Labor. It is a very interesting document, and we will take occasion early to refer to it somewhat in detail.

Mr. C. W. Likens, of Snokomo, Wabunsee county, sends in a sample of this spring's growth of alfalfa on his farm. It was pulled on his farm April 1, and measured from six to seven inches in length.

Mitchell county farmers, on the 28th of March, resolved that they will use no twine for binding unless it is sold as low as it has been in previous years. That is good medicine. Let it be administered in allopathic doses all over Kansas and the Northwest.

Let farmers keep their work well ahead so that they will be ready for grain harvest when it comes, preparing to get along without the use of binding twine. Bind by hand or stack loose. If the grain is to be put up loose, cut high, so as to have less straw to handle.

The farmers of Brown county at a large and enthusiastic meeting recently, resolved not to use binding twine, or at most as little as possible, unless the price of it be made reasonable. A valued correspondent writes: Farmers, remember, if we unite, trusts must fall. Let us be willing to make sacrifices for the general good.

PHILOSOPHY OF MONEY LENDING.

In a letter transmitting a communication relating to the payment of usurious rates of interest by farmers, the author takes occasion to commend the position of the *KANSAS FARMER* as set forth in our prospectus—that it "stands for the people against organized wrong"—and remarks incidentally that not a paper in his part of the country, unless it is "tinctured with anarchistic tendencies, dares to defend the farmer against usurious money lenders."

We understand very well how contemptuously the average money lender looks upon a clodhopper who says anything about the generally-supposed-to-be-abstruse subject of finance. It is true that many persons, most persons indeed, never thought a minute about the philosophy of money lending, leaving the subject altogether in the care of those who make a business of lending money, just as people did nearly fifty years in the matter of railroads. A time came, however, when a great soldier, speaking for a few million farmers, asked to have the whole subject of transportation examined by competent men, to the end that the cost of carrying freight from Western farms to the great cities and to the seaboard might be lessened. President Grant's request was written in 1872, and in fifteen years we got the inter-State commerce law with a commission to execute its provisions. The people, even farmers, did know something about railroad business; they knew they were compelled to pay more for freight than the service was worth. They knew another thing—that every foot of land over which every railway line extends was taken from its owner by the State for public use. And another thing they knew—that every right and privilege which any railroad company enjoys was given to it by the people. Knowing these things, they believed the people ought to regulate railway business in the public interest, to the end that all persons who should need the services of a railway company would get them on exactly equal terms, and that those terms should be reasonable and just to both parties—the company and the passenger or shipper. The foundation principles of railroad law are now universally recognized and understood, namely: (1) A railroad is a highway opened by the people for their own convenience; (2) a railroad company is a public agent specially authorized to transport persons and property, and entitled to reasonable compensation; (3) all persons may avail themselves of the use of a railroad on equal terms; (4) the rule of adjustment between the people on one side and a railroad company on the other in all matters pertaining to compensation is the rule of the common law—what the service is reasonably worth. As a conclusion from these premises, it may be stated (1) that all demands and all receipts beyond what is reasonable is unjust and therefore unlawful; and (2) that whenever railroad managers do not follow the rule, the people, through their legally constituted tribunals—legislatures and courts, may determine for themselves and prescribe what is reasonable and just, and compel obedience, even if it be necessary to take possession of the roads and conduct them as post offices are conducted—by government agents.

Applying the same principles to the use of money, the true philosophy of money lending may be seen. What a common highway or a railroad is to the transportation of property money is to the immediate exchange of property—a medium used for common convenience. It is an indictable of-

fease to obstruct the public highway. No person may appropriate it to his own use, except to pass over it without hindering any other person. Let a man place two stockades at two places on the road and undertake to collect toll from people who choose to pass between; he would be set upon and beaten by the first nerry man that came along. Let a usurping company undertake to occupy a railroad and conduct the business for one day, charging extortionate prices for carrying; the people would destroy the road rather than submit to the outrage. Going down to first principles—leaving out of view for the present private ownership of money—we find that money is a convenient device to facilitate exchanges of property, and its function is the same everywhere among the people. Farmer A wants some dry goods from New York city, and he has wheat to exchange for them. He may forward his wheat by railroad to a New York merchant who in turn will forward the dry goods over the same railroad to Mr. A. Instead of doing this, however, there is an easier, a shorter, simpler, quicker way—simply the using of money. The wheat in New York would be worth, say \$50 less charges—say \$25 net. Mr. A. may deliver his wheat to a grain buyer at his nearest town and get for it \$25 in money; he may take this money to a dry goods merchant in the same town and receive just such goods as he desired from New York. In one case the exchange is effected (as far as A is concerned) by the use of a railroad, and in the other case by the use of money. Money is a labor saving invention; by its use we avoid the delay, and sometimes much of the hard work attending trade by barter—the actual exchanging of commodities without the use of money, wheat for sugar, coffee for corn, calico for potatoes, shoes for meat, etc.

It is not difficult to understand the principle involved here. It can be done without studying any work on political economy. It can be done without going through a course of training in schools of theory or schools of practice. Indeed, the more one studies accredited standards, the less he knows on this subject, for they all teach the doctrine of supply and demand as to the value of money as well as to the value of beef and cloth. The orthodox doctrine is that if a man can get 50 or 100 per cent. for the use of his money, that is what its use is worth and that is what he is justified in demanding and receiving. It was once taught that the same doctrine applied to railroad charges. Jay Gould so taught twenty years ago; so did Messrs. Vanderbilt & Co. But it is not good doctrine now. So with money. Its use is worth something, and that something should be determined by the simple rule of justice between man and man. This means that interest rates should be uniform, the same for all classes of people and for every individual who needs to borrow, and that brings us to the next important feature of the subject.

As the State or general government provides railroads and prescribes regulations for their use by the people, so should money be provided and regulations prescribed for its use by the people. This would not destroy the value of money owned by individual persons, nor would it destroy the business of legitimate money lending. If persons having money did not care to lend it at the rates prescribed in the law, they would use it in some way which they believed to be more profitable; they would invest in land, in agriculture, in manufactures, in trade or mining, or in State or municipal bonds. Men who have been trained in the school of honorable money lending

would be the best agents to entrust with the business of lending government money. The effect of such a change in the money lending business as this suggests would give the people money at low and uniform rates, so that a citizen's necessity would not belittle his security.

The reader will observe that of many things which might be talked about in relation to money, this article touches upon one only, the object being to direct attention to the principle underlying the use of money. The proper function of money is to serve a general purpose, and is therefore properly and necessarily subject to public control and regulation. Other and related matters will be discussed at other times as occasions may suggest.

FARMERS AND FARM STATISTICS.

In another part of the paper is a letter from a farmer denouncing the method which our Legislature has adopted for collecting farm statistics. The author, like many other persons who have expressed themselves on the subject, believes it to be a prolific source of evil to farmers in that it gives knowledge in advance to gamblers who use it in their games of despoiling agriculture.

Our correspondent, if he will take into consideration a few other facts, will see that his fears are altogether unfounded. One of the facts to which we allude is this: Official farm statistics are never published until they are old, and until after the same information has been given to the country through other channels. If he is an old reader of the *KANSAS FARMER*, he has doubtless many times read our criticisms on the slowness of our official agricultural news publications. Take the reports about which the complaint is made—the Kansas reports, sent out by the State Board of Agriculture; every one of them is preceded by the newspapers telling substantially the same things. The reports of the *KANSAS FARMER*, for example, are always out a week or two before those of the official publication. And every one of the great daily newspapers of the country has its own private sources of information, and thus publish all important facts concerning the condition of crops in the States, usually at least ten days before the official publications appear. The only difference between the value of the private and official reports consists in the fact that the official work is done in better manner and form for preservation, and have the stamp of authority upon them.

Another fact of still greater weight is this: Every board of trade where grain gambling is indulged, has its correspondents in every agricultural district in the country, and through them keep themselves accurately posted from week to week. Every storm, every frost, every snow fall, every thaw, every rain, every hot day, every drought, every freshet and flood, every appearance of destroying insects—in short, every fact which bears upon crops and farm productions generally are placarded every day in the official club rooms of every such body. If our correspondent visits the city of Washington he will find at a certain place in the capital building a chart upon which are shown every hour in the day the weather conditions in every part of the country at that particular hour. Boards of trade have similar facilities. They pay no attention to official statistics, except to see whether they are correct, taking their own as the standard.

Still another fact of great weight in this matter. Every grain gambler, every cattle dealer of prominence, every packer, every dealer in farm produce at

the great centers of trade, has his own private correspondent in every State, and several of them in each of the agricultural States from whom they receive brief reports by telegraph and full reports by mail, daily at certain seasons and hourly on some days in some places. If one watches the market reports as published in daily papers, he will observe how prices are affected by reports of frosts, storms, floods, insect visitations, etc., occurring that very day at places far distant.

In consideration of these facts, it is easy to see that the collection of farm statistics by State authority works no injury to farmers.

And then, there is still another view of the matter which ought to have great weight, namely: Farmers are benefited quite as much by the collection and publication of farm statistics as any other class of citizens; for if the information is properly utilized, it will suggest to every farmer how he ought to manage his business so as to get as much profit as possible out of existing conditions.

Let farmers report willingly and correctly as railroad and other corporations are required to report, and then require the Legislatures of the State and nation to suppress gambling in products of the farm.

KANSAS WEATHER SERVICE.

Through courtesy of Sergeant T. B. Jennings, of the Signal Corps, and Assistant Director Kansas Weather Service, we have a pamphlet containing a great deal of useful matter relating to temperature and rainfall in Kansas. Besides an address by Sergeant Jennings before the State Board of Agriculture, at the last meeting of that body; the pamphlet contains an address by Prof. J. T. Lovewell, of Washburn college, Director of Kansas Weather Service—a review of the meteorology of Kansas for 1887 and 1889, with a reprint of some weather tables first published in the report of the State Board of Agriculture for 1874, to which is added a great deal of similar matter concerning the period since that time.

We observe that Professor Lovewell does not believe in any system of scientific forecasting of the weather a long time in advance. This seems to be a strange position for a scientific teacher to assume. Prof. Lovewell very properly urges co-operation on the part of different States to the end that weather conditions may be noted, studied, reported and published. "A full study of a storm," he says, "is one of the best contributions to practical meteorology, and in no way can it be sooner raised to the dignity of an exact science." It is not that kind of science, however, that Prof. Lovewell objects to; it is weather predictions based upon "planetary influences" to which he refers, saying, that these "weather prophets * * * coming in the guise of science, revive some of the worst vagaries of old astrologers and sooth-sayers;" and it is this character of scientific work that he has little patience with. Does the Professor mean to assert that there is no such thing as planetary influence in weather conditions? If there is any such influence, may it not be, some time, ascertained by scientific research, and is it not a result of natural laws which may be scientifically determined? These questions are not asked with the object of starting a discussion, but, simply to call attention to the point we suggest.

Oklahoma settlers, those who have selected claims, are said to be secreted along the streams waiting to come out at 12 o'clock on the 22d inst. to take immediate possession. It is further re-

ported that they have determined to keep out other people, that is, fresh ones, until after the claims already picked out are secure to the persons taking them, even if railroad bridges have to be burned or broken.

ONE DAY EARLIER.

There has been so much complaint of late because frequently, even at post offices in this, Shawnee county, the KANSAS FARMER does not reach its destination until the week after it is printed. To remedy this we have concluded to issue the paper one day earlier hereafter, beginning with the next issue. Our subscribers pay for the paper and they are entitled to it on time. Getting it out on Wednesday instead of Thursday will insure its delivery at any post office in the State as early as Saturday.

Sorghum Cane and Its Sugar Product.

Prof. Failyer, of the Agricultural College, gave some useful facts a few weeks ago, in the *Industrialist*, concerning the increase of sugar in cane plants during the maturing season: "Some writers have compared sorghum with the Southern sugar cane, to the disadvantage of the former, in a peculiar way, as it seems to the writer. This is something like the following: The sugar of the Southern cane serves a useful purpose in the perpetuation of the species. The sugar in the sorghum plant at the time of ripening seems to be an accident so far as the plant is concerned. Hence, it may be inferred that the sugar of the sorghum plant is more liable to deteriorating change than that of the tropical cane. In accordance with this, it has been asserted that sorghum does not retain its quality long after ripening; that although a large per cent. of crystalizable sugar may be present in the cane at the time of maturity, unless worked immediately this sugar becomes uncrystalizable. While this may be true of some varieties of sorghum, it is not true of those that we have worked upon the past season. It has been an invariable rule that the quality of the canes improved up to the time that the cane became fully ripe and the seeds dry. It then remained sensibly constant until injured by frost. Then deterioration soon set in. This character of development will be seen in the cases here given. They might be much extended from figures of our last year's work.

"A sort of sorghum called 'Cross between Amber and Orange' gave 9.5 per cent. of cane sugar on September 4; on the 22d, 12.7 per cent.; on October 15, 12.7 per cent. Dutcher's Hybrid, on August 29, 6.3; on September 17, 9.4; on October 6, 8.6 per cent. Honey Dew, on September 4, 7.4 per cent.; on September 23, 10.7 per cent.; on October 15, 10.2 per cent. Honey Drip, on September 13, 8.4 per cent.; September 28, 12.1 per cent.; on October 16, 11.9 per cent. Kansas Orange, on September 20, 9.7 per cent.; on October 3, 12.6 per cent.; on October 18, 12.5 per cent. Link's Hybrid, on September 22, 12 per cent.; on the 27th, 12.7 per cent.; on October 11, 12.6 per cent.

"In these cases the cane was left standing in the field, and it will be seen that there is very little deterioration, although the blades of most kinds were killed by frost on October 3. A freeze later caused very rapid and serious changes. It is well known that this constancy does not obtain when the cane is cut and piled. In this case there is not any fermentation and consequent souring, but the cane sugar which is crystalizable becomes transformed into glucose which does not crystalize in the ordinary processes of sugar-making. This product is fully

as sweet as the cane sugar; and cane containing it would make sirup, but commercial sugar would not result from working it."

Greeley County.

We are in receipt of a copy of an "open letter," written by J. U. Brown, County Clerk of Greeley county, with request that it be copied in the KANSAS FARMER. We are very much interested in the development of Western Kansas, and take occasion to send out a great many items of information concerning that region. Mr. Brown's letter was written in answer to a request from an Illinois friend for information, and contains facts of interest to all persons who care to know anything about this, the most wonderful State in the Union. The reader will remember that Greeley is the middle county on the west line of the State. Here are a few extracts from Mr. Brown's letter:

Greeley county is situated in the center of the western tier of counties bordering on the Colorado line. The Union Pacific railroad follows the Smoky river, forty miles to the north of Greeley, and the Santa Fe follows the Arkansas river, forty miles to the south, so that very little was known about this magnificent stretch of country until the last few years. The first settlement on government land in this county was made in August, 1835; the county then began rapidly to fill up.

With a view to organize the county, Hon. O. S. McDowell, was appointed enumerator, and in June, 1837, he reported the population to be 2,633, and the taxable property \$251,169. On November 6, 1838, the first election for permanent county seat was held, and Tribune was declared the county seat by a large majority of the legal voters.

The surface of this county is slightly rolling—to the eye of an Irish agriculturist it is a very "foine lay." The soil is a sandy loam, mixed considerably with marl, and is very fertile. Everything growable can be produced here; for the last three years every time "humanity has tickled it it has smiled abundantly." Our crops have never been a failure; on the other hand, they have been better than we expected. The finest of corn can be purchased to-day for 25 cents per bushel. A number of our industrious and experienced farmers are preparing for good orchards, and soon if we do not "bloom like the rose" we will at least produce like the pumpkin.

Western Kansas can boast of the most magnificent climate in the world. There are more fine days to the year out here than in any other place I have ever been. [As you know, I have lived in several other places, in and out of the United States, and can say I have never seen such a climate as this.]

The citizens of this county enjoy, probably, better religious and educational advantages than any other county of the same age in the State. The Methodist, Baptist and United Presbyterian and other denominations are represented; there are at present twelve preaching places, and twenty-eight school districts in the county in which school is being taught.

Our county enjoys excellent railroad facilities. The main line of the Missouri Pacific railroad from St. Louis to Pueblo passes through Greeley county, and the Great Bend Extension of the A. T. & S. F. railroad is built to the Greeley county line, and will push on to Colorado Springs this summer.

Greeley county has no county seat fight to damage her reputation or pile up a huge debt. Has no bonded indebtedness and only a small floating debt. Can boast of as intelligent and energetic a class of citizens as exist in the United States. Has no poor; only one hundred dollars has been expended by the county to aid paupers. Has an excellent climate, fertile soil and good water. Has some government land and cheap deeded land to induce home-seekers.

Hon. Thomas Ryan, long a member of Congress from the Topeka district, resigned a few days ago, having accepted the mission to Mexico. An election to choose his successor is to be held the 21st day of next month, May. The number of candidates mentioned is about twenty.

Prof. Snow's weather report for March shows that only five Marches on our twenty-two years record have been warmer than the month just closed. The rainfall was normal, the winds were of low velocity and the sky was slightly cloudier than the average. White maples were in blossom on the 11th, dog-tooth violets on the 20th, and elms on the 22d.

We see by the daily newspapers that Mr. Secretary Mohler's report for the first quarter of 1889, shows that wheat, rye, stock of all kinds, fruit and grasses, in nearly every county in the State, are in unusually good condition. In some sections of Western Kansas, wheat made a small growth in the fall by reason of dry weather and the drought being continued into early

winter there was much anxiety among the farmers with respect to its condition. The winter, being extremely mild, and later on moisture came in the form of snow, and, in March, abundant rains fell, bringing out the wheat in splendid shape. Probably the plant has never shown a more vigorous and thrifty growth throughout the State at this date than at present. The increase in area sown to wheat in the State in the fall of 1888, as compared with that sown the previous year, is 24 per cent., which gives a total area for the State of 1,336,427 acres, or an excess of 257,484 acres over that of the previous year. The per cent. reported winter killed amounts practically to nothing. General condition of the plant as compared with full stand and unimpaired vitality, is practically 100 per cent.

The Methodist Episcopal church now has 2,154,237 communicants, against 2,093,935 last year, indicating a net gain in 1888 of over 60,000. The value of church property, including parsonages, has reached the enormous sum of \$97,546,515, an increase for the year of about \$4,825,000. The church property, exclusive of the parsonages, is valued at \$85,000,000. Upon the churches there is a total indebtedness of \$6,682,493.

March weather in Greeley county, during March, as reported by S. B. Jackson, of Tribune, was: Temperature, highest, 69.5 deg. on the 16th; lowest, 30 deg. on the 9th; mean for the month, 37.8 deg. Precipitation, greatest in twenty-four hours, .41 inches on the 17th; snow fall, 2 inches; total rain and snow reduced to rain, .53 inches. Number of rains days, four.

Book Notices.

THE FORUM.—The April number of this excellent monthly is unusually interesting. Among the articles may be mentioned "A Review of Cardinal Manning's Writings on Public Schools;" "Shall White Minorities Rule?" "Remedies for Social Ills;" "Signs of Impending Revolution;" "Scope of the Monroe Doctrine;" "Impediments to Our Foreign Commerce," and several others. To a person that desires to keep abreast with the current of modern political thought, *The Forum* will be an invaluable help.

THE PANSY.—For April brightens our table with its pretty cover. The contents are even more interesting than usual. "Pansy" (who is undoubtedly the most popular writer to-day of the best class of Sunday school literature), edits the magazine, and several of the stories this month are from her pen. Margaret Sidney's serial is delightful reading. Altogether there are thirty-two pages of reading matter and pictures, besides several pages devoted to the Pansy Society, letters from the children, etc. The price is 10 cents a number, \$1 a year. D. Lothrop company, Boston, will send a sample (back) number at half price.

ACME SHORT-HAND.—A new system of short-hand writing is being introduced, based upon easy and natural methods. We have received a pamphlet which briefly describes the system, and upon examination we are so much pleased with the foundation principles that we at once ordered a set of the books which teach the system, in order that we may give the whole subject a careful and critical examination. If it proves to be what now seems probable—the simplest system of short-hand ever published, we will give our readers due notice of it. In the meantime, any person interested can obtain the descriptive pamphlet, with instructions about learning the system by lessons sent by mail, by addressing a request to F. J. Mulvey, 921 F. street, N. W., Washington, D. C.

A new disease has been developed by the widely prevalent cigarette habit. It is called "cigarette eye." The symptoms of the disease are dimness, and a film-like gathering over the eye, which appears and disappears at intervals. It is a dangerous malady, and can be cured only by long treatment.

Horticulture.

Fruit a Good Medicine.

Spring is here. If there is any enthusiasm in a citizen it is certainly very dormant if it fails to show itself this time of year. The wealth of a nation depends upon the freedom and health of its people; and to obtain the highest point, to exercise the faculties on the broadest plain of liberty, there is no other one thing so essential as the boon of health.

Where do we get this gift? From what source does it flow? Who and where are the agents which govern it? These are the questions De Soto desired which have been interesting to everybody from the dawn of life. We get it, in the main, by our actions. Our habits of living are the sources from which it flows. The agents are fresh air, water, food, exercise, sleep, clothing, rest and social environment. These are all found outside the drug stores and this side of the doctor's "favorite prescription."

Food, from my standpoint, takes precedence of everything else because my business deals it to the public. Fruit is the most neglected and more unappreciated than all other articles of diet; and at certain times of the year it is more essential than meat, eggs, butter or any other article of diet. Now I do not make this assertion because the production of fruit is a branch of my business, for I raise hogs by the carload, chickens by the hundred, and ship two or three cases of butter and eggs each week. But I do say it because I know it to be a fact.

The doctors are the best patrons of the fruit-grower. Last season nearly every M. D. in this locality bought berries by the crate and all bought them by the box. Some were so eager for them they came to the farm to order their supply before the berries were ripe. I have noticed since I undertook fruit-growing that the consumers of fruit always look rosy and radiant; their eyes sparkle and they pay their bills with a promptness that makes one glad.

Every farmer who fails to raise a family supply of fruit falls short of his calling, and he who fails to provide this article of food, in some form, atones for it in the payment of doctor bills. Fruit is much pleasanter to take than medicine, and we outrage the stomach when we take anything unpleasant to the palate. The taste serves to dictate what is proper for the stomach, and if it is not in an abnormal condition it will only crave that which is beneficial to the system. Physicians know this and on account of the prejudice and ignorance of patients oftentimes are at their wits end to know how to take care of their practice. To illustrate this I will take for example a landlady with whom I once boarded. She was "all out of sorts" and went to her family physician for medicine. He inquired into her daily diet and discovered her rations consisted too much of meat, butter, eggs and coffee. He prescribed a diet of fruit for a few days and told her she needed no medicine. She was a massive being of both body and mind, and informed the doctor that she knew a thing or two as well as he, besides she was practical (?) and did not want to spend money for fruit when pills were so cheap. The doctor's situation was precarious; but he was equal to the occasion, and told her to take a seat while he prepared a "very mild laxative." This fixed her completely. So he prepared some Imagination pills, composed of flour and water, and sugar-coated them nicely, so that they looked just like Ayer's pills. Then he took a two-ounce vial, filled it with a fluid and

labeled it "aqua pura"—pure water. These he gave her, telling her she must eat a certain amount of fruit if she desired the best results. She departed. In a day or two she went into the office to pay her bill. She was aglow with enthusiasm over the virtues of the Imagination pills and Aqua Pura.

Ardent zeal is what drives every business to success. Luck is "no good." Some claim that luck and success are merely distinctions without a difference. The farmer who has "bad luck" with his horses, cattle, hogs and crops, has also a great deal of bad management. The man who knows how, when and where to do things, never complains of bad luck; he can trace almost every failure to indiscretion.—I. F. Sproul.

Pruning Grape Vines.

Replying to the questions of a correspondent, the editor of *Farm, Field and Stockman* gives the following advice concerning the pruning of grape vines:

"Commencing with the grape vines as set out in the spring, the first season it is best to set a light stake and grow one cane, rubbing off all side shoots; tie to this stake. In November cut back to two or four buds, and cover with earth. Prune one week before covering, so the fresh cut will season, and then it will not bleed in spring.

"The second season let only two canes grow; train as before; do not let the vines bear either the first or second year. In November cut back to three or four feet of the ground, and cover as before.

"The third season, if the vine is vigorous, you may let it bear ten to twenty bunches of grapes. Always remember that if one-third of the bunches are removed just after blossom, you will get as much and nicer fruit. From this time on there is a great diversity of pruning and training. If you need to protect in winter you must train so you can readily lay them on the ground, and it is preferable when planting to set at an inclination to the north, and always lay in that direction. After the old cane becomes hardened by age, it is only necessary to cover the new fruit-bearing wood. It is best to grow one or more canes according to the age of the vines, to the height of the stakes or trellis; this height should be attained at the age of two years, and branches or spurs of new wood all the way up from the ground, then by shortening these branches of new wood to two or three buds each November, you cut off about three-fourths of all the new wood; it looks cruel, but if you don't you will soon have to climb for your fruit. Each bud of new wood left on, if properly wintered, ought to give three bunches of fruit.

"Do not let the vine bear more than twenty bunches at three years, or forty bunches at four years; and by pruning away about three-fourths of all the new wood each November, you can control the vine and handle it easily.

"A trellis is sometimes made at the planting of the vines, but this had better be deferred until the third season, using light stakes four to six feet above ground the first two years, and stakes may be continued, adding more as the vine requires it. The vine should be so spread out when tied up that the bunches will not grow in matted clumps; it will be a great benefit to the fruit and aid very much in gathering. Wire is good; slats may be used, or short slats nailed on the posts, any way you fancy, only give the fruit sun, light, air, clean culture, a dry soil, southeastern or southern slope, and severe pruning. No work—pruning or tying—should be done in the vineyard while the fruit is in bloom.

"Summer pruning, by pinching the

end of the shoot two leaves beyond the last bunch of fruit is quite important; this should be done before blossoming. After this it is more a matter of fancy than otherwise, whether the pinching be kept up by stopping the growth again, leaving one leaf; in close summer pruning it is well to leave an upper shoot to run as a safety-valve for surplus flow of sap."

Thinning Fruit.

The past season was a peculiar one for such large fruits as the apple and pear in many localities usually favorable for heavy crops. The trees this year promised great returns; but after the fruit was about quarter grown, and for some time afterwards, it began to drop, and owners became much discouraged, fearing scarcely half a crop. This dropping was ascribed by many to the unusual changes in the weather. It proved to be one of the best things that could happen to the owners of the orchards, more particularly as applied to the Rhode Island Greening among apples, and to the Sheldon and Lawrence among pears. It effected an excellent thinning of the fruit, and what was left grew into such fine and large specimens as are rarely seen. The Greenings assumed such a handsome appearance that some fine judges of fruit, to whom specimens were shown, failed to recognize the variety. An estimate was made by a person accustomed to such estimates of the quantity of fruit in a portion of an orchard, and where he had marked forty bushels for the Greening there afterwards proved to be over 100; and for an estimate of five bushels of Lawrence pears, there were twenty-four. The Sheldons were superb; the Seckels were large and fine. This result could be reached every year that an abundant crop is set, by artificial thinning, without any diminution in the number of bushels.—*Country Gentleman*.

Trees With Large Leaves.

Trees of the palm family have larger leaves than any others. The Inaja palm, which grows on the banks of the Amazon, has leaves which reach a length of from thirty to fifty feet and are ten or twelve feet in breadth. Specimens of the leaves of the Tilipot palm, a native of Ceylon, have been met with that were twenty feet long and eighteen feet broad. These leaves are used by the natives to make tents, and form very efficient shelter from the rain. The leaves of the double coconut palm are often thirty feet long and several feet wide. When the wind is strong they clash together with a noise that may be heard at a great distance. Only one leaf is produced each year, and they are so firmly attached to the stem of the tree, and so strong in themselves, that a man may sit on the end of one and rock to and fro in perfect safety.—*Scientific American*.

For information concerning spraying machinery and implements, write to Rumsey & Co., Seneca Falls, N. Y., and get their catalogue of machines and prices. The Field Force Pump Co., Lockport, N. Y., also deal in implements of this character. A postal card request will purchase their catalogue.

At the rate in which forests are cut down, if they were not reproduced, I find that after so many years no part of the earth would remain in a habitable condition. Still, I suppose, the pessimists are determined that the human family should be destroyed, they can never be made to think differently. They always have a devil at their elbow that is going to play the deuce with them. In the old Roman days they

believed the earth to be held up by posts; they could find nothing to rest the posts on, so they were in constant fear lest it should fall and crush them. Better that the end of the world would come. I believe in making the earth more productive, and it can be done.—*Ex.*

It is now pretty well settled that one-half pound of Paris green or London purple to fifty gallons of water is sufficient. It needs to be kept stirred while being sprayed, otherwise the poison will sink to the bottom, as neither dissolves in water except to a slight degree. The London purple is preferred to Paris green because it is easier held in suspension in water.

Either Paris green or London purple sprayed upon potato vines will kill the Colorado beetle as effectually as if dusted on them mixed with flour, lime or land plaster.

The Poultry Yard.

The Poultry Blaze.

EDITOR KANSAS FARMER:—I'm glad to see Kansas people taking more interest in poultry-raising, and I hope the Poultry Association has come to stay. This is the busy time with poultry-raisers, and a few thoughts about the hen house is in order. In the first place, I'll suppose that it has been cleaned weekly the whole winter, but at this season it should be thoroughly cleaned. Whitewash nests, both inside and out, and all the wood-work inside. Kerosene roosts and crevices, and arrange your setting room so that your hens will be healthy, quiet and free from vermin. I commenced at the bottom of the poultry stairs—had one hen, and her poultry house was a barrel placed against the side of a building, and one day in the beautiful month of May, I tied her to a stake to exercise and enjoy a dust bath. In the meantime I went to a neighbor's, forgetting to put the hen in the barrel; so, of course, that old hen did not hatch well, as she exercised all day on one of the beautiful hills of Kansas. Now I raise chickens by the hundred, but I don't throw the feed to them any place on the farm, or at any time, but have things systemized. These stairs that I've climbed were not smooth ones, and the person who enters the poultry business and thinks he can whistle and let the chickens eat out of corn cribs, or wherever they desire, and when they wish to, and all they want, is sure to fail. About a year since, a sad-eyed person asked me if I was getting many eggs? I told him yes, and he said, "I don't get any to speak of." "Do you feed your fowls regularly?" was asked. "No, they get all they want out of the corn crib." That settled it. Who ever heard of a man planting a field of corn and not cultivating or caring for it, and expecting a heavy yield in return? We must care for our fowls the same as the corn field, if we expect them to do well. Select a good breed of whatever kind suits you the best, and study their wants. I have 150 hens, and get over 100 eggs per day, but don't for one moment think that my fowls are "corn-crib managed." We have one good poultry house, and will build another before long.

I don't know of any birds more abused than poultry. No difference what neighborhood you are in, or what time of the year it is, you'll see chickens woefully neglected—roosted on an old board or crooked pole out of doors, combs frozen, eyes sad, and if they could talk I know they would tell us that they'd like to be in another world;

but as it is, they have to suffer on in silence, while their owner complains that they eat their heads off, and don't lay enough eggs to supply their table. Talk to them, the old fogies, about feeding the fowls regularly, and taking a live poultry paper, and they shake their heads disdainfully and say, "it won't pay." If it don't pay, don't complain about your egg baskets not being full, for you know a hen can't produce eggs without the material, and the right kind, too. I wish more women would give their experience in poultry-raising. Let us try to make the "Poultry Yard" in the KANSAS FARMER very lively. If practical poultry-raisers would contribute weekly to the KANSAS FARMER it would cause them to take more interest with their fowls, and poultry-raising would prosper as it never did before. Get your pencil and commence at once. There is money in poultry, yet many have not found it out, and are groping about in very dark places. They need a bright light to shine upon them. All of them are not "old fogies," and we will wake up some of the "old fogies" so much that they will start right in the poultry business, and their wives will forever bless us.

MRS. BELLE L. SPROUL,
Frankfort, Kas.

The Poultry Interest.

The following suggestive matter appeared recently in the Iowa Homestead:

The older a country becomes and the more completely its resources are developed, the more diversified does its agriculture become. A new country runs to wheat or corn or cattle as the exclusive product, but as civilization develops, these become limited and divide the interest of the farm with other industries. The advent of railroads and the growth of towns and cities make dairying profitable, small fruits are grown, orchards and vineyards find a place on the farm, and, last but not least, the poultry interest develops. This is the case especially when stock-feeding is established. The grain that would else go to waste on a stock farm winter and summer would keep a considerable flock of poultry, and in a country well supplied with railroads there is no trouble in finding a market. Whenever there is a profit to be made on poultry, there is a wide and profitable field for the poultry-breeder. The breeder of fine poultry is of more benefit, however, to the farmer than the farmer is to the breeder. Many a farmer who thinks the care of dunghill fowls beneath his notice will care for a really fine bird, and will in due time find the poultry business one of very considerable profit.

On this point we quote a valuable statement from the pen of Mr. A. M. Bollman, both a breeder and shipper of poultry, of Lenox, Iowa, as follows:

"The article in the Homestead of March 15, on scrubbing thoroughbred horses and cattle was a good one, and will apply as well to poultry as to cattle and horses. There is not more than one farmer out of one hundred that tries to care for his poultry properly, thinking, no doubt, they are not worth caring for. This is a very wrong idea, and the farmers in this vicinity are beginning to see it in that light. Having had an interest in the buying and shipping of poultry and eggs, as well as in breeding thoroughbred poultry, I am in a position to know what has taken place in this locality. I know that a few years ago the amount of poultry sold in the market of Lenox would not exceed in value \$1,000 per year, while in the summer and winter of 1898 there was at least \$15,000 worth marketed. This is partially due to a good market having

been established, so that now all the poultry and eggs the farmers can produce find a ready market, of course at fluctuating, but generally good, prices. A few years ago this was not the case. It was a matter of uncertainty whether they could sell their poultry when they brought it to town. A market is the first thing that should be established; then the farmer can go ahead increasing the production and improving his stock just as much as he desires.

"A farmer having thoroughbred horses or cattle, as a general thing will take better care of them than one who has poor stock, and some of the reasons may be found to be that he has more money invested in his start in thoroughbred stock, and also a certain feeling or pride that the fact of having something fine creates in one's breast, generally resulting in the conclusion that because he has good stock he must take good care of it, and show his neighbor who has common stock that there is something in thoroughbreds more than name. This rule will apply just as forcibly to the poultry as it does to horses and cattle. What farmer's wife would not rather take care of a fine flock of chickens that are near the same color and size than a flock of all colors, all sizes and all degrees of usefulness? These are matters that I am sorry to see are not much discussed in the Homestead, and I for one should like to see discussed thoroughly. There is great profit in exchanging ideas in regard to best kinds, best houses, best way to feed and care for poultry and other stock, best feed, etc., etc., thus benefiting each other. How many farmers know what a capon is, and how to caponize, and how many are making any money out of it? I think there are but few. To any one wanting to know what a capon is, and how to caponize, I would be glad to answer by letter or through the columns of the Homestead."

The farmers of the West will never be prosperous until they learn to keep down their store bills, and there is nothing that comes as handy for this as the poultry product. We know of sections of the State in which the poultry interest is developed where in the fall the merchant, instead of having bills against the farmer that he is anxious to collect, has to pay out hard cash to balance the account. The items on the credit side are mainly poultry products with occasional butter or cream. The average farmer's store bills run from \$10 to \$20 per month. From three to six dozen of eggs per day for nine months, with the surplus chickens in the fall and winter, will cover them. There is very little actual outlay for all this on a stock farm. To be successful, however, the ordinary farmer must have fowls of the best breeds. It is not in human nature for either the farmer, his wife or children to take first-class care of inferior stock.



How to Cure
Skin & Scalp
DISEASES
with the
CUTICURA
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THE MOST DISTRESSING FORMS OF SKIN and scalp diseases, with loss of hair, from infancy to old age, are speedily, economically and permanently cured by the CUTICURA REMEDIES, when all other remedies and methods fail. CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease, from pimples to scrofula. Sold everywhere. Price, CUTICURA, 50 cents; SOAP, 25 cents; RESOLVENT, \$1. Prepared by the POTTER DRUG AND CHEMICAL CO., BOSTON, MASS. Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP. Relief in one minute, for all pains and weaknesses, in CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster. 25 cents.



A DELICATE COMPLIMENT.

Ah, Miss Smithers, you have a complexion which would make the fortune of the manufacturers of the soap you use, if it could be advertised. Pray, what is the brand?"

"Thanks, awfully, Mr. Flatterer; I never use soap. I use pure, clear water freely, and take a certain tonic occasionally which removes the necessity for any cosmetic or soap."

The "tonic" Miss Smithers mentioned, is a powerful curative as well. It is Dr. Pierce's Favorite Prescription, and is the best remedy for "female weakness" known. By fortifying the health, the bloom of youth and the soft, round lines of the girlish face are preserved to an age when most women are wrinkled and gray from pain and suffering.

WARRANTED.

"Favorite Prescription" is the only medicine for women, sold by druggists, under a positive guarantee of satisfaction in every case, or price (\$1.00) refunded. This guarantee has been printed on the bottle-wrappers, and faithfully carried out for many years.

As an invigorating tonic, it imparts strength to the whole system. For overworked, "worn-out," "run-down," debilitated teachers, milliners, dress-makers, seamstresses, "shop-girls," housekeepers, nursing mothers, and feeble women generally, Dr. Pierce's Favorite Prescription is the greatest earthly boon, being unequalled as an appetizing cordial and restorative tonic.

As a soothing and strengthening nervine, "Favorite Prescription" is unequalled and is invaluable in allaying and subduing nervous excitability, exhaustion, prostration, hysteria, spasms and other distressing, nervous symptoms, commonly attendant upon functional and organic disease. It induces refreshing sleep and relieves mental anxiety and despondency.

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Dr. Pierce's Pellets regulate and cleanse the liver, stomach and bowels. One a dose. Sold by druggists.

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CURES Syphilis, Scrofula, Rheumatism, Gout, Eczema, etc., causing ulcers, eruptions, pain in bones, swelling of joints, enlarged glands, mucous patches in mouth, falling hair, and many other symptoms. All poison thoroughly and permanently eradicated from the system by purely Vegetable Treatment. Spermatorrhoea, Impotency, Nervous Debility, etc., resulting from youthful indiscretion, excesses in matured years, and other causes, inducing some of the following symptoms, as dizziness, confusion of ideas, defective memory, aversion to society, blotches, emissions, exhaustion, Varicocele, etc., are permanently cured. URINARY, KIDNEY and BLADDER troubles, Weak Back, Incontinence, Gonorrhoea, Gleet, Stricture, etc., are quickly and perfectly cured. Consult the OLDEST DR. WHITTIER in person or by letter first. No promises made that age, integrity and experience do not justify. Medicines sent anywhere by mail or express, secure from observation. Consultation free and invited. Office hours, 9 to 5, 7 to 8; Sunday, 10 to 12. NO FEE UNTIL CURED, from responsible persons. NEW BOOK on diseases of men, free. Address, H. J. WHITTIER, M. D., 10 W. Ninth St., Kansas City, Mo.

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The Veterinarian.

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

MANGE—I have a small herd of cattle and some horses that are said to have mange or itch. Will you please give remedy in next issue and oblige a constant reader. ARQUE. Ness City, Kas.

—True mange is a contagious disease, consequently all animals suffering from it should be isolated and every article that has been used upon or around them should be thoroughly purified. With horses, the harness, saddle and all grooming utensils should be thoroughly scrubbed with soap and water; when dry, should be sponged over with carbolized water. The stables should be cleaned and then thoroughly white-washed. As scabies or mange is a local disease, it is curable by topical remedies. All animals should be washed with carbolized soap and warm water before remedies are applied to destroy the parasites. Wash the parts affected thoroughly with following wash: Pulverized stavesacre seed, 1 ounce; white hellebore, 1 ounce; water, 1 gallon; boil down to two quarts and apply.

OCLUSION OF TEAT—I have a registered two-year-old Jersey cow, milking, that got one teat hurt last November. Got it cured up nicely, but that quarter of the bag seems to be smaller than the others, and the lower end of the teat is callous, causing it to milk hard and the milk to splatter. What do you recommend for teat, also bag, to restore size to something near other parts. W. M. Waverly, Kas.

—Occlusion of the teat, brought about by inflammation, develops slowly, and in milking the stream of fluid gradually becomes smaller, until at last it can only be drawn by drops. When occlusion is due to closure of skin at end of teat, it should be lanced and kept open for five or six days by a suitable bougie. Take out at milking time and again replace. When canal is only partly obstructed, the sinus of teat can be dilated by means of a knitting needle or small feather. To prevent closure, introduce a milk tube and allow it to remain; the opening in tube close with a cork, except at milking time. Rub quarter frequently, using a little spirits of camphor.

550 Horses in One Stable.

OFFICE E. CLEVELAND ST. R. R. CO., CLEVELAND, O., December 1, 1886. LAWRENCE WILLIAMS & CO., Cleveland, O.—Gents:—In reply to your inquiry as to our opinion of Gombault's Caustic Balsam, we have been using it for three or four years in our stables. Have now 550 horses, and have probably treated nearly or quite 100 in the past year, using it for all kinds of leg or shoulder lameness, strains, diphtheria, pink-eye, etc., and must say that for any case where blistering is necessary we find it to be JUST WHAT WE NEED and to do what you claim for it, and a PERFECTLY SAFE REMEDY TO USE. We could not well do without it, and can freely recommend it to horsemen. EDWIN DUTY, Superintendent.

We would add that the above company have used over six dozen bottles in the past year, which fact speaks plainly for itself.

Send to the Louisburg (Kansas) Nursery for your trees and plants. They pay the freight. Catalpa, first size, \$2.50; second size, \$1. Black locust, same price. Hedge plants, \$1.25 per thousand. Write for prices on what you need.

Farm Loans.

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

OKLAHOMA--THE PROMISED LAND.

"On to Oklahoma!" is now the watchword of the thousands of home-seekers who have anxiously awaited the President's proclamation opening this vast and rich country to public settlement. Colonies are being formed in every State and Territory in the Union. The millions of acres may not furnish a home-stead for all who come, but there will be thousands ready to relinquish their claims at a nominal figure. The intending settler should look the country over. Go via the GREAT ROCK ISLAND ROUTE, popularly known as the "People's Favorite" wherever it runs. KINGFISHER, the U. S. Land Office for Oklahoma, is the coming metropolis of the Indian Territory, and is located on the ROCK ISLAND ROUTE. A fast line of stages has been put on to Fort Reno, to connect with the trains of the Rock Island Territorial extension. This is the cheapest and best route and direct to the place you want to go. Through solid vestibule trains from Chicago via Kansas City and St. Joseph, also from Denver, Colorado Springs and Pueblo to the Territory, through the cities of Topeka, Hutchinson, Wichita, Wellington and Caldwell. It will be to your advantage to locate on the People's Favorite railway. Look at the map. The Rock Island has excellent connections from all portions of the Union. For full information concerning Oklahoma, the land laws, and the best way to get into the country, address

JOHN SEBASTIAN, G. T. & P. A. Chicago, Kansas & Nebraska Ry., Rock Island Route, Topeka, Kas.

Give the horses a large stall and a good bed at night. It is important that they lie down to rest.

A span of horses never drew a pound more because of swearing at them when doing their best, and swearing is a very foolish way for the driver to seek to ease his mind.

Colts should be halter-broken when following the mare; it helps to subdue them, and supersedes the necessity of breaking them over again when grown up. "Once broken, always broken," is an axiom as old as the art of breeding. It is advisable to break them to harness at 2 1/2 or 3 years old. They will receive no injury from careful usage in light vehicles.

THE MARKETS.

By Telegraph, April 8, 1886.

LIVE STOCK MARKETS.

Chicago.

CATTLE—Receipts 15,000. Market steady at Friday's prices. Best \$4 20a4 50, good \$3 90a 4 15, medium \$3 70a3 80, common \$3 30a3 60, stockers \$2 40a2 70, feeders \$2 80a3 55, bulls \$1 65 a3 25, cows \$1 50a3 15.

HOGS—Receipts 16,000. Market 5a10c lower. Mixed, \$4 70a4 92 1/2; heavy, \$4 75a5 95; light, \$4 80a4 95; pigs, \$4 75a5 05.

SHEEP—Receipts 7,500. Market stronger. Natives, \$3 75a5 50; Western, corn-fed, \$4 50a 5 50; lambs, per owt., \$4 75a6 25.

St. Louis.

CATTLE—Receipts 200, shipments Market active and higher. Choice heavy native steers \$3 70a4 25, fair to good native steers \$3 00a3 60, medium to choice butchers steers \$2 70a3 25, fair to good stockers and feeders \$2 25a3 30.

HOGS—Receipts 1,300, shipments 1,700. Market quoted higher. Choice heavy and butchers selections \$4 80a4 85, medium to prime packing \$4 65a4 80, ordinary to best light grades \$4 25a 4 75.

SHEEP—Receipts 600, shipments Market strong. Fair to choice \$3 50a5 25.

Kansas City.

Receipts for 1889 to date are 233,250 cattle, 562,405 hogs and 106,161 sheep, showing a gain of 77,450 cattle, 22,440 hogs loss and a gain of 42,824 sheep, compared with 1888.

CATTLE—The run of cattle here was not quite up to the 4,000 predicted by our local prophets on Saturday, but was close to it. Chicago had the 14,000 predicted for her. An all-day rain usually embarrasses trade, but not so to-day. Buyers wanted steers lower and got them lower, but they wanted lots of them. The lowest cattle sold at the opening and over 3,100 cattle were sold at noon, the biggest forenoon's business of the year. Dressed beef and shipping stuff \$3 45a4 00, cows and mixed \$1 70a2 75.

HOGS—The general trade was 5c lower. One large buyer bid 10c lower trying to buy at \$4 50 and took a few at \$4 42 1/2, worth \$4 60 Saturday, and possibly \$4 62 1/2 at high time. Speculators paid \$4 52 1/2a4 60 and sold sorted light at \$4 55, worth \$4 60a4 62 1/2 Saturday.

SHEEP—Receipts were liberal and quality good. The demand was good and an early clearance was made. Culls sold at \$2 00a2 50,

clipped sheep at \$3 40, wool sheep at \$4 12 1/2a 4 80, and 74-pound yearlings at \$4 30.

PRODUCE MARKETS.

New York.

WHEAT—No. 2 red, 85 1/2a85 3/4c. CORN—No. 2, 43 1/2a43 3/4c. OATS—Mixed, 30a30 1/2c; white, 34a34 1/2c. COFFEE—Options lower. Sales, 30,750 bags. Spot, quiet at 18 1/2c. SUGAR—Firm but quiet. EGGS—Firm at 10a11 1/2c. BUTTER—Firm at 11a25c. CHEESE—Easy and quiet at 9a10 1/2c.

St. Louis.

FLOUR—Quiet and unchanged. WHEAT—No. 2 red, cash, 88c nominal; May, 88a90 1/2c; June, 84 1/2a85 1/2c. CORN—No. 2 mixed, cash, 30 1/2a30 3/4c; May, 30 1/2a31c; July, 32 1/2c. OATS—Lower. No. 2 cash, 25a26c bid; May, 26 1/2a28 1/2c. RYE—Dull. No. 2, 40a42 1/2c. HAY—Unchanged. Prairie, \$6 50a8 00; timothy, \$7 50a12 00. FLAXSEED—\$1 45.

Chicago.

A larger business was done in wheat to-day and interest centered principally in the July future. Sellers were the most numerous and a lower range of prices was established in which all futures shared, operators now being of the opinion that the May is over are getting more confident and selling. Parties who would not sell for fear of manipulation heretofore are now selling freely, and it was rumored that two prominent flour traders had entered on a "bear" campaign for July delivery, at least they were reported as being heavy sellers to-day. The weakness and declining prices had the effect of bringing out considerable "long" wheat. Outside influences were all favorable to "short" sellers. A fair business was transacted in corn to-day early and within a narrow range after which the market ruled quiet.

Cash quotations were as follows: FLOUR—Dull and unchanged. WHEAT—No. 2 spring, 85 1/2c; No. 3 spring, 81a84c; No. 2 red, 85a85 1/2c. CORN—No. 2, 34 1/2c. OATS—No. 2, 25c. RYE—No. 2, 43c. FLAXSEED—No. 1, \$1 54. TIMOTHY—Prime, \$1 32a1 33. PORK—\$11 90a12 00. LARD—\$8 33 1/2a8 65. BUTTER—Active. Fancy creamery, 24a25c; choice to fine, 21a23c; fine dairy, 20a25c; choice, 15a18c. EGGS—Firm at 10a10 1/2c.

Table with 3 columns: Articles, Receipts, Shipm'ts. Wheat 17,000, Corn 114,000, Oats 81,000.

Kansas City.

WHEAT—Receipts at regular elevators since last report bushels; withdrawals, 500 bushels, leaving stock in store as reported to the Board of Trade to-day, 137,647 bushels. No. 2 red winter: Cash and April, no bids nor offerings; May, no bids, 87c asked. No. 2 soft winter: Cash and April, no bids nor offerings; May, no bids, 86c asked. On track by sample: No. 2 red, 87 1/2c; No. 2 soft, 89c.

CORN—Receipts at regular elevators since last report, 1,023 bushels; withdrawals, 11,415 bushels, leaving stock in store as reported to the Board of Trade to-day, 224,478 bushels. On track by sample: No. 2, 26 1/2c; No. 2 white, 27c.

OATS—On track by sample: No. 2 white, 24 1/2c; No. 2 mixed, 24 1/2c.

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

HAY—Receipts 15 cars. Firm. Strictly fancy prairie, \$3 00; choice, \$5 00; medium, \$3 50a4 00; poor, \$1 00a1 50.

SEEDS—We quote: Flaxseed, \$1 35 per bu. on a basis of pure; for planting, \$1 60. Castor beans, \$1 50 per bu. for prime; \$2 for sowing.

OIL-CAKE—Per 100 lbs. sacked, f. o. b., \$1 25; \$10 50 per 1,000 lbs.; \$20 00 per ton; car lots, \$18 00 per ten.

FLOUR—Dull and weak; hard to sell at quotations. Quotations are for unestablished brands in car lots, per 1/2 bbl., in sacks, as follows: XX, \$1 00; XXX, \$1 10; family, \$1 30; choice, \$1 65; fancy, \$1 80; extra fancy, \$2 00a 2 19; patent, \$2 30a2 40.

BUTTER—Receipts fair and market weak for all classes of poor. We quote: Creamery, fancy, 21a22c; good, 18a20c; dairy, fancy, 16c; fancy roll, 14c; choice, 8a10c; medium, 7c; good to choice storepacked, 8a9c; poor, 4a5c.

CHEESE—We quote: Full cream, twins, 11c; full cream, Young America, 11 1/2c.

EGGS—Receipts moderate and market steady at 7c per dozen for strictly fresh. Held stock and limed not wanted.

APPLES—Supply large. Strictly fancy, \$2 50 per bbl.

POTATOES—Irish—Market well supplied and dull; home-grown, 28a30c per bus.; Colorado and Utah, 40a50c per bus.; Iowa and Nebraska, choice, 20a25c per bus. Sweet potatoes, yellow, 90c\$1 00 per bus.

BROOMCORN—Green, self working, 4c;

green hurl, 4a4 1/2c; green inside and covers, 3a 3 1/2c; red tipped and common, self working, 2c; crooked, 1c.

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Interesting Items.

The tea plant has been discovered growing wild on the slopes of the Himalayas.

The weight of the heart is from eight to twelve ounces. It beats 100,000 times in twenty-four hours.

Wherefore do ye spend your money for that which is net bread, and your labor for that which satisfieth not?

Put the colt you are breaking by the side of a fast-walking horse; it will give it a good start toward becoming a fast walker.

Among English peasants the fore foot of a hare worn constantly in the pocket is considered to be a charm against rheumatism.

Plaster busts may be cleaned by dipping them into thick liquid cold starch—clear starch mixed with cold water—and brushing them when dry.

To remove machine oil from cotton goods rub the spots with hard soap and soft water as soon as they are observed, and they can be easily taken out.

Iroquois tradition tells us that the sun and moon existed before the creation of the earth, but the stars had all been mortals or favored animals or birds.

A piece of zinc placed on the live coals in a hot stove will effectually clean out a stove-pipe, the vapors produced carrying off soot by chemical decomposition.

At a pageant of the guilds, in the time of Elizabeth, the tailors took for their emblem Adam and Eve—considering them to have been the first to exercise their craft.

No man can make his heart a ledger and write upon it nothing but tax and loss and gain, average and barter, without cheating the world through what he withholds from it.

The philanthropies form the greater part of the kinds of work which women do outside of the strictly home fireside work. The field of philanthropy is pre-eminently hers.

Hints to Housekeepers.

Scatter sassafras bark among dried fruit to keep it from becoming wormy.

When flatirons become rusty, black them with stove polish, and rub well with a dry brush.

Lamp wicks give a better light when cut squarely across, and should not be pecked off, as some advocate.

If soap is purchased in large quantities, and kept in a warm, dry place, half the usual amount will be required.

A sure and safe way to remove grease spots from silk is to rub the spot quickly with brown paper. The friction will soon draw out the grease.

As a dressing in the bath, two quarts of water, with two ounces of glycerine, scented with rose, will impart a final freshness and delicacy to the skin.

To the consumptive a panacea is found by daily use of glycerine internally with proportion of one part of powdered willow charcoal and two parts of pure glycerine.

There is nothing better for a cut than powdered resin. Pound it until fine, and put it in an empty, clean pepper-box with perforated top; then you can easily sift it out on the cut, and put a soft cloth around the injured member, and wet it with cold water once in a while. It will prevent inflammation and soreness.

Oyster Pie

Put two cups of flour into a cold bowl; cut into it quickly a quarter pound of cold, hard butter; add a teaspoonful of salt and sufficient ice-water to just moisten. A word of caution: add the water very carefully, wetting only the dry flour, never stirring twice in the same place. Dredge the baking-board lightly with flour; turn the paste out onto it, and roll lightly and quickly from you into a long, thin sheet. Place over this a quarter pound of butter, cut into small pieces; fold into three, turn the paste around and roll from you again as before. Fold and roll again; then fold and stand on the ice for two hours. This paste to be very light must be mixed and rolled quickly and the materials icy cold. With one-half this paste line a deep pie dish. Drain fifty oysters free from all liquor, turn them into the pie dish; add a tablespoonful of butter, cut into small pieces, salt and pepper. Roll out the remaining half of the paste for the upper cover. Bake in a quick oven thirty minutes. —Mrs. Rover.

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The Busy Bee.

The Ethics of Bee-Keeping.

Many of us are apt to measure the benefits accruing from any particular pursuit by the weight of actual monetary profit only, always reckoning the pros and cons, and cramping up the profits and losses with the limits of the £ s. d. We rarely think of the collateral advantages we are receiving and enjoying, perhaps at the very moment when the cash balance-sheet shows a disagreeable adverse margin. Were one able to recognize in apparent disaster the indirect and imperceptible influences on the mind for good, how much better one could bear misfortune. So that if we search through our pursuit for crumbs of philosophic comfort—and this can appropriately be done—we shall surely find the mind refreshed and strengthened by our discoveries. Some of the happiest thoughts have entered our mind as we have watched our bees coming home at the closing in of a hot summer's day; at such a time a sweet calm steals over us as we are filled with love and admiration of the works of the Creator; the surroundings, the rising mists from the valley, the streaky bands of purple and golden cloud in the western sky, the occasional flutter of leaves stirred by the breeze which always springs up at sunset, lend themselves to the spirit awakened by a contemplation of nature. Time flies, and we return to our books, filled with thankfulness for the blessings bestowed by a bountiful Providence. Who has not felt better in health and spirits from an hour's "observation" in the early morning when the sun and the bees are racing which shall drink up the best share of the moisture dripping on the alighting-board, or hanging like gems on the margins of roof and porch? What bee-keeper is there who cannot recall his "sallet days," when, filled with the trepidation and trembling felt on first opening a hive "all by himself," how truly the saying "Familiarity breeds contempt" was exemplified in himself by repeated manipulation? At his first (aye, and on some subsequent attempt) he feels full of nervous flutter, and has to patiently practice the cultivation of the placid calmness almost equal to the stoicism of a North American Indian. He knows full well he will have to "take his waak" of stings sometimes, and has to stimulate a sublime indifference which must be the resultant growth of hours of heroic suffering. Should his first attack of bee-fever be a bad one, he, perchance, boldly determines to purposely get severely stung, so as to sooner partake in the immunity from pain supposed to result from repeated inoculation; he unwisely runs risks which end in his being taught highly salutary lessons of inhibitory caution. How "fools rush in," etc., he soon perceives as he gains practical acquaintance with his bees, and the correct method of manipulation. Ignorant or self-opinionated bee-keepers will artificially swarm weak stock, spread brood in unfavorable weather, feed slowly in autumn or rapidly in spring, catch the queens with the drones in the drone-trap, destroy the lot, and perhaps write asking if we can tell him the reason of the queenlessness of the hive. He will be guilty of such vagaries as are calculated to make the bee-keeper's angel weep. Yet, after having dearly bought his own experience, should he notice anachronisms in the comforts of others, he runs the chance of being quietly snubbed and sat upon as simply a scientist, (and we know how science is scorned by some) these find the purely practical man the only bee-master, as if the scientific bee-keeper were not also compelled to be practical! Even he, however, is forced to admit the truth of the adage, "practice is more to be trusted than theory," and makes in his mind the arithmetical analogy that as labor is to capital in commerce, so is practice to theory in bee-keeping.

Any one at all conversant with bee-keeping will recall the courage required in stepping up a rickety pair of steps for the purpose of taking his first awkward swarm. One of his arms is engaged with the skep, the other with the branch, whilst an all-too-trustful partner tremblingly steadies (?) the steps below, uttering wise words of warning meanwhile—"Do be careful." "Mind you don't fall," and so on. The bee-

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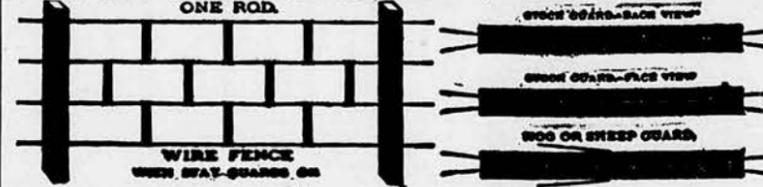
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keeper at this moment calls to mind horrible traditions of the results of an accident at such a moment—disaster which might be brought about by a single bee below, or by a little over-reaching above. To gently carry a swarm down a ladder requires a species of calm firmness that is admirable, and this moral quality may perhaps be purely an outcome of practical bee-keeping. In time, as sure as death and the tax-collector, comes the unavoidable accident, the breaking down of comb, a hive upset, a frantic pony, or whatnot, and some such serious trouble may be surrounded with the difficulties requiring, to surmount them, the cultivation of an amount of presence of mind and courage not always possessed by the soldier even. To the uninitiated it seems nothing for them to call on a bee-keeper "unaccustomed to public climbing" at a moment's notice to mount a ladder themselves in the first place. Self-confidence and a rapid decision of what is best to be done on a sudden emergency are matters of mental growth with the bee-keeper. The high moral lesson of patient endurance through misfortunes not resulting from his own acts has been taught in this last year to many a disappointed bee-keeper, who can ill afford to see the little hard-scraped savings expended on the hobby he has assured the good-wife is a paying one; it is hard for him to buy sugar for bees with money that could well be expended on boots for the children; yet, somehow or other, things work round well for both—the weather has kept mild until the boots got bought, and the bees are fed to boot.

The flowers have literally this time "wasted their sweetness," yet the philosophic bee-keeper is not robbed of the sweets held in the lap of hope. Ever looking forward to better times in store, his mind is brightened by the prospect; he takes heart of grace and feels a cheerfulness which clings to him even in his business. Sometimes his good humor is positively contagious, and all this because his bees the previous day had a good flight, or a honey-flow had commenced. Surely, too, as he finds from bitter experience how necessary it is for his bees to put by a store for old age and hard times, will he take the lesson home and do likewise. Perseverance is learned by the bee-keeper at an early period, or it were better he had left the thing severely alone; if he does not soon learn to persevere he soon ceases keeping bees. A bad year, or even a series of them, must not daunt him; his time will come as he calls to mind the Italian proverb, "Everything comes to him who knows how to wait." By steadily pegging away on his path he will be recompensed here for his labor, rewarded in addition by enhanced vigor, restored health, and renewed strength of mind resulting from the contemplation of the labor of his bees. There is no end to the number of lessons we may learn in the bee-garden, and we shrewdly suspect some of our parson bee-keepers derive from the bees, year in and year out, many beautiful thoughts which, after due maturing, are brought forth in the Sunday sermon. "Sermons in stones," indeed! volumes of them in a bee-hive.—*British Bee Journal.*

In purchasing medicines, don't try experiments; the first and only consideration should be genuineness. Ayer's Sarsaparilla has stood the test of forty years, and to-day it is in greater demand than ever—a triumphant proof of popular approval.

OTTAWA HERD.

I. L. WHIPPLE & SONS,
Breeders and shippers of POLAND-CHINA SWINE, SHORT-HORN CATTLE, Mammoth Bronze Turkeys, Toulouse Geese, Light and Dark Brahmas, Plymouth Rocks, Imperial Pekin Ducks, all from prize stock. Stock for sale. Eggs in season. Please call and examine stock, or write, giving full description of what you want. Farm three miles southeast of OTTAWA, KANSAS.

F. M. LAIL, MARSHALL, MO.,

Breeder of the very best
POLAND-CHINA
HOGS.
Pigs from ten first-class boars for the season's trade.

MAPLE GROVE HERD

WM. PLUMMER, breeder and shipper of POLAND-CHINA SWINE and Light Brahma Fowls of the best strains. 25 choice sows bred to three first-class boars for the season's trade. Young stock for sale, and eggs in season. Farm three and a half miles southwest of Oaage City. WM. PLUMMER, Oaage City, Kas.

Walnut Grove Herd of Poland-Chinas.

Pigs from three first-class boars for sale. Am taking orders for fall pigs, to be delivered at from eight to ten weeks old, at \$8 per head, or in pairs \$15. Sows in pig or with litters, for sale. A few choice males on hand. My stock is of the best strains in America. Inspection desired. Stock recorded in Ohio Poland-China Record. Pigs from twelve exceeding fine sows. Took six first and two second premiums at Topeka and Ottawa, only places shown, including grand sweepstakes at Ottawa. V. B. HOWEY, Box 108, Topeka, Kas.

MAINS'
Fountain Head and Storm Cloud Claim this Space.
Mains' Herd of Pure-bred POLAND-CHINA HOGS, of as fashionable strains as can be had. All recorded in the Ohio Poland-China Record. Fall pigs of both sexes and spring sows bred and to breed for sale. A large selected herd of sows (most of which were bought in Ohio) new bred for season of 1899 to No. 1 boars of as good royal breeding as there is in the country. Address JAMES MAINS, Oskaloosa, Jefferson Co., Kas.

JACKVILLE HERD OF POLAND-CHINAS

J. S. RISK, Prop'r, WESTON, MO.
I have 100 Pigs for sale, sired by such noted boars as Gov. Cleveland 4529, Royalty 6469, John 690, King Klever 2d 1309, and other equally noted sires. I can supply very choice pigs. Write for prices or call and see stock.

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For Registered Prize-winning
BERKSHIRE SWINE AND SOUTHDOWN SHEEP
or money refunded. Come and see or address J. M. & F. A. SCOTT, Huntsville, Randolph Co., Mo. Mention Kansas Farmer.

SELECT HERD OF LARGE BERKSHIRES

Of the Royal Duchess, Sallie, Hillside Belle, Charmer, Stumpy, Fashion, Queen Betsy, and other families of fine, large, fleshy qualities, with such top breeding as British Champion, Longfellow and Sovereign Duke, and the noted young show boar PENLIZAS 1945 at head of herd, the property of G. W. BERRY, Berryton, Shawnee Co., Kas. Located on the K., N. & D. R. R., nine miles southeast of Topeka. Farm adjoins station. Write for prices and free catalogue. Fine fall and winter pigs for sale. Orders taken now for spring pigs from show sows.

ENGLISH BERKSHIRES.

THE WELLINGTON HERD consists of twenty matured brood sows of the best families of home-bred and imported stock, headed by the celebrated HOPEFUL JOE 4888, and has no superior in size and quality nor in strain of Berkshire blood. Also Plymouth Rock Chickens. Your patronage solicited. Write. M. B. KEAGY, Lock Box 784, Wellington, Kas.

PLEASANT VALLEY HERD OF Pure-bred Berkshire Swine.

I have thirty breeding sows, all matured animals and of the very best strains of blood. I am using three splendid imported boars, headed by the splendid prizewinner Plantagenet 2919, winner of five first prizes and gold medal at the leading shows in Canada in 1881. I am now prepared to fill orders for pigs of either sex not akin, or for matured animals. Prices reasonable. Satisfaction guaranteed. Send for catalogue and price list, free. S. McCULLOUGH, Ottawa, Kansas.

SECRETS OF LIFE FREE.

A Private Adviser for those contemplating marriage and for men suffering from Private, Nervous or Chronic Diseases. Send 6c. for sealed copy. Consult the old Doctor confidentially. L. R. WILLIAMS, M. D., 68 Randolph St., Chicago.

I GURE FITS!

When I say cure I do not mean merely to stop them for a time and then have them return again. I mean a radical cure. I have made the disease of FITS, EPILEPSY or FALLING SICKNESS a life-long study. I warrant my remedy to cure the worst cases. Because others have failed is no reason for not now receiving a cure. Send at once for a treatise and a Free Bottle of my infallible remedy. Give Express and Post Office. H. G. ROOT, M. C., 183 Pearl St. New York.

MORGAN HORSES Western Headquar- ters for Stallions of high breeding, and Grade Fillies. DR. A. W. HINMAN, Dundee, Ill.



SCHNELLE BROS., Pollock, Mo., Have for sale a choice collection of Imported Percheron Stallions & Mares coming 2 and 3 years old. Recorded in France and America. Blacks, Grays and Bays at prices from \$500 up for next 60 days. Grades \$175 to \$300. Terms to suit. Our next to consist of Shires, Percherons, Belgians and Cleveland Bays. Catalogue free.

We Stand at the Head



CLEVELAND BAYS.

At the great American Horse Show, held in Chicago, November 13-24, 1888, we were awarded Grand sweepstakes gold medal for best Cleveland Bay stallion and silver medal for best mare of any age, thus placing our stud on top. We have also a grand lot of ENGLISH SHIRE stallions and mares on hand. Every animal recorded and guaranteed. Lowest prices. Best terms. Farm one-quarter mile east of city. Write for new illustrated catalogue to **STERICKER BROS., Springfield, Ill.**

Walnut Grove Stock Farm



Western Headquarters for ENGLISH SHIRE Stallions and Mares and HEREFORD Cattle. These animals have been selected with the greatest care by ourselves from the most noted studs and herds, both in England and this country. Any one wishing first-class animals should give us a call. Terms favorable and prices low. Will trade for steers. Farm two and a half miles northeast of town and 100 miles west of Topeka on Santa Fe railroad. Write for particulars to **MAKIN BROS., Florence, Marion Co., Kas.**

TOWHEAD STOCK FARM

LEONARD HEISEL, Carbondale, Osage Co., Kansas.



Importer and breeder of Clydesdale and Percheron Horses. I have a choice collection of registered horses on hand from 2 to 5 years old, unsurpassed for quality and breeding, every animal recorded with pedigree in the recognized stud book of Europe and America and guaranteed breeders. Terms, prices and horses that induce people to buy of me. Write for illustrated catalogue. Carbondale is eighteen miles south of Topeka, on A., T. & S. F. R.R. Farm and stable three miles northwest of Carbondale.

Holstein-Friesian Cattle.

I have a choice herd of these justly-celebrated cattle of all ages. Also some nice grades, for sale at reasonable prices. Personal inspection invited. Call on or address **JNO. D. FRYOR, Winfield, Cowley Co., Kas.**



SILVER SPRING HERD OF SHORT-HORNS.

Chas. Roswurm, Prop'r, Beman, Morris Co., Kas. consists of 100 choice Thoroughbreds of the best families, including the celebrated Cruickshank strain. Young stock for sale on easy terms. Special bargain given on three fancy-bred bulls, fine individuals, suitable to head herds.

SEANNON HILL STOCK FARM.



GLICK & DEVIN, Atchison, Kansas, Breed and have for sale Bates and Bates-topped

SHORT-HORNS.

Waterloo, Kirklevington, Filbert, Cragg, Princess, Gwynne, Lady Jane, and other fashionable families. The grand Bates bulls Imp. 8th Duke of Kirklevington No. 41798 and Waterloo Duke of Shannon Hill No. 89879 at head of herd. Choice young bulls for sale now. Correspondence and inspection of herd solicited, as we have just what you want and at fair prices. Address **LUTHER DEVIN, Manager, Atchison, Kansas.**

FOR SALE TO FEEDERS. Steers and Heifers.

One, two and three years old, near Kiowa, Kansas, suitable for feeding or raising. Also stock cattle. To parties making first-class paper, will be sold partly on time. **B. R. GRIMES, Kiowa, Kas.** Or **W. B. GRIMES, Kansas City, Mo.**

30 HORSES CHAMPION PRIZE-WINNING STUD OF THE WEST. **70 PRIZES** **RIX & GOODENOUGH,** TOPEKA, KANSAS.

IMPORTERS AND BREEDERS OF PERCHERONS, CLYDES, SHIRES AND CLEVELAND BAYS.

GOOD HORSES, LONG TIME, LOW INTEREST, MODERATE PRICES. No other firm in America sells to stock companies under the same perfected system that we do, which insures to companies square dealing, successful breeders and absolute success. Illustrated catalogue free. Farm and Stables—Two miles east of Highland Park, TOPEKA, KANSAS.

Champion Gold Medal Stud.

250 CLEVELAND BAYS AND ENGLISH SHIRES!

Of the highest breeding and most popular strains. We carry a large stock of young, vigorous stallions and mares at all seasons, imported young and matured on our farms, thus fully acclimated, and sure breeders. Prices low and terms easy.

150 HOLSTEIN-FRIESIANS at exceptionally low prices. Grand opportunity to secure foundation stock at low figures. Send for Illustrated Descriptive Pamphlet. Mention this paper. **GEO. E. BROWN & CO., AURORA, ILL.**

HANCOCK COUNTY IMPORTING COMPANY, WARSAW, ILLINOIS.

IMPORTERS AND BREEDERS OF

Percheron and English Shire HORSES.



We have a choice collection of Registered horses on hand, from two to five years old, unsurpassed for quality and breeding. Our importation this year numbers thirty head, making in all fifty head, which we now offer to the trade. We have a large lot of two and three-year-old stallions, imported last year, which are now fully acclimated. Customers will find it to their interest to call and examine our stock before purchasing. Prices low. Terms to suit. **WARSAW** is four miles south of Keokuk and forty miles south of Burlington, Iowa.

IMPORTERS AND BREEDERS OF

ENGLISH SHIRE AND SUFFOLK PUNCH HORSES

—AND—

RED POLLED CATTLE.



STERLING. 4718.

We have on hand a very choice collection, including a recent importation of horses, several of which have won many prizes in England, which is a special guarantee of their soundness and superiority of form and action. Our stock is selected with great care by **G. M. SEXTON, Auctioneer to the Shire Horse Society of England.** Prices low, terms easy, and horses recorded in respective stud books and guaranteed.



Peter Piper (17).

SEXTON, WARREN & OFFORD, Maple Hill, Kansas.

E. Bennett & Son,

TOPEKA, - KANSAS,

the Leading Western Importers of

CLYDESDALE, PERCHERON, CLEVELAND BAY

French Coach Horses.

AN IMPORTATION OF 125 HEAD,

Selected by a member of the firm, just received.

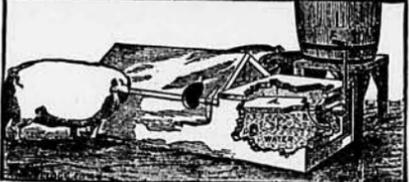
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AN ENTIRELY NEW DEVICE.

An Automatic or Self-Regulating Stock Waterer.



Can be attached to barrel, tank or pond. Keeps on hand a constant and regular supply of water. One tank or trough especially for hogs. For detailed description send for circular. Correspondence solicited. Agents wanted. Territory for sale. Manufactured by **PERRY & HART, P. O. Box 391, Abilene, Kansas.**

Just the thing. Oh how cheap. Large size. Low price. You want it.

TRY IT. ASK FOR IT, RIGHT NOW.

JOLLY TAR PLUG CHEWING.

TOBACCO is the BEST CHEWING TOBACCO ever offered for the money—

LARGE PLUG LITTLE MONEY

Your dealer has it. **JNO. FINZER & BROS., Louisville.**

Dr. SPINNEY & CO. NATIONAL DISPENSARY.

NERVOUS, CHRONIC and PRIVATE DISEASES OF MEN and WOMEN successfully treated.

YOUNG MEN

Suffering from the effects of youthful follies or indiscretions, or are troubled with Weakness, Nervous debility, Loss of Memory, Despondency, Aversion to Society, Kidney Troubles or any diseases of the Genito-Urinary Organs, can here find a safe and speedy cure. Charges reasonable, especially to the poor.

MIDDLE-AGED MEN.

There are many troubled with too frequent evacuations of the bladder, often accompanied by a slight smarting or burning sensation, and weakening of the system in a manner the patient cannot account for. On examining the urinary deposits aropy sediment will often be found, and sometimes small particles of albumen will appear or the color be of a thin, milkish hue, again changing to a dark or torpid appearance. There are many men who die of this difficulty, ignorant of the cause, which is the second stage of seminal weakness. The doctor will guarantee a perfect cure in all such cases, and a healthy restoration of the genito-urinary organs. Consultation free. Send 2-cent stamp for "Young Man's Friend, or Guide to Wedlock." Address

DR. SPINNEY & CO.,

Main and 12th Sts., Kansas City, Mo. Mention this paper.

A SUFFERER from errors of youth, lost vigor, etc., was restored to health in such a remarkable manner after all else had failed, that he will send the mode of cure FREE to all fellow sufferers. Address **L. G. MITCHELL, East Haddam, Conn.**

OPIUM Morphine Habit Cured in 10 to 20 days. No pay till cured. **Dr. J. Stephens, Lebanon, Ohio.**

THE STRAY LIST.

HOW TO POST A STRAY. THE FEES, FINES AND PENALTIES FOR NOT POSTING.

BY AN ACT of the Legislature, approved February 27, 1886, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and appraisement, to forward by mail, notice containing complete description of said strays, the day on which they were taken up, their appraised value, and the name and residence of the taker-up, to the KANSAS FARMER, together with the sum of fifty cents for each animal contained in said notice.

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

No persons, except citizens and householders, can take up a stray. If an animal liable to be taken up, shall come upon the premises of any person, and he falls for ten days, after being notified in writing of the fact, any other citizen and householder may take up the same.

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

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

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

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

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

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

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

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

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

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

FOR WEEK ENDING MARCH 28, 1889.

Lyon county—Roland Lakin, clerk.

COW—Taken up by G. W. Mow, in Center tp., December 28, 1888, one red and white spotted cow, branded F. P. on left hip; valued at \$15.

HEIFER—By same, one roan heifer, 3 years old, indistinct brand on left shoulder; valued at \$15.

Butler county—T. O. Castle, clerk.

CALF—Taken up by A. G. Laughlin, in Milton tp., P. O. Brainard, March 11, 1889, one white yearling bull calf; valued at \$8.

CALF—By same, one red yearling bull calf; valued at \$8.

CALF—By same, one red yearling heifer calf; valued at \$5.

CALF—By same, one pale red heifer calf, 6 months old; valued at \$1.

Anderson county—S. Durall, clerk.

STEER—Taken up by Chris Henrick, in Putnam tp., March 12, 1889, one yearling steer, dark red, some white on both flanks and end of tail white, no other marks; valued at \$12.

Montgomery county—G. W. Fulmer, clerk.

PONY—Taken up by W. H. Corle, in Independence tp., P. O. Independence, February 26, 1889, one bay pony mare, 14 hands high, 3 years old, star in forehead, left hind foot partly white; valued at \$20.

FOR WEEK ENDING APRIL 4, 1889.

Chase county—J. S. Stanley, clerk.

STEER—Taken up by Matt Bros., in Toledo tp., P. O. Cottonwood Falls, March 11, 1889, one red and white yearling steer, hole in left ear; valued at \$13.

Leavenworth county—J. W. Niehaus, clerk.

COW—Taken up by William Dister, in Leavenworth tp., March 6, 1889, one roan cow with red neck and head, bob tail, 10 years old; valued at \$15.

Shawnee county—D. N. Burdge, clerk.

MARE—Taken up by J. W. Wilson, P. O. Topeka, near bridge on Kansas avenue, March 9, 1889, one dapple bay mare, 9 years old, no brands, lame in fore and hind feet; valued at \$20.

Douglas county—M. D. Greenlee, clerk.

STEER—Taken up by Wm. G. Stevenson, in Clinton tp., March 15, 1889, one yellow Texas steer, 3 years old, no marks; valued at \$10.

STEER—By same, one deep red Texas steer, 3 years old, no marks; valued at \$10.

FOR WEEK ENDING APRIL 11, 1889.

Greenwood county—J. W. Kenner, clerk.

STEER—Taken up by J. W. Davidson, in Bachelor tp., March 6, 1889, one red yearling steer, white on back and in forehead; valued at \$15.

Cowley county—S. J. Smock, clerk.

PONY—Taken up by J. E. Campbell, P. O. Torrance, February 20, 1889, one dark bay male pony, anchor on left flank and bar below; valued at \$15.

PONY—By same, one light bay male pony, pitch fork brand on left hip; valued at \$15.

Chase county—J. S. Stanley, clerk.

HEIFER—Taken up by John C. Denby, in Bazaar tp., P. O. Birley, March 11, 1889, one yearling roan heifer with red neck, branded 1R on right hip; valued at \$12.

HEIFER—By same, one yearling red and white heifer, branded 1R on right hip; valued at \$14.

HEIFER—Taken up by W. N. Oles, in Bazaar tp., P. O. Bazaar, March 30, 1889, one three-year-old red and white heifer, under-bit in each ear; valued at \$12.

Osage county—R. H. McClair, clerk.

PONY—Taken up by J. M. Brewer, in Grant tp., March 20, 1889, one bay pony mare, about 3 years old, hind feet white, a small bunch on right fore leg, white spot in face between eyes.

Labette county—W. J. Millikin, clerk.

MARE—Taken up by L. Metzger, in Elm Grove tp., March 21, 1889, one light brown mare, white forehead, three white feet, branded C on left shoulder.

Too Late to Classify.

EXTRA EARLY SEED CORN.—Mr. C. A. Johnson, leading stock dealer of Hartford, Kas., who planted my Pride of Kansas corn, March 17, 1888, says: "Bill," (that's me), "it didn't make it in six weeks, but we had a mess of roasting ears June 23." Mr. Alfred Combs says: "The early corn bought of you came up all right, and I commenced to feed it to my team the last week in June. I can recommend it as the earliest corn I know of." Mr. J. J. Hewitt says: "I commenced to plant corn April 7, last year, and continued off and on until May 25, when I planted some of your early corn the last of all, and it had the first roasting ears of any on the place. I was surprised at its being so early." I still have several hundred bushels of this corn—Harden's Pride of Kansas, at \$1 per bushel, sacks free. Warranted to grow or money refunded. W. I. F. Harden, Seedsman, Box 1, Hartford, Kas.

CANE SEED.—For good Amber or Orange, low price, address William Dye, Eldorado, Kas.

CHEAP ONION SETS.—To close out, offer Yellow Bottom sets at 40 cents per peck or \$1.50 per bushel at express office or depot here. F. Barteldes & Co., Lawrence, Kas.

CHEAP SEED SWEET POTATOES.—To close out, offer Yellow Jersey and Yellow Nansamonds at \$1 per bushel or \$2.50 per barrel at express office or depot here. F. Barteldes & Co., Lawrence, Kas.

CHEAP ONION SEED.—To close out, we offer large Red Wethersfield and Yellow Danvers onion seed in lots of five pounds and more at \$1.25 per pound at express office here. F. Barteldes & Co., Lawrence, Kas.

CHEAP ALFALFA CLOVER.—To close out, we offer prime Alfalfa at \$5.50, choice Alfalfa at \$7 per bushel, sacked, on cars here. F. Barteldes & Co., Lawrence, Kas.

Kill Them Before They Grow.

Brayton's Sure Horn Destroyer, the greatest discovery of the age. A chemical compound, which applied to the embryo horn will kill it without injury to the calf, leaving the head smooth as a ball. This easy and harmless method of destroying the horns does away with the objections of cruelty urged against the saw and knife. Get a bottle of the DESTROYER now. You will need it soon. It should be applied before the horns come through the skin. Then it is sure. It is easily applied. Every bottle guaranteed. Bottle containing sufficient to destroy horns on forty head, sent prepaid on receipt of 75 cents. A. W. BRAYTON, Mount Morris, Illinois.

Farmers, Stockmen, Horse Dealers, Dairymen.

If the stock on my farm at Kingman, Kansas, is not sold in a body, by May 1st, 1889, I shall be prepared to dispose of the same in large or small lots, at low prices. 100 head of imported and home-bred Holstein Friesian Cattle of all ages. Young stock bred from the same, of large milking families and of good individual merit. Also a fine lot of grade Holstein Heifers from Thoroughbred Short-horn Cows.

90 Mares and Colts 90

These Mares are all well graded, ranging from 1150 to 1500, all stinted to the imported Percheron Stallion Murat (2914); also a fine lot of colts and fillies from the above horse. I will close these out for cash. Correspondence promptly answered. For particulars address T. G. HINDS, Kingman, Kas.

WOOL! WESTERN WOOL COMMISSION CO. ST. LOUIS, MO.

Consignments of Wool Solicited. Cash returns made within six days after receipt of wool. Liberal Advances made on Consignments. References: Dun's and Bradstreet's Agencies and Local Banks. Send for Circular and Price Current.

H. GIVEN HAGEY, FOUNT P. HAGEY, FOREST HAGEY, BEN M. HAGEY, THOS. J. HAGEY, LEWIS W. HAGEY.

HAGEY BROTHERS, Successors to HAGEY & WILHELM, WOOL Commission Merchants, 220 N. Commercial St., ST. LOUIS, MO.

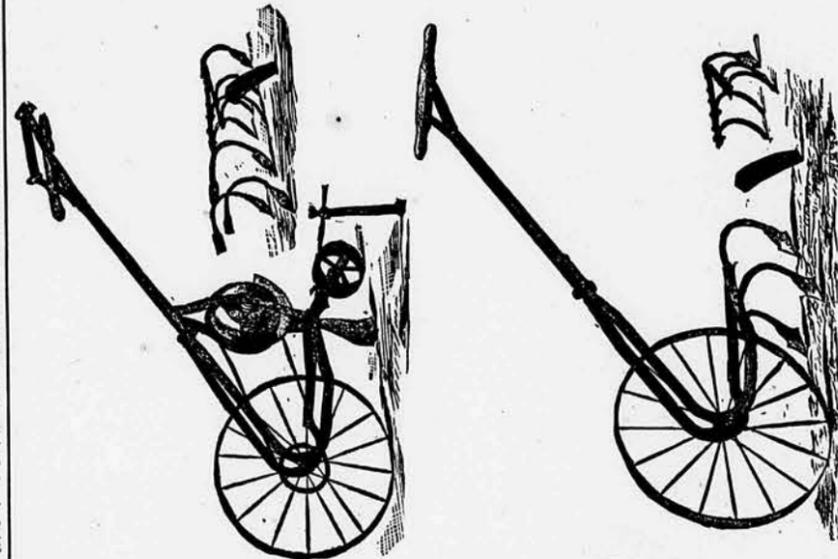
General Agents for Cooper's Sheep Dip. References:—Boatmen's Bank, Dunn's Mercantile Agency, Bradstreet's Mercantile Agency. Full returns guaranteed inside of six days.

TOPEKA GARDEN TOOL & IMPLEMENT CO. TOPEKA, KANSAS.

We make a special offer for thirty days, and will reduce the prices for Trial Machines.

THIS IS FOR TESTIMONIALS ONLY.

Those wanting GOOD GARDEN TOOLS now have a chance to get HUNTER'S KANSAS GARDEN CULTIVATORS AND SEED DRILLS COMBINED.



CUT No. 1. No. 1—Combined Seed Drill, \$12.00. For cash... 9.00.

CUT No. 2. No. 2—Cultivator, \$6.00. For cash... 5.00.

No. 3—Hoe Cultivator, \$1.50; for cash, \$1.00. This Hoe Cultivator is the best tool ever made for the kitchen garden, and no one that cultivates the soil can afford to be without it. One man can do the work of ten men with a common hoe.

Direct all communications to C. C. HUNTER, BUSINESS MANAGER, TOPEKA, KAS.

W. B. WILHELM & CO., WOOL Commission Merchants.

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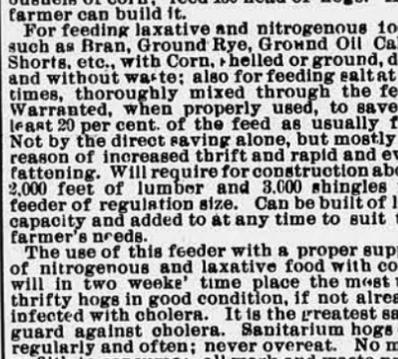


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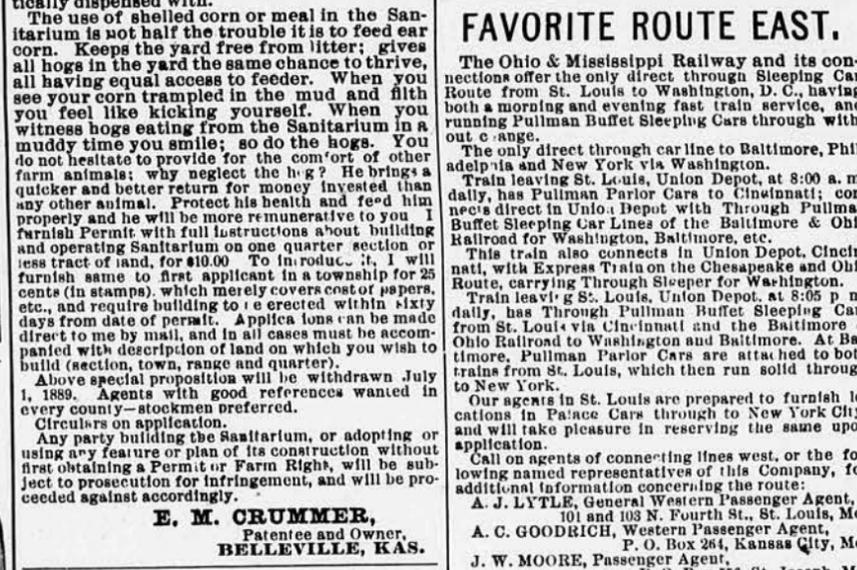
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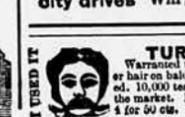
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"For Sale," "Wanted," "For Exchange," and small advertisements for short time, will be charged two cents per word for each insertion.

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EGGS. - Standard White Leghorn, Plymouth Rock, Brown Leghorn, \$1 per thirteen; Bronze turkey, \$2.

FOR SALE. - Light Brahma eggs, \$1 for thirteen; \$1.50 for twenty-six. My hens are selected from my own stock.

EXTRA EARLY SEED CORN. - Orders filled at once at prices given in this column March 7, until further notice.

600-ACRE STOCK FARM - Six miles from Eureka, Kas., on Spring creek. 160 acres in high state of cultivation; good bottom land; plenty running water.

EGGS. - Toulouse Geese, Wyandotte and Plymouth Rocks. Circular free. I. H. Shannon, Girard, Kas.

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FOR SALE - Twenty thoroughbred Poland-China boars, ready for service now. Address Walter Ferguson, Valley Falls, Kas.

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TREES, CHEAP. - Will bale and put on cars No. 1 Ben Davis, 4 to 5 feet and other varieties, for \$1 per 100.

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WANTED - To exchange, some beautiful building lots in Brentwood addition, just west of city, on street car line, with all kinds of bearing fruits for immediate family use.

EGGS FROM LIGHT BRAHMAS, BARRED PLYMOUTH ROCKS, WHITE PLYMOUTH ROCKS and White Leghorns, all of the finest strains.

FOR SALE - Choice Northern-grown Seed Potatoes - Early Ohio, 55 cents per bushel; Early Beauty of Hebron, Early Chicago Market, Early Rose, 50 cents per bushel.

FOR SALE OR EXCHANGE - For good horses, imported and fine-bred Galloway and Aberdeen-Angus cattle. A. J. Grover, Muscotah, Atchison Co., Kas.

I HAVE FOR SALE - At my farm, five miles southwest of Topeka, an excellent variety of early yellow seed corn, which I will deliver shelled and sacked on board the cars for following prices.

STALLION FOR SALE - A very fine Percheron dark dapple gray stallion, 3 years old next May, weighing 1,650 pounds.

FOR SALE - Eggs from high-class poultry - Wyandottes and Langshans - \$1 per thirteen at yard. C. W. Smith, Princeton, Kas.

SEED CORN. - Do you want seed corn that will mature before the hot winds? Address Trumbull, Reynolds & Allen, Kansas City, Mo.

WANTED - To negotiate with parties interested in starting a cheese factory or separator creamery. Have some means and fourteen years experience as butter and cheese-maker.

TWO-CENT COLUMN--(Continued.)

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2,000,000 HEDGE PLANTS - 125,000 two and three-year-old apples, 500,000 Russian mulberries, catalpas, etc. A full line of nursery stock. Babcock & Stone, North Topeka.

FOR SALE - Twenty-five Thoroughbred Hereford Bulls. Extra fine individuals, of the Fortune, Wilton and Grove families. Also cows and heifers.

RED CEDARS A SPECIALTY. G. W. TINCER, Topeka, Kas. Red Cedars, Transplanted, 16 to 20 in., per 100 \$6 25

My trees are nursery grown from Northern seed, stocky and well-rooted. I feel confident they will give entire satisfaction.

WANTED - Young men and women to consider their best interests and take a thorough business course at the Topeka Business College.

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POULTRYMEN! - The Fanciers' Review, Box K, Chatham, N. Y., a 16-page poultry journal, 25 cents a year. Three sample numbers 10 cents.

KANSAS ECONOMY INCUBATORS FOR SALE. Also 25-cent Book, which tells how to make and operate incubators and manage poultry or chicks hatched from incubators. Jacob Yost, Topeka, Kas.

SEED CORN - Pure Golden Beauty, \$1 per bushel. Sacks free. Address Chas. McCoy, Thompsonville, Jefferson Co., Kas.

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ZETA has the size, style, action, speed, endurance, beauty and disposition to sire Coach, Saddle, Driving or General-Purpose horses of the best class.

TERMS - \$15 for the season; \$25 to insure. Further information upon application to SEXTON, WARREN & OFFORD, Maple Hill, Kas.

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Breeder of high-scoring PLYMOUTH ROCKS. A few cockerels for sale now. Eggs \$2.00 per setting.

For Sale or Exchange! An A 1 thirty-room three-story hotel, controlling the trade in the best manufacturing town in northern Illinois.

Seed Sweet Potatoes. - All the 1 adding varieties. Large or small orders promptly filled. Prices low. Write for circular and price list. Address C. F. PHIMM, Augusta, Kas.

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20 PERCHERON and FRENCH COACH STALLIONS - all choice animals - Prize Winners at the Three Great Shows of France, 1888, as follows: That of the Societe Hippique Percheronne at Nogent-le-Rotrou, the Government Show at Alencon, and the Horse Exhibition of Paris.

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Are by far the most commodious and best appointed in the Missouri Valley, with ample capacity for feeding, weighing and shipping Cattle, Hogs, Sheep, Horses and Mules.

All the sixteen roads running into Kansas City have direct connection with the yards, affording the best accommodation for stock coming from the great grazing grounds of all the Western States and Territories.

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

Kansas City Stock Yards Co. Horse and Mule Market. FRANK E. SHORT, FRANK E. SHORT & CO., Managers. | CAPT. W. S. TOUGH.

This company has established in connection with the yards an extensive Horse and Mule Market known as the KANSAS CITY STOCK YARDS COMPANY HORSE AND MULE MARKET.

In connection with the Sales Market are large feed stables and pens, where all stock will receive the best of care. Special attention given to receiving and forwarding. The facilities for handling this kind of stock are unsurpassed at any stable in this country.

Settlements will be made when stock is sold. J. F. MORSE, General Manager. E. E. RICHARDSON, Treasurer and Secretary. H. P. CHILD, Superintendent.