

# KANSAS FARMER

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## BREEDERS' DIRECTORY.

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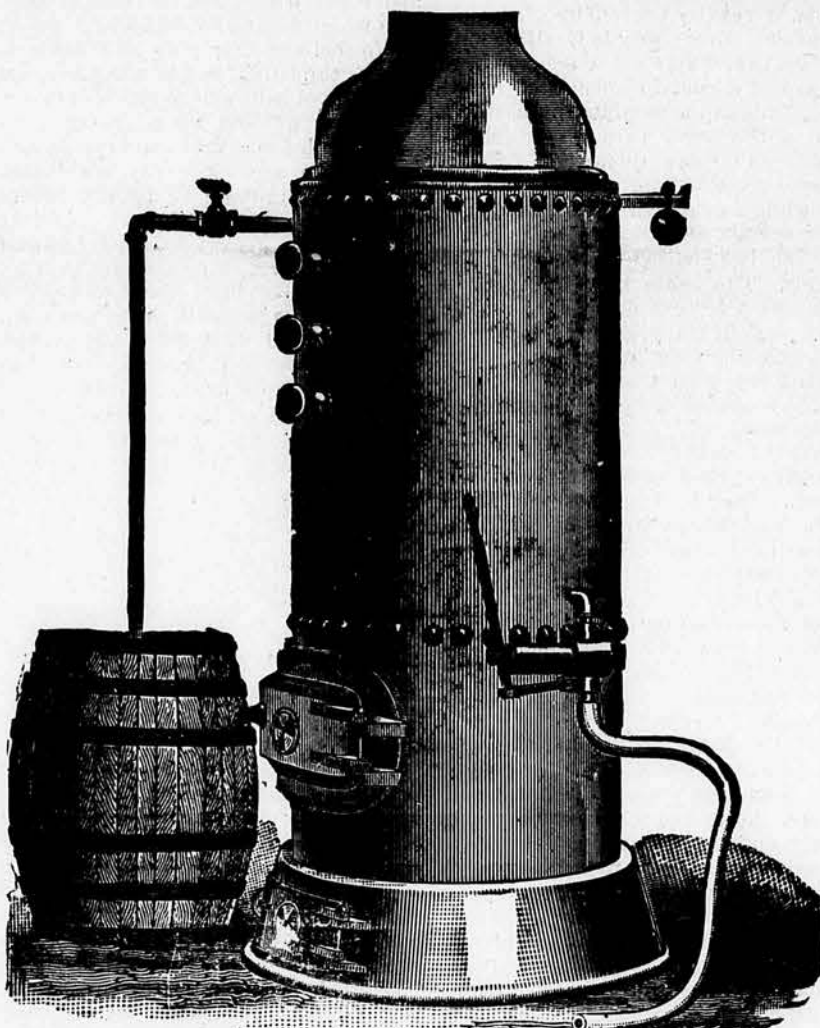
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## Agricultural Matters.

### PLANT LIFE ON THE FARM—HOW PLANTS FEED.

BY PROF. C. C. GEORGESON.

The root has two offices—first, to fix the plant in the soil, and, secondly, to absorb nourishment. To this might be added that some plants also use the roots for store-houses of food on which they draw in later stages of their growth, as, for example, beets, mangels, carrots, and, indeed, most plants which live but two years. During the first year they accumulate nourishment in the root, most of which is expended in the production of seed in the second year; but this feature is not of general application. That the roots secure the plant in the soil is a self-evident truth which does not need demonstration. Nor is it necessary to prove that the roots are the medium through which the plants are nourished. The point is to know just how the food is absorbed by the roots—whether the entire root mass is engaged in this process or it is confined to some special portions of the root, and in what condition the plant food must be, in order to be available for assimilation by the roots. It is comparatively easy to prove that plants live by drinking, rather than by eating, or, in other words, that they are fed by absorbing water which contains the necessary elements of nutrition in solution. In early times, before the science of botany was understood, some theorists believed that plants fed on small particles of soil, and that this was the reason for the good results caused by thorough culture, since frequent stirring of the soil divided it into small particles which were thus more readily swallowed and digested by the plant. This notion could, of course, not stand the light of investigation, since the roots had no mouths or openings anywhere through which even the smallest particles could pass. It was, on the other hand, evident that plants fed by some process of absorption, since a withered plant might be revived by merely putting its roots into clear water. This is further proved by immersing the young, active roots of a plant in water in which some coloring material has been dissolved. The roots absorb the color, which shows itself throughout the tissue. Now, does this absorption take place through the ends of the roots or through the whole length of the root? Investigation has proved that it does neither the one or the other. The tips of the roots, as has already been stated, consist of a compact mass of small hardened cells, which are designed to pierce the soil when the root is elongated by growth. These cells are not suited for absorption. Nor does the older portions of the root, on which the outer covering has become thickened and leathery, take a prominent part in feeding the plant. This is proved by that a plant having the older portions of the roots immersed in water, while the young growth is kept in the air, will wither almost as fast as if the plant was wholly exposed to the air. The absorption of plant food must, therefore, take place wholly, or at least chiefly, through the young and tender portions of the root. A close examination further reveals the fact that the young growth of the roots is more or less covered with very fine fibrous appendages which have been called root-hairs. These hairs are slender tubes with very thin walls, and they constitute the real absorbing surface of the roots. Many of these root-hairs are so small that they cannot be seen without the aid of a microscope. They are simple projections of the outer cells of the root, just as the fingers project from a glove—that is, they do not have a partition at the base but open directly into the cells. As the root grows older, this outer layer of cells becomes thickened and the root-hairs disappear and the cells lose absorbing power in proportion. This explains why the older portions of the roots, covered with a thickened epidermis or sort of bark, have but slight absorbing powers. At the close of the season of growth, when plant food is no longer in demand for the de-

velopment of new tissue above ground, absorption ceases and the root-hairs die. Even the newer portions of the root become covered with epidermis and the plant becomes dormant until warm weather the following spring renews its vitality.

But how can this absorption occur? What is the reason that the newly formed tender cells of the roots, when they come in direct contact with the moisture in the soil, absorb this moisture, or, in other words, what force causes the moisture to enter the cells? The cause is a natural phenomenon which has not been satisfactorily explained. It is due to the force technically called "osmose," or diffusion of liquids through a membrane, and is defined as a "kind of molecular attraction allied to that of adhesion." This force is exhibited when two liquids of different densities are separated from each other by a thin animal or vegetable membrane. The two liquids then tend to mix or become diffused by passing through this membrane. Thus experimenters have proved that when a bladder is filled with brine and then immersed in a vessel of water, that the water will pass through the bladder and cause it to become more distended and even to force its contents to rise in a tube attached to the neck of the bladder, and at the same time the brine in the bladder will pass through the membrane and give a salt taste to the water. Now the absorption of water by the tender cell tissues takes place on the same principle. The moisture in the soil in which the roots are bathed passes through the thin cell walls and rises in the tissues of the plant. That the absorptive power which this force gives rise to is very great, at least in some plants, is readily proved by direct observation. Everybody is familiar with the fact that maple sugar is made from the sap of a certain species of maple tree. This sap is obtained by boring a hole in the tree, through which it exudes in great quantities. Fruit-growers are also familiar with the fact that when a grape vine is pruned late in the spring, after the roots begin absorption, it "bleeds" freely from the wounds. The same may be seen in stumps of trees cut down early in the season, and in many other cases. Such cases give abundant proof that the sap which flows from the wound so freely must be replaced by the liquid absorbed by the roots.

That the roots feed on the soil, as the common expression goes, is really not correct. They feed on water contained in the soil which holds certain substances in solution. What these substances are we shall see in a later paper. The presence or absence in the soil of these food materials makes the difference between a fertile and a sterile soil. The fertile low-lands along rivers and streams are fertile because they contain an abundance of this food material, and hill-tops and barren sands lack fertility because the elements of plant food are present in but small amount. Now, the root growth depends largely upon the fertility of the soil. It has been observed that when roots reach a fertile spot they develop an enormous amount of feeders, that is, small tender rootlets, which can absorb this nourishment. Any one can readily convince himself of this by noticing how enormously roots multiply in spots in the soil where a small mass of manure has been plowed under. It is frequently found to be penetrated through and through with a thread-like net-work of the fine white roots, while in the soil immediately surrounding such spot the roots may be but sparsely distributed. It has even been noted that when there are successive layers of fertility in the soil, the roots will develop in these layers in the manner stated, whereas, in the less fertile soil intervening there are but few roots to be found. It is for this reason that in a fertile soil the roots do not usually reach so far, but are more uniformly distributed through the whole mass of the soil than is the case when the soil is less fertile. In poor, sandy soil, it is claimed that corn roots have been traced for a length of fifteen feet from the plant. Call it instinct, or what we may, they seem to have the power to search for food, and when found they

make the most of it by producing an abundance of absorbing surface. In like manner, the roots of some plants apparently go in search of water. When the soil can be penetrated, alfalfa roots will thus grow to a great depth until the water table is reached, and it is a common observation that the roots of willows or other trees will follow a drain or sewer for long distances until an opening is found through which the water percolates, and entering this they will fill the drain, sometimes for many yards, with a mass of roots almost as solid as if it had been tamped in place. Agricultural College, Manhattan, Kas.

#### Sub-Irrigation.

EDITOR KANSAS FARMER:—We were very much interested in "A New Departure in Agriculture," by Secretary Mohler, and "Sub-Irrigation," by "S. B." of Pollard, and were prompted to give ideas which we have had on sub-irrigation.

Several years ago, we experimented with sub-irrigation in our garden, by using a mole ditcher, and were much pleased with the saving of water and work of hoeing, and the superior growth of vegetables irrigated in that way over those surface-irrigated.

Now, our plan for sub-irrigation is this: Dig trenches about six inches wide and eighteen to twenty inches deep, running with the slope of the land, and about ten feet apart, connecting at the upper end by a cross trench somewhat wider than the above. Into these trenches put six to eight inches of gravel or crushed stone, and then fill with earth. If for orchards the trenches could be dug so as to go under each row of trees if the slope permitted. Into the main trench put a box, open above and below, and fill with gravel, into which the water could be pumped.

We believe this plan will work as well as the tiling, and to many who are near gravel beds will be much cheaper.

We are getting up a trench plow with which a man and team can trench four to five acres per day, six inches wide and eighteen to twenty inches deep, trenches ten feet apart. And as we can obtain gravel two and one-half miles from farm, we calculate that we can put in the plant, ready to receive the water, for from \$15 to \$20 per acre, if we hired all work done; but we can do all the work within ourselves and at very small actual cost. We are going to experiment on an acre the coming summer and will give results, and would be glad to hear from others on this line.

It may be that our plan may need to be altered in some small way, but we believe it can be worked successfully. As to this, time and experiment will tell.

B. B. GILLET.

Larned, Kas.

#### The Want of Moisture.

EDITOR KANSAS FARMER:—That moisture is required in all vegetable life is demonstrated, from the planting of the seed through the various stages of growth to maturity. Drop the seed into a soil entirely destitute of moisture, and although it contain the germ of a new life, that life fails to develop and will continue to fail until moisture comes to the soil sufficient to give vitality to the latent spark awaiting it. Light, heat and moisture are important elements of plant growth, and while it is so that of the two first mentioned there is usually an abundance in all sections of our country, there are some sections where the supply of moisture through the natural channels is insufficient to answer all the demands of vegetation, and unless it can be supplied by artificial means, disaster is liable to result.

It is hardly possible to estimate the possibilities of any country in the line of crop production until there are opportunities for supplying to the soil all the moisture that the growing crop can appropriate. Even in sections that are considered well supplied with moisture, there are times of want that leave a very marked impress upon the growing crop. A crop of corn may be carried along in its growth by a good measure of moisture until about the time of earing, and then suffer from a failure of moisture, resulting in a greatly reduced crop. Fortunate is

the section of country that is so situated that it can husband and utilize the surplus water that falls. The subject of irrigation is one that is engaging the attention of farmers to a greater extent than ever before. Even in Connecticut, where, a few years ago, irrigation would not have been thought of, the subject is to receive attention and discussion at a coming meeting of the Board of Agriculture.

A great advance will be made in agriculture when it is so that water can be applied according to actual necessities of the crops.

WM. H. YEOMANS.

Columbia, Conn.

#### Farmers' Institute at Oberlin.

About forty farmers, a few of them accompanied by their wives, met in the court-room and organized a farmers' institute, Thursday evening. Hon. W. D. Street was elected Chairman, and H. W. Halliday, Secretary.

The program was opened by Dr. Mayo, of the Agricultural college, with a short talk upon the treatment of wounds in domestic animals. This brought out considerable discussion.

Prof. Mason and Mrs. Kedzie, of the Agricultural college, each gave a few words of explanation about the work of the college and the experiment station.

The subject of the raising of alfalfa was started and stories of success and money-making with an alfalfa field were told by Messrs. Street, Fawcett and Bliss. Even though some dismal tales of first experiences spoke of failure in first crop through lack of moisture or excess of jack-rabbits, every one seemed agreed that alfalfa was a glorious success in all parts of the country.

Friday morning the meeting was called to order by President Street, and a permanent organization was agreed upon, with Messrs. Sayles, Fawcett and Bliss as committee to arrange for future meetings.

The first paper was by Mr. Bliss, who raises Berkshires, upon the raising of swine in Decatur county. He believes in soaked corn and alfalfa. He raises hogs for the money there is in it, and says a good breed of animals, a mixed diet and careful attention will always bring a good profit. Several farmers gave special experiences and seemed to agree that hogs should grow a pound a day all their lives, and bring the greatest profit if sold at a weight of about 200 pounds.

Dr. Mayo was listened to with interest in his talk on "The Examination of Horses for Soundness." A good deal of discussion followed.

In the afternoon Mr. J. H. Sayles read a paper on "What The Hog Has Done for His Country." Mr. Sayles has just finished an experiment in pig-feeding, using four kinds of food—dry ground corn, whole soaked corn, dry ground wheat and whole soaked wheat. He uses, in addition, the same amount of other food for each pen and makes up his "balanced ration." He decides in favor of soaked wheat. He described the treatment he gave to a pig which made it into a hog weighing 814 pounds at the age of twenty-six months. He raises beets for his pigs, and says his crop runs from fifteen to forty-two tons per acre, and they grow on any kind of ground.

Mr. T. H. Fawcett read a paper on sub-irrigation, which created much interest. There are now about a thousand acres of land in the county under sub-irrigation, and this land gives good crops in the driest seasons. Nine hundred dollars worth of produce was sold from six acres of such land last year.

Sub-irrigation in Decatur county is accomplished by building a dam of stone across a bend in the creek; the water backs up and the porous soil allows it to seep through for some distance on either side of the stream. Capillary attraction draws the water to the surface.

Prof. Mason gave a talk upon the propagation of plants, fruit trees and small fruits taking his special attention. His illustrations, by means of charts, created much interest.

The evening session was opened by Mrs. Kedzie, with a talk on "Domestic Science for Girls." Mr. Sayles followed with a paper on "Tree-planting in



Decatur County." In spite of dry weather and hot winds, Mr. Sayles has a good orchard well started, and he believes fruit can be grown in quantity even on the high divides. Prof. Mason was asked many questions about the culture of small fruits, both with and without irrigation.

The institute closed with a hearty vote of thanks to the Agricultural college representatives, and with an enthusiastic thought of future institutes to be held in Oberlin.

## The Stock Interest.

### LIVE STOCK MATTER FOR 1894.

#### Important Announcement.

The special editor of this department of the KANSAS FARMER is glad to announce to our readers for 1894 that the live stock interests will be cared for much better during the New Year than ever before. More and even still better matter has been arranged for. Everything pertaining to live stock husbandry and the animal industry will be given careful attention by timely and practical articles from week to week. The services of two special live stock editors and a strong corps of special contributors of recognized authority in the West on breeding, feeding and practical live stock management have been secured to furnish articles for this department. Therefore it affords the writer special gratification to announce a feast every week of 1894 for readers of this department, which will be worth, in a business way, many times the subscription price of the paper for the entire year.

The editor desires that every breeder and stock-owner will do all in his power to extend the circulation and usefulness of this paper, as well as to make free use of these columns to discuss anything relating to live stock husbandry. Talk, work and write for the KANSAS FARMER.

#### Charcoal Supplies for Swine.

Every one who has had much to do with the rearing of swine, whatever the conditions, has time and again observed that they seem to crave certain substances that are not ordinarily regarded as foods. Among the best known of these are charcoal, stone-coal, bones, decayed wood, pieces of brick, mortar, etc. No matter how much they are given of what may be called proper food, they will, when given access to the substances named, eat astonishing quantities—so much as to apparently endanger their well-being, if not their lives. A litter of pigs will pick the bits of charcoal from a bucket of wood ashes with as much avidity and relish as a hungry boy has for the plums in a Christmas cake.

Of such articles that are devoured by swine, none can be more harmless than charcoal, and it indeed is recognized as being a healthful corrective, giving tone to the digestive system and thereby tending to prevent the breeding of intestinal worms, which have been and are the bane to thousands of pigs, big and little, in the Western States. To those who have not observed the matter closely, the facts as to worms and the damage they do to the swine-growing interest every year, would, if indicated in dollars and cents, represent an appalling total. This is so much the case that when such inexpensive substances as charcoal, wood ashes and salt will serve as almost infallible preventives, no man who raises hogs at all should fail to have them where the animals can at all times help themselves. A pint or a pint and a half of salt to a peck of ashes makes about the right proportions, and this mixture should, of course, be kept in a sheltered place, protected from the rain or snow.

One of the best-informed and most successful pork-growers the writer knows anything about makes a specialty of having his pigs supplied with

a charcoal he makes from cobs. He digs a hole in the ground, four or five feet in diameter and deep enough to hold a good wagon-load of cobs. In the bottom of this he makes a fire, fills in the cobs, and, when fairly started, covers over so tightly as to make the combustion quite slow. Rightly managed, he in this way obtains what, mixed with salt and sometimes sprinkled with strong copperas water, makes about the cheapest and best "medicine" or rather disease-preventive yet discovered or invented. When such simple means are known unmistakably to be effective, it is an expensive mistake to ignore them until disease is apparent and then depend upon the drug store and the veterinarian to cure (and nine times out of ten they fail) what, by very little effort, could have been prevented. The old saw about the "ounce of prevention," for all of its antiquity, is a very wise saying.

#### Stay in the Swim.

"There never was a time when we felt like more earnestly recommending those engaged in swine breeding to stick to their text than at present," says the *Western Swineherd*.

"There is just enough persistence in our make-up to give us a high opinion of the man who has the courage to hold onto a good thing. And at present swine breeding is the best thing by all odds in live stock raising. Over a great portion of the hog-producing regions of the West a good hog is at present of better market value than an average horse. This means marketable animals, not those valued for breeding purposes. In the same regions sheep go begging at less than \$1 a head and common stock cattle are hardly worth their keeping. These conditions may change, but the change is not coming in the next twelve months. The grain put into hog next year is going to pay the farmer better than that put into any other stock that walks on four feet, or, for that matter, on two. That many appreciate the truth of this is made evident by the brisk demand for breeding stock. The number who report being sold out of everything is larger than usual at this season, and it looks now as if very little stock would be left in the hands of breeders a month, or at the most two months hence. The times are hard; we all admit that. And the harder the times the closer the world gets down to that great essential of living, hog and hominy. Those who tune their palates to trout and turkey taste in times of prosperity return to the substantial of life when adverse winds blow. Bacon goes farther than turkey in giving relish to a meal and the country is getting down to a bacon basis. Let us furnish the bacon."

#### Improved Stock Breeders.

The fourth annual meeting of the Kansas Improved Stock Breeders' Association will be held at Throop hotel, Topeka, on January 9 and 10.

These meetings have always been of great interest and benefit, not only to breeders, but to all interested in improved stock and methods of management. The program is not completed, but enough has been promised to make this the "blue ribbon" meeting. All breeders should attend, and a cordial invitation is extended to all to meet with us. Reduced rates will be given by the railroads of the State to those in attendance.

The partially arranged program is as follows: Business meeting. Election of officers, etc. President's address. "Beef Breeds," by G. W. Glick, Atchison; J. M. Winters, Irving. "Dairy Breeds," A. E. Jones, Topeka; H. M. Kirkpatrick, Kansas City. "Swine Industry," F. D. Coburn, Kansas City; G. W. Berry, Berryton; W. S. Hanna, Ottawa. "Draft Horses," O. L. Thisler, Chapman; Henry Avery, Wakefield. "Trotters," M. A. Low, Topeka; D. N. Heizer, Great Bend. "Sheep Husbandry," E. D. King, Burlington; H. A. Heath, Topeka. "Live Stock Husbandry," I. D. Graham, Manhattan. "Health of Live Stock," Dr. S. C. Orr, Manhattan. "County Breeders' Clubs," W. P. Popenoe, Jr., Berryton. "Exhibitions at Fairs," by everybody.

#### Feeding for Wool and Mutton.

A different ration for the sheep that is to grow wool, is needed from what should be supplied when feeding to fatten, says a thoughtful and practical writer in the *Wool and Hide Shipper*. This is an idea that seems to have been overlooked by a great many Western flock-masters, and as sheep husbandry promises to become a permanent feature of the animal industry, the balanced food ration should have greater consideration, and especially so at the present time, when so many thousands of range sheep are being fed every winter in Kansas and Nebraska. To produce fat requires food to fill up the tissues and to store up material for heat and life and needs the consumption of starchy and oily foods. While wool is produced more from the albuminoids, such as the feeding of bran, oil meal and the class of foods best calculated for the growth and development of bone and muscle rather than fat.

During the winter, when sheep must depend largely, if not entirely, upon the food supplied, care must be taken to feed the fleece and at the same time the body which is to produce it. If the body is made feverish from the food supplied, there will be more or less of a failure, while if, on the other hand, the food is too stimulating the sheep will lose their wool. The idea should be to feed so as to keep in a good thrifty condition, and the rations should be one well calculated to secure this most freely and yet at the lowest cost.

Too much corn or timothy hay during the winter is a detriment rather than a benefit. Yet some corn in winter can nearly always be given with profit, as a heating food is nearly always needed in winter, at least to some extent. But if given too much corn there is always danger of them losing their wool.

The rations must be one that supplies first of all the elements needed to maintain animal life and then grow flesh or wool. No one material will do as fully as a good combination or variety. Corn may be fed at night with clover hay; wheat bran and unthreshed oats make a good morning ration, or if a ground ration is supplied, a ration made up of wheat bran, four parts; corn meal and oil meal one part each, is a good one when wool is the principal object in feeding. Clover or millet hay is even good; cured corn fodder is better than timothy or red-top hay. Many good feeders consider that good oat straw is a preferable ration as a roughness to either timothy or red-top hay. The condition of the sheep must always be taken as the guide as regards quantity. Keep thrifty and be sure that the ration is sufficiently liberal to do this, and not only can a good growth of wool be secured, but it will be of the best quality, both items of importance in making sheep most profitable.

#### Baby the Animals.

A. once bought a lot of cows of B. We heard him complain that they did not do well for him, and he gave as his reason that B. had babied them. Exactly. And he is the man that will succeed with cows. Why could not A. baby them, too? A. "told on himself" when he made that remark. We doubt not, that our friend John Gould babies his cows. Terry babies his potatoes; Greiner makes his garden his pet. That is the way to succeed. But we had rather buy cows from a farm where they had not been taken care of quite so well as we propose to do it, rather than from one where they have been better cared for than we care for them. Cows take kindly to any advance in treatment, but not to poorer treatment than they have been used to. This is why some make a failure of buying fine blooded stock. The cattle are not as well cared for as they have been used to, and they cannot stand neglect or ordinary treatment so well as animals that have never known any other. Buy babied stock if you are ready to baby them a little more yet, and you will be all right.

Last winter we met Mr. L. E. Shattuck, at Stanberry, Mo., one of the greatest sheepmen in the West. He has taken as high as \$2,100 in prizes in a single year. Some \$8,000 during the past eight years. He told us how he

## Scrofula

is Disease Germs living in the Blood and feeding upon its Life. Overcome these germs with

## Scott's Emulsion

the Cream of Cod-liver Oil, and make your blood healthy, skin pure and system strong. Physicians, the world over, endorse it.

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STRENGTH And beauty of leather is Vacuum Leather Oil; 25c, and your money back if you want it Patent lambskin-with-wool on swob and book—How to Take Care of Leather—both free at the store.

Vacuum Oil Company, Rochester, N. Y.

started. Bought six sheep with his first year's earnings when a boy. They were good ones, and he babied them. About the time they were to have lambs he had engaged a girl to go to a party with him on a certain night. He went to the barn to get his horse and found some lambs. It was cold and he staid with them and let the girl go. We asked him if he got the girl eventually. "No," he said, "I lost her, but saved the lambs." This is a little hard on the girls, but such are the young men who make their mark in stock keeping—men whom any girl, young or old ought to be proud of. Be very kind to and gentle with all animals if you want to get the most possible out of them. In short, baby them. If you don't love them, and can't do this, do something else. Raise crops and sell them; but they will pay for babying, too.—*Exchange*.

#### It Pays.

It pays to read the papers, especially your own farm paper, for often in this way good business opportunities are brought to your attention. It may be that you wish to secure a bargain in implements, or a situation for one of your boys, or you wish to use your spare time to good advantage; if so, B. F. Johnson & Co., of Richmond, Va., have an advertisement in another column that may interest you.—*Adv*.

#### San Francisco's Midwinter Fair

will be one of the attractions on the Pacific coast during the coming winter. It will be held from January 1 to June 30, 1894, and might be aptly termed the World's Fair in miniature.

It will equal if not surpass the great Centennial.

The Union Pacific is offering unusually low round trip rates to all California points and Portland, Ore.

Send 2 cents for our California Sights and Scenes. A. M. FULLER, E. L. LOMAX, City Agent, Topeka. Gen'l Pass. and Ticket Agt., Omaha, Neb.

#### Memphis Route! Half-Rate Holiday Excursions.

On December 23, 24, 25, 30, 31 and January 1 the Kansas City, Ft. Scott & Memphis railroad company will sell round-trip tickets between all stations on its lines at rate of one fare, with minimum rate of 50 cents return limited to January 3. On December 19, 20 and 21 this company will also sell excursion tickets at one fare to points in Florida, Tennessee, Mississippi, Alabama, Georgia and the Carolinas, with limit of thirty days for return. On dates last named and for the special accommodation of sportsmen and home-seekers, round-trip tickets at one fare (with thirty-day return limit) will be sold to points in Missouri and Arkansas east of Springfield, from Lamar and stations north and west, including the Clinton division north of and including Clinton. J. E. LOCKWOOD, General Passenger and Ticket Agent, Kansas City.



## The Farmer's Forum.

This department is devoted to the discussion of economic questions and to the interests of the Alliance, Grange and kindred organizations.

### THE FUTURE OF WHEAT.

Mr. F. H. Peavey, the well-known grain dealer of Minneapolis, in an interview at Sioux City recently, is reported to have admitted that he fully realized that grain prices are now very low, but as to the future he frankly declared that he had no opinion, and didn't believe it would be worth anything if he had one.

"If you want to make some money in grain," he said, "I'll give you a pointer. It is the best advice I can give on the subject, and I never charge for it. To do the best in grain—let it alone. Operations on the grain market are like those on the stock market in the play of 'Henrietta,' if you ever heard it. There is an old man in the piece who speculates in stocks. He is very smart and has been eminently successful. He has two sons. One is brilliant and successful, but gets on the opposite side of the market from his father, who is a bull. The other is a sort of imbecile, who knows nothing of the market and never asks advice. He tosses a copper; if it comes heads up he buys, if it's tails he sells. The imbecile gets wealthy while the father and the bright son fail.

"Yes, the prices of grain are very low, but I can see no reason to expect an advance. Take wheat. The elevators at Minneapolis, Duluth, Chicago and New York are full. There is no demand. The trouble is not because of lack of money. There never was a time when money was to be had more readily or cheaply, for investment in grain, than now. I can get all the money I want at 5 per cent. People are willing to put money into grain because it is a commodity that can be turned into money readily, and on which there is not much risk. They would be very slow to put the same money into farms to be cut up into town lots.

"The low prices of grain are caused by the small foreign demand. It is Liverpool, after all is said, that rules the world's prices on grain. As careful reports are received there every day from Russia and India and South America and the United States, as we at Minneapolis get from Minnesota and the Dakotas. The fact is, the world's production of wheat has increased faster than the demand for it, and I believe the prices will be lower and will stay so. Why not? Everything the farmer needs is to be had for less money than formerly. He farms for less money because he has better machinery, for which he pays less than he used to pay for poorer utensils. Everything else that he buys is cheaper in the same way.

"Over in Russia wheat is sold for next May's delivery at the same prices that are placed on that of to-day's delivery. We are paying 7 cents more for May wheat than for the cash article. The result is that the 7 cents is absorbed by the Russian, who is selling the wheat for May delivery, while we can't sell what we have on hand.

"The new countries always raise wheat, and the thing our Western farmers must do now is to diversify their crops. This is being done in a large degree already. Why, I can remember when 800,000 bushels of wheat were shipped out of Yankton county, S. D., in one year. Now little or no wheat goes from there; it's all corn and hogs. At that time corn was shipped to Le Mars, because it was believed that corn could not be raised so far north. Now very little wheat is raised in that section; corn is the staple. Out on the Omaha road, in Nebraska, they raise wheat, corn, oats, flax and all the crops that can be made successful in this section, and the farmers are getting rich. When the cross roads went into the section that had formerly been entered only by the Omaha lines, I expected to lose a great deal of business; instead, it has increased very much. The country is filling up. More land is farmed, and it is farmed better.

"I consider that this country is still in the infancy of its development.

Your children will say, in their time, that it is still a new country. Only one-eleventh of North Dakota is under the plow, and one-seventh of Minnesota. The proportion in Iowa is still very small. All this must be filled up before this will cease to be a new country."

### Missouri Supreme Court on Option Dealing.

The St. Louis Journal of Agriculture of recent date says:

Judge Burgess, of the Missouri Supreme court, last week filed an opinion in a case involving the construction of the law relating to option dealing. There was a "cross appeal in two cases, one by the brokerage firm of Connor & Connor, of St. Louis, to recover commission and \$4,400 of margins from a man named Black, and the other by Black to recover \$5,000 put up with the firm to hold up a deal on 100,000 bushels of oats." The court held that the dealings were purely fictitious, so far as an actual delivery of grain was concerned, and that such transactions, under the existing law, are gambling and consequently void. If even one of the parties to such a transaction is dealing in fictitious property the contract is also void.

Concerning the suit of the brokerage firm against Black the Judge held that "plaintiffs were parties to an illegal contract, which they were seeking to enforce and in which the law will not aid them." He said that the sale of any of the properties mentioned in the law without any intention of delivering the property sold, and all the buying or selling, or pretended buying or selling of such property on margins or option delivery when the party selling the same does not intend to have the full amount of the property on hand or under his control to deliver upon such sale, is gambling, unlawful and prohibited.

We are glad that the Supreme court has rendered this decision. It will aid in robbing this nefarious practice of its respectability, for every one dealing in options will now be, or should be looked upon as a gambler of the worst sort. But we don't want our readers to suppose that this decision renders a federal anti-option law unnecessary. If grain gambling could be absolutely stopped in Missouri, the market-wrecking and price-fixing establishment would still remain. The prices of grain for all the States are fixed in Illinois by the grain pit gamblers of Chicago; and as option dealing in one State affects the prices of products in all the States it is a matter of inter-State concern. We hope, therefore, that all the influence possible may be brought to bear to induce Congress to protect the producers against the den of gamblers who manipulate the prices of the necessities of life.

### The Grain Gamblers Are Ready.

The fight against possible legislative interference with the profits of gambling on prices of agricultural products has already been inaugurated by the defenders of this nefarious system. One of the organs of these gamblers becomes ironical in its treatment of the subject, and says: "If Congress has any time to spare from the discussion of tariff and the currency, it is altogether likely that we shall have another siege of the anti-option question. Senator Peffer has already warmed over the Washburn bill and introduced it in the Senate. Farmer Hatch has prepared another bill and submitted it to the Committee on Agriculture, of which he is chairman. He will introduce it in the House and try to have it referred to his committee. According to the present rules of the House, it should be referred to the Committee on Ways and Means. If this is done, Hatch's bill will die 'a-bornin'." If the agricultural committee gets the reference it will report the bill favorably and the fun will begin.

"Uncle Hatch has cut out of the bill the part imposing a tax on legitimate deals. He thinks his bill will discriminate between legitimate and illegitimate deals effectually. If his bill makes distinctions, he will leave a loop-hole for universal evasion. The history of

## \* THE PRODUCT OF THE FARM! \*

**WE WILL SELL YOUR** Grain, Hay, Dressed Hogs, Lambs, Veal, Wool, Butter, Eggs, Poultry, Fruit, Vegetables, Hides, Pelts, Furs and all kinds of Produce on the Chicago market for you on commission, to best advantage.

Organize a league in your neighborhood—members participate in commission profit of sales of their own products.

Send for tags with instructions for shipping, to our General Office, 706 Garden City Block.

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legislation proves this. It is said that if he cannot get an anti-option bill through, farmer Hatch will attempt to have all deals for future delivery taxed as a means of raising revenue. He is in earnest and the fact that he was sat down upon during the last Congress does not seem to dishearten him. Still, he must know that any such bill as he proposes stands little chance of successfully running the gauntlet of legislative action and Presidential veto."

### Labor and the Tariff.

The position of the newly elected Master Workman of the Knights of Labor on the question which is soon to become the absorbing one before Congress, namely, the tariff, is a matter of interest, since it may be taken as, in some measure, an indication of the estimation placed by those supposed to be the chief beneficiaries of protection, upon the aggregate of the effects upon their own prosperity. The new chief, Mr. Sovereign, is quoted by the Associated Press as saying: "I am an out and out free trader. I believe in no makeshifts or partial reductions of tariff taxation. The so-called protection to all labor is a delusion. Labor is not protected. Invested capital receives a bonus in the form of protection and it is then optional with the capitalist to give a share of the bonus to labor in the form of increased wages. But the option is seldom, if ever, exercised."

### State Bank Notes.

The following is the outline of the report made by the sub-Committee to the full Committee on Banking and Currency for a bill to repeal the 10 per cent. tax on State banks:

SECTION 1. The tax of 10 per cent. on State bank notes, etc., paid out and used as currency, is repealed.

SEC. 2. Except as below provided, no State bank notes, etc., shall be paid out and used as currency outside of the State of their issue, except subject to a penalty of 10 per cent. each time paid out.

SEC. 3. State bank notes may be paid out and used as currency (outside of the State of their issue) on compliance with the following:

A—Bank notes to be furnished, and issue to be registered by the Comptroller of the Currency, and to be of sharply distinctive design.

B—Banks issuing such notes to be subjected to inspection by the Comptroller of the Currency.

C—Outstanding notes of each bank to be limited to 75 per cent. of paid and unimpaired capital.

D—State bank notes to be made by banks of issue a first lien on all assets of issuing bank, and a liability against stockholders to an amount equal to their stock in addition to it.

E—An assessment of 1 per cent. to be paid on taking out circulation and also on all circulation outstanding more than a year.

SEC. 4. State bank notes may also be paid out and used as currency (outside of the State of their issue) on compliance with A, B, C and D of the section, on deposit with the Comptroller (as security for ultimate redemption of notes) of United States, State, municipal, etc., securities to amount of par of notes to be issued, the character of securities permitted to be strictly prescribed in this bill.

Friends of the Wilson bill, the new tariff measure now before Congress, claim to have canvassed its strength and ascertained that it will pass both houses and be laid before the President for his signature by March 4. That the President will approve it is not questioned.

### Thinks Socialism the Remedy.

You may ignore the fact, but it is at such times as these that Socialism forces itself to the front and demands to be recognized. It is the desperate situation in which we find ourselves placed by the stringency of money, the uncertainty of the government in regard to this important subject, the fearful doubts and apprehensions awakened by the ever-increasing number of unemployed—who are, at present, unable to obtain even the semblance of an honest livelihood—that force us to the conviction that Socialism and its objects are bound to attract a greater degree of attention in the future than they have ever done before. The present crude theories of Socialism are but characteristic of the real feelings of the people, and are significant as the first serious solution of the greatest of problems. We may lull our uneasy consciences to sleep with the argument that no man who will work need be hungry, but, after all, this is a very transparent falsehood; for there are thousands who would gladly work if they were given an opportunity, even if only to gain a pittance to keep body and soul together. There is not the least doubt in the minds of those who read this that the modern state, whether you call it monarchy or republic, is a mere league of the rich and powerful to acquire and hold possession of the best things in life; and, very often, their power is used to such disgraceful purposes as to call down the censure of every honest, right-thinking man.

There is a rift in the lowering skies of social degradation. Hopes and aspirations are awakened. The intuitions of men grasp the healthful ideas of progress and reform. Men are coming to believe in the possibilities of the poet's dream, the sage's prediction—the abolition of poverty.—Bjornstjerne Bjornson, in the Cosmopolitan.

A few years ago our statisticians were concerned at the accumulation of a great surplus in the United States Treasury. Truly, it was a matter of serious moment; but they readily rose to the emergency and so increased appropriations that not only have we ceased payments on the national debt but a deficit stares the Treasurer in the face and the power to issue additional interest-bearing bonds is asked. The governments of the old world have debts which they do not expect to pay and they consider themselves solvent and really fortunate if they still have sufficient credit to enable them to secure further loans. Is this country to imitate them in this and saddle itself with perpetual burdens of interest?

### Mothers, Save Your Children!

and read what a mother says of Steketee's Pin Worm Destroyer. Mrs. R. J. Ellis, of Hood River, Ore. "Mr. Steketee: Please find 25 cents for a package of your Pin Worm Destroyer. It has cured our little boy of having fits. We tried three different doctors and none of them could help him. Your medicine has been worth thousands of dollars to us; we will not be without it. One trial of this medicine will convince any one that it cannot be praised too highly." This advertisement will appear but a few times; as it is only 25 cents I cannot afford to advertise it. Each bottle ought to sell for \$1. If your druggist has it not for sale, then send 25 cents in United States postage and I will send by mail. Take nothing else. Cut this out and take it to your druggist. Address Geo. G. Steketee, Grand Rapids, Mich.

Initiative and Referendum Lectures  
On direct legislation. For information and history, as well as plan for State organization, write to

W. P. BRUSH, Topeka, Kas.



## The Family Doctor.

Conducted by HENRY W. ROBY, M. D., consulting and operating surgeon, Topeka, Kas., to whom all correspondence relating to this department should be addressed. Correspondents wishing answers and prescriptions by mail will please enclose one dollar when they write.

### Swing of the Medical Pendulum.

In the delightful jaunting-car of imagination, we can all rattle over the rock-ribbed hills of history until we reach the great level plain of primeval life, past all the colleges and school houses of the Esculapians, past the primitive oral schools, under the trees and up to the gates of primordial life, so far away from the nineteenth century that we can find no doctors, no drugs, no druggists. There in that very dim light of the morning of humanity men knew nothing of the quarrels of doctors or the wrangles of the medical schools, or the loud shout of the druggists over the superior virtues of their special preparations. In that morning hour of the race the "S. T. 1860 X." of the patent medicine man disfigured no walls or fences on humanity's pathway nor glared from the stony faces of the hills "rock-ribbed and ancient" as the rolling globe. There was a time when myrrh and thyme cut no figure in the healing art, for there was no healing art among the sons of men. From our high perch on our jaunting-car we see an adventurous man or boy climbing a tree for a pomegranate or pumeloe lose his footing and fall with the primal dull thud of the race, and hear his wall of anguish as the first bone in the human frame is broken by that fall. We can see his fellows gather around him in consternation and affright. Nobody thinks then of running for the doctor, for that more modern product of evolution had not yet been evolved. What did they do? They tried to walk him to his mother, but he could not walk. Then they dragged or carried him thither and left him to his luck. They probably brought him figs and mangoes, and kept the beasts at bay, and after many moons and seasons they saw him hobble on again by the help of a stick, with a crooked leg to limp on. But somewhere and at some time our forefathers learned that a broken bone would in time unite. Then one morning another man fell and broke his leg in such a way that the upper fragment of bone tore its way through the soft tissues and protruded. They fed him and left him to his fate. But fate was not kind to him and his leg did not heal. The flies blew his swollen member, the maggots nested in the seat of fracture; he got thirsty, lost his appetite and finally died from the injury, and men learned that nature would not knit up every broken bone. That was another lesson. As we ride further we see a boy under a tree who has been testing the edibility of green figs or dates, and he is yelling and writhing in the pinch of green fruit colic. But on the morrow he sucks a ripe mandrake and goes to his play with the gambling kids, and man learns that green figs will gripe and purge. A little further on we see a heap of leaves, and under it the corpse of an urchin who had experimented with green cucumbers and gave up the ghost. Another lesson was learned. After a time an old gray-headed fellow who had seen a respectable number of broken limbs, some followed by death and others by deformity, got it into his head that if the cases that recovered were properly taken care of their limbs might make a better showing in the tournament of good legs. So when the next accident happened he obtained leave to try his hand on keeping the leg straight while it was being knit up again. He got that one fairly straight, but it was broken at the middle of the thigh, and he found that while it was straight it was still far too short to match its running mate. Then he scratched his head as if there were something running in that, and on another occasion he tied the foot to one tree and the body of the unfortunate to another and gave him a good stretching. The outcome was encouraging and he kept on and finally was sent for, far and near, when a leg was broken. One day when he saw the bad boy of the neighborhood contorted with mullygrubs, he thought occurred to him that he might give the fellow something through his inwards to ease the pain—might send something after the wild crab apples that would pacify them and divert their attention or hurry them down the canal. He had once found out by accident that after chewing a piece of mandrake root which looked nice and tempting he had been hurried out of sight of his fellows on a hasty mission of his own, and so he concluded on the score of analogy that mandrake root might hustle the crab apples out of the boy. It was tried, and lo, it succeeded. There was another lesson, at least to the observing ones. Mandrake would hustle crab apples so that they would give over twisting the boy's ventral apparatus.

Then another old fellow, seeing this old fellow's success with broken bones and borborygmus, concluded that he could do

as well and gain at least a share of the plaudits of the primitive populace. But he was not satisfied with a simple imitation of his rival, for the rival got all the credit of inventing and discovering the method of relief and he only got credit for doing what had been done before. So he tried nut-galls for the next case of colic, and while the sufferer was worse for a while and concluded to send for the older doctor, he suddenly grew better, before the old fellow could be found, and nut-galls were lauded alongside of mandrake for unlocking the clutch of the gripes. So these rivals went on trying this and that and the other thing for colic and broken bones, until others became infected with the desire for fame and set themselves up for helpers of the sick and menders of broken bones, until after a while the fellow who could not mend a broken bone became a *mend-I-cant*, or something equally disreputable, and at the present day the veriest jay thinks he can give pointers to all the doctors in the land. He is quite ready to announce that "Doc don't know his business. I'll jess tell him so when I see him." In this age of newspapers, the fellow who cannot play the role of bone-setter and puker thinks he is in everlasting disgrace, and most of them can give you more pointers than a porcupine.

(To be continued next week.)

### Program of Annual Meeting of Kansas State Board of Agriculture.

WEDNESDAY, JANUARY 10, 1894.

#### AFTERNOON SESSION.

Opening at 4 o'clock p. m. Roll call; report of Committee on Credentials; reading minutes of previous meeting; reports of officers; reports of committees.

#### EVENING SESSION.

Address of welcome, Governor L. D. Lewelling.

Response, the President, A. W. Smith. "Wheat-Growing in Kansas," Joshua Wheeler, Nortonville.

"Laying Off Land for Plowing," A. C. Shinn, Ottawa.

"The Relation of Horticulture to Agriculture," Samuel Reynolds, Lawrence.

"Problems for Solution," the Secretary.

THURSDAY, JANUARY 11.

#### MORNING SESSION.

"Creamery System of Dairying," J. E. Nissley, Abilene.

"Lessons from the Danish Dairies," Prof. C. C. Georgeson, Manhattan.

"Results of Chinch Bug Experiments," Chancellor F. H. Snow, Lawrence.

"Alfalfa," John H. Churchill, Dodge City.

"Alfalfa," M. A. Wilson, Atwood.

#### AFTERNOON SESSION.

"Farmers' Institutes," Judge W. B. Sutton, Russell.

"Circulation of Water in Soils" (illustrated by experiments), Prof. Milton Whitney, Johns Hopkins university.

"Things We Want to Know," H. R. Hilton, Topeka.

"Kansas Minerals at the World's Fair," Prof. Robt. Hay, Junction City.

#### EVENING SESSION.

"Experiments for Farmers by Farmers," President Geo. T. Fairchild, Manhattan.

"Irrigation in Sub-Humid Regions," J. S. Emery, Lawrence, national irrigation lecturer.

"Irrigation—Its Past, Present and Future," E. R. Moses, Great Bend, President Inter-State Irrigation Association.

"Irrigation in Cheyenne County," B. F. Campbell, St. Francis.

"Irrigation from Wells With Wind Power," I. L. Diesem, Garden City.

FRIDAY, JANUARY 12.

#### MORNING SESSION.

"A Chapter of Kansas Geology," President S. Z. Sharp, McPherson.

"The Future of the Cattle Industry," W. J. Bailey, Baileyville.

"Beef Production," John McDearmid, Kansas City, Mo.

"The Horn-Fly," R. T. Stokes, Garnett.

#### AFTERNOON SESSION.

"Criminal Reform," Ex-Governor Geo. W. Glick, Atchison.

"Trichina," Dr. C. J. Sihler, Kansas City.

"Rabies, or Hydrophobia," Prof. Nelson S. Mayo, Manhattan.

"Texas Fever, Quarantine Regulations, Etc.," J. T. White, Ada.

"The Effect of Prairie Fires on Vegetation," John L. Finley, Dodge City.

#### EVENING SESSION.

"The Necessity of Cheaper Transportation," A. G. Forney, Belle Plaine.

"Rural Life," Mrs. G. M. Cottrell, Topeka.

"The Relation of Western Agriculture to the East," Col. Daniel Needham, President New England Agricultural Society.

"The Farm Home," Mrs. Nellie S. Kedzie, Manhattan.

#### DISCUSSION OF PAPERS.

Papers, when read, will be subject to discussion, and delegates are expected to prepare for these discussions. Others present, of whom there will be a large number, will, as heretofore, also have the privilege of participating in the discussions.

### Kansas Swine Breeders.

The Kansas Swine Breeders' Association will meet at the Hotel Throop club rooms, Topeka, Kas., on January 10, 1893, at 7:30 p. m., and continue over the 11th. Owing to the present prosperous condition of the swine industry, the breeders and feeders should make this meeting the most enthusiastic and instructive ever held by this association.

#### PROGRAM.

President G. W. Berry, Address of Welcome; H. M. Kirkpatrick, "Elements of Successful Swine Husbandry;" N. H. Gentry, "The Pig From Farrowing to Market;" R. S. Cook, "Eastern versus Western Pigs and Prices;" Jas. Mains, "Care of the Male Hog;" M. B. Keagy, "Care of the Sows;" J. H. Sayles, "Most Profitable Farmer's Pig—Cost per pound, etc.;" W. B. McCoy, "Why I Prefer Poland-Chinas;" C. J. Huggins, "Why Farmers Do Not Feed Swine More Profitably;" W. S. Hanna, "The 'Score Card' as a Means of Judging Swine;" Hon. T. A. Hubbard, "Pastures—Necessity of Clover, Alfalfa, etc.;" Wm. Whitby, "Large versus Small Hog Houses;" Dr. P. A. Pearson, "Line versus In-breeding;" D. Trott, "Jersey Red's History, etc."

The Kansas Improved Stock Growers, and the State Board of Agriculture hold their annual meetings during the same week and reduced railroad rates will probably be secured for all who attend the meetings. Special rates at the Hotel Throop to swine breeders in attendance.

WILLIS E. GRESHAM, Secretary Kansas Swine Breeders' Association. Burrton, Kas., December 18, 1893.

### Shawnee County Horticulturists.

The December meeting of Shawnee County Horticultural Society was held in Capital Grange hall, on Saturday, December 23, President Cecil in the chair. Reference was made to the KANSAS FARMER report of the fruit exhibited at the Thanksgiving day meeting, and it was desired that it be stated that the list given is not a "recommended" list by the endorsement of the society, but the fruit displayed was merely such as happened to be brought to the meeting.

D. C. Burson suggested that Rev. J. B. McAfee was present, and, having a large orchard, could give valuable information as to most profitable varieties and best methods of managing an orchard. Mr. McAfee replied that the Lowell had paid \$2 profit for every \$1 cleared on any other variety. Other profitable varieties were Grimes' Golden, Jonathan, Geniting, Maiden's Blush, Romanite. Smith's Cider has not been so profitable. Ben Davis should have been named earlier in the list. Had planted his orchard twenty-three years ago, taking extra care in preparing the land. First broke the prairie in lands eight feet wide, one land every twenty-five feet, leaving the dead furrows in the center. The next spring plowed three times, turning in same direction as before. The last time bolted plank on plow beam and had driver ride to put the plow deep. Then subsided three times in bottom of dead furrow, having driver ride on beam as before, so that the ground was loosened about thirty to thirty-six inches below where the surface was originally. Bought one-year-old trees; planted them in close rows for one year. Then planted in ground prepared as described, taking care to have the ground brought to proper level by shoveling best soil to place for trees to stand, and planted the trees with great care. From time of planting until now perhaps one-sixth of the trees have died.

Every dead tree has been replaced with another of the same variety. In replacing, a very large, deep hole was dug and a load of fresh, rich surface soil was hauled and filled in to give the young tree a good chance. The replantings had done very well. He now proposes to plow the orchard three or four times, throwing the soil toward the trees, leaving a very deep dead furrow in the middles, and to run a subsoiler through this as before and to plant a new orchard to come on by the time the old is done. Favors a north-

east slope for an orchard, believing the trees less likely to be affected by the hot afternoon sun. Thinks fruit trees should not be planted on hardpan; that if a man has no other soil than hardpan he had better not plant an orchard.

John Armstrong favored a northeast or a west slope for an orchard.

A. L. Brooks was called out, and spoke of the influence of cion on stock. Each variety has its own peculiarity as to roots, whatever root the top may be grafted upon. Thinks the best results are obtained by grafting a four-inch cion on three-inch root.

Mr. Burson asked whether the difference is in the root itself or in roots from cion?

Mr. Brooks thought each variety will have roots peculiar to itself whether the cion send out roots or not.

B. F. VanOrsdal does not believe in trying to grow a new orchard on the same land with an old one.

Secretary Mohler suggested that the over-shading of the young trees by the old ones may be a reason why resetting is not usually more successful, and that this may have more to do with it than the exhaustion of the soil. Favors planting wind-breaks on three sides of an orchard. Thinks irrigation by means of porous tiles under the surface near the trees will be found to greatly increase the profits of orchards. Referred to a man in Texas who has a line of tiles at a distance of eight feet on each side of his rows of apple trees and irrigates through these tiles with good results.

Philip Lux advises not to try to replace an old orchard on account of the soil having been sapped of its fertility.

Mr. Burson thought that no trees had died in Shawnee county for lack of irrigation.

Mr. Mohler, Mr. Brooks and others thought the fruit failures were largely due to the drought during the fall.

The following subjects were assigned for the January meeting: "Peach Varieties and Culture," J. F. Cecil; "Trimming Vineyard and Orchard," D. C. Burson; "Management of Nursery Stock," A. L. Brooks.

### Christmas.

Years ago there was a star  
Seen by wise men from afar,  
And that star, exceeding bright,  
Ever since hath been the light  
Of the wise men, leading them  
Onward still to Bethlehem.

"Peace on earth, good will to men,"  
Is its meaning now, as then,  
Bidding hope, dispelling fear,  
Bringing to the world good cheer,  
Ever leading us above,  
Star of Hope and Star of Love.

Topeka, Kas. W. C. CAMPBELL.

### Horse Markets Reviewed.

#### CHICAGO.

J. S. Cooper, Union stock yards, Chicago, says:

"The receipts of horses this week, so far, are again light, with quite a contingent of buyers on the market. The tone is firm and sales made freely at the advance noted in our report of last week. Small and medium sized chunks probably commanded readiest sale this week, but draft horses are in strong demand and sales are only limited by the very small supply. We look for no change between now and the first of the year."

#### KANSAS CITY.

Kansas City horse market has been unusually active. Receipts were fair and not near up to demand. Below are average quotations:

Extra draft, 1,500 lbs.	\$110	@150
Good draft, 1,300 lbs.	80	@110
Extra drivers	100	@200
Good drivers	75	@100
Saddle, good to extra	75	@175
Southern mares and geldings	25	@75
Western range, unbroken	20	@50
Western ponies	12½	@20

Prices of mules:  
14½ hands, 4 to 7 years. \$40 @ 50  
14½ hands, 4 to 7 years. 45 @ 55  
15 hands, 4 to 7 years, extra. 80 @ 120  
15 hands, 4 to 7 years, good. 80 @ 120  
15½ hands, 4 to 7 years, extra. 90 @ 100  
15½ hands, 4 to 7 years, good. 90 @ 95  
16 to 16½ hands, good to extra. 100 @ 150

### Do You Study Politics?

Whoever studies political questions should read all sides. The official State paper, the Topeka Advocate, is still at the head of the reform movement, and is giving its readers a more reliable report of the situation in Congress than any other Western paper. It receives its information in the shape of editorial correspondence.

One dollar a year or 25 cents for a trial subscription. Address,

ADVOCATE PUBLISHING CO.,  
Topeka, Kas.



## 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 Door of the Year.

The corridors of Time  
Are full of doors—the portals of closed years;  
We enter them no more, though bitter tears  
Beat hard against them, and we hear the chime  
Of lost dreams, dirge-like, that behind them  
ring.

#### At memory's opening.

But one door stands ajar—  
The new year's; while a golden chain of days  
Holds it half shut. The eager foot delays  
That presses to its threshold's mighty bar;  
And fears that shrink; and hopes that shout  
aloud.

#### Around it wait and crowd.

It shuts back the unknown;  
And dare we truly welcome one more year,  
Who down the past a mocking laughter hear  
From idle aims like wandering breezes blown?  
We, whose large aspirations dimmed and shrank  
Till the year's scroll was blank?

We pause beside the door;  
Thy year, O God, how shall we enter in?  
How shall we thence thy hidden treasure win?  
Shall we return in beggary as before,  
When thou art near at hand, with infinite wealth.  
Wisdom and heavenly health?

The footsteps of a child  
Sound close beside us! Listen! He will speak!  
His birthday bells have rung a week,  
Yet he has trod the world's press undefined.  
"Come with me!" hear Him through His smiling  
eyes, "Behold, I am the way!"

Against the door His face  
Shines as the sun. His touch is a command;  
'I he years unfold before His baby hand!  
The beauty of His presence fills all space,  
'Enter through me," he saith, "nor wander  
more.

#### For lo! I am the door."

And all doors openeth He,  
The new-born Christ, the Lord of the new year.  
The threshold of our locked hearts standeth near;  
And while He gives us back love's rusted key,  
Our future on us with His eye has smiled,  
Even as a little child.

### THE HISTORY ARTICLES.

In "Home Circle" of November 15, appeared a clipping from Des Moines Leader, concerning the English language and some of its curiosities.

Mr. Browse-Oldreive, whose writings are familiar to KANSAS FARMER readers, sent a very interesting criticism on some of the statements therein contained. His article appeared in "Young Folks" department of our issue of December 6, followed by remarks of the editor of this department.

Mr. B. has sent us the following, which came too late to appear in last week's issue, and no doubt his remarks will prove of interest to those who have read the former articles above referred to:

EDITOR "HOME CIRCLE" DEPARTMENT:—I have no pretensions to be an "authority." That is a decidedly big and comprehensive word, but I fear you are "poking fun" at me by so alluding, for in the same paragraph you speak of "truthful" politicians.

I cannot agree that your quotation from "Green" amounts to much. It is decidedly non-committal. But this much is certain and evident to any person who will think, that the Saxons did not impress their language, laws or religion on a people that they either drove out or massacred. It was impossible. Now, all I said the Saxons did was to "spare the young females of marriageable age," as was the invariable custom of all savage conquerors. How this can be construed into impressing laws, religion, etc., on the ancient Briton is beyond me. That England became heathen with its new inhabitants is a truism which nobody disputes. You say "the religion of Woden and 'Thunder' triumphed." Don't you mean Woden and Thor? He is spoken of in Norse mythology as "the Thunderer," which is not quite the same thing.

I have never read Green, but I take it to be there are other authorities equally good, who will dispute the theory that the Anglo-Saxon and Jute were pure Germans. Nobody denies their relationship, more or less, which is another matter.

I have to write at a great disadvantage, having no books of reference on the subject by me, so am obliged to trust entirely to my memory. As it happens, about thirteen years ago I read up the latest views, at that time, on the matter, but I cannot remember the title of the book or the name of its author, my memory having failed me in some odd ways since suffering from fever in Kansas just after I settled here, but the contents, or general drift of the work, I have a very clear recollection of. Amongst other matters, it especially ridiculed the ancient idea that the Saxons and Jutes were an inland and purely German people, and conclusively shows that those invaders must have been, to a great extent, at least, maritime in their habits, else they would not have so readily crossed a stormy and dangerous passage. And if maritime and coast-dwellers, they could not at the same time have been purely German.

Your criticism on mine, with regard to

the "Normans," is purely verbal; somewhat hypercritical, or, as some people would call it, hair-splitting. It was a verbal error, no doubt, to say the Northmen conquered "Normandy." I should have said they conquered that portion of France subsequently called Normandy, after the conquerors. And I think you are incorrect in saying it remained a province of France, for to all intents and purposes it was independent, the tie being nominal and a feudal tie of the weakest variety, which is shown by the fact that the Dukes of Normandy made war on the Kings of France and were more powerful than their nominal superior. Normandy became a province of France, as I view it, when it was lost by the English King John and acquired by the French King—not before.

I wish to give a homely illustration or two to your contention that the "Normans" became "French." First, do "Short-horns" become "Texans" when transplanted to Texas? Second, has the "Anglo-Saxon" become a "red man" by his residence in America? Neither did the Norseman become "French" in that short period. To this day the racial difference can be seen, I understand, between the "Normandy" peasants and the others. The purest representatives of that tribe are to be found amongst the inhabitants of the channel islands—Guernsey, Jersey and Alderney—still attached to the British crown. The Normans introduced into England the feudal laws, so-called, but the introduction of "law Latin" was surely the outcome of ecclesiastics being the lawyers and practically the only writers of the age, the language of their church, the Roman, being Latin, and learning being almost confined to that class, besides which, neither English or even French, were sufficiently formed, as languages, then, to compete with Latin, which, beside being the language of the learned, was, to a much later date, the international language of Europe. All this being granted, how can this justify the Des Moines Leader in saying "the Normans had early felt the encroachments of the Romans?" Still farther, was not the "Western Empire" overturned before the Normans settled in Northern France?

Maybe I am in error with regard to the derivation of the word Saturday, but I have an impression I had seen a work which spoke of a Norse Satur or Saturn. Was there also a northern divinity (mythological) of that name, or not? You can look it up, probably. On such a matter I think a Scandinavian "authority" would be preferable to Cyclopaedia Britannica, especially if the latter be an old edition. Saturn, in the Latin mythology, was the father of Jupiter, etc., and did not "Thor" (Norse) correspond to Jupiter (Latin)? Had "Thor" a supposed progenitor, and if so, his name?

J. BROWSE OLDREIVE.

Now, as to Mr. B.'s suspicion that there was some inclination to "poke fun" at him, it must be said that no such idea afflicted the writer hereof in commenting on his article. The only intention was to try to show that the clipping from Des Moines Leader did not contain any glaring misstatements of historical facts. Neither did Mr. Browse-Oldreive quote history wrongly. Only the conclusions he drew from historical facts were somewhat different from those advanced by the historian Green.

The FARMER was pleased to have Mr. B. take the trouble to send his letter for publication, as it was believed that there were many who would find it of great interest. This expectation was proven to be correct, as two have already written to say they were much pleased, and one gentleman writes: "My boy has lately begun the study of English history, and the text-book he is using is 'Green's History of the English People.' Both he and I have read the two articles with great pleasure."

Referring to the matter of "Woden and Thunder," objection is made to the name of Thunder instead of Thor. In the article of December 6 it was quoted as it appears in Green's history. In the Norse mythology, Thor was the thunderer, and the historian was perfectly warranted in substituting the one name for the other. And as it may be agreeable to some to read a portion of the cyclopedia description of the gentleman (Thor is meant, not Green), it is here subjoined:

"Thor, the first born of Odin and Frigga, the bravest and boldest of all the gods. He directed the winds and the seasons; agriculture and the family relations were under his special care; and, unlike Odin, he was opposed to war among men. He destroyed monsters and giants with his bolts of thunder. A terrible hammer was hurled at his victims, and after the blow the hammer returned to his hand. Thor has been compared to Hercules and Jupiter. The fifth day of the week has from him received its name, Thursday."

It seems in throwing his hammer and in its returning again to his hand, it rolled down the clouds and back again, which made the noise we call thunder. You all have heard it. When next time you hear what is called thunder, please to remember that it is only Uncle Thor throwing his hammer around somewhat carelessly. And



TWO NEVER'S.

NEVER let blankets remain in service after they are soiled. Dirt rots the fibre and invites moths.

NEVER wash a blanket with anything but Ivory Soap. Don't use either very hot or cold water. Dry quickly. This preserves all the softness of the flannel.

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when the lightning strikes a big tree, you will know that Thor hit his mark.

As to the remark that the Anglo-Saxons and Jutes were wrongly termed pure German, we must remember that it is not intended to be understood that they were similar to the Germans of to-day. No more than the present inhabitants of England called Anglo-Saxons are like the gentlemen who conquered Britain in the sixth century. The Angles, Saxons, Jutes and Danes are the outgrowth of the ancient Teutonic (German) tribes who overran central Europe in the third, fourth and fifth centuries. It is only in the sense that they were of Teutonic origin that they are called German. It would require too much space for these columns to try to argue the distinctions that could be made.

The shortness of our columns will not permit of a full answer to Brother Browse-Oldreive as would be desired, but still a waiting public will insist on at least short answers to some of his questions, in order that the "ship of state" may float safely into quiet waters.

Answer: (1) No, Short-horns do not become Texans under the conditions named. (2) The Anglo-Saxons did not become red men by living in United States 150 years; they became Americans.

The cyclopedias do not state that the Norsemen had a deity by the name of Satur or Saturn. By the way, all our "Home Circle" readers ought to have a cyclopedia. They are very cheap now. See advertisement elsewhere in this paper, or send for our supplement, which will tell all about it.

If any of our young folks seem to care for it, we will get some one to "write up" all the ancient Norwegian divinities, but there is no more room on this page for such this week.

### Chicken Pie.

Chicken pie made by this recipe is excellent cold: Save the neck, the tips of the wings, the gizzard and the liver of the chicken, and the feet. Pour boiling water over the feet, leave them a moment, then pull off the outer skin and nails. After these are removed, put the feet with the other parts. They are quite important, as they contain the gelatine which forms the gravy around the chicken when the pie is cold into a delicious jelly. Stew the skinned feet, wing-tips, neck and giblets, which have been well cleaned, in just enough water to cover them; add a slice of onion, one of carrot, and let the water simmer gradually till it is reduced one-half; add a few drops of lemon juice or a teaspoonful of tarragon vinegar, and some jellied stock, if necessary. Pour this gravy around and over the chicken in the pie and cover it with a paste, and bake it until the crust is a fine brown. It is better to strain the gravy before pouring it over the chicken. Some people add little egg balls or slices of the yolks of hard boiled eggs and rings made of the whites.

### "Soft-Bread Dough."

The following on "shortbreads," given in the British and Foreign Confectioner, illustrates not only some good recipes, but to the housewife some of the conditions required by the foreign baker, who has learned the art of adopting bakery prod-

ucts to all grades of flour, or by reversal how to adopt all grades of flour to several bakery products:

There are three kinds of shortbread: Scotch shortbread, Crisp shortbread and French shortbread, and this classification has sub-divisions made chiefly from the first-named dough (Scotch), such as Pitcaithly, Ayrshire, Petty-coat-tail, Coffee, Exhibition, Glasgow Squares, Prince's, Kettledrum, German and Fancy shortbread various.

In doughing up use soft flour, for if your flour is strong and the butter poor, you will have a game of rub-a-dub without being able to get it together. In such a case, where there is no choice, place your sugar on the table and give it as much buttermilk or water as it will take up without running away, then dough-up the usual way.

Scotch Shortbread.—Best soft biscuit flour, any quantity, say forty pounds; then of the best washed Danish butter, twenty pounds; of fine sugar, ten pounds. The quicker and more equally this is doughed-up the better, so give it plenty of elbow grease; that means put your best strength to it. Some allow a suspicion of carbonate of soda in their doughs, but many consider this a mistake. In all cases shortbread should be well baked.

Crisp Shortbread.—There is a certain firm which has made this a specialty for some years now, and although they make their doughs the very opposite of the orthodox modes, they have, through this very reason, brought their name and product more prominently to the front. They use fresh melted butter, that's all. In eating this kind of shortbread it crunches crisp, whereas the other eats free, short and cheesy; if well baked, crumbly.

Prince's Shortbread.—Prince's shortbread get as much fine orange peel and cocoanut as the dough will take in. The cutter is peculiar, but has four corners rounded crescent shape at the four corners of an otherwise square cutter.

Pitcaithly Shortbread.—There are approved recipes for this, but the general one is to allow one pound of finely chopped orange peel, and the same of fine almond nibs, to every sixteen pounds of dough. See that the orange peel is dry and well mixed or the dough will come out streaky.

Coffee Shortbread.—Is made in finger lengths, after the style of the fancy shortbread without being iced, and you will get along quicker with large sheets, cutting them in lengths and then in strips, they look well beside a plate of cheese cut to same size.

Ayrshire Shortbread.—Ayrshire shortbread is broader than coffee shortbread, and besides being an old favorite, it is quickest managed if you run it through the machine on top of a biscuit cloth in long lengths. Then there are cutters to be had which run across the sheet in a jiffy.

So thorough is the excellence of Ayer's Hair Vigor that it can be used with benefit by any person, no matter what may be the condition of the hair, and, in every case, it occasions satisfaction and pleasure in addition to the benefit which invariably comes from its use.

Get up a Club for KANSAS FARMER.



## The Young Folks.

### The New Year.

The world is full of mystery,  
Which no one understands;  
What is before our eyes we see,  
The work of unseen hands;  
But whence and when and why they wrought,  
Escapes the grasp of human thought.

There was a time when we were not,  
And there will be again,  
When we must cease and be forgot,  
With all our joy and pain,  
Gone like the wind, or like the snow  
That fell a thousand years ago.

We live as if we should not die,  
Blindly, but wisely, too,  
For if we knew death always nigh,  
What would we say or do,  
But fold our hands or close our eyes,  
And care no more who lives or dies?

If death to each man in his turn  
Is coming soon or late,  
Be ours the soldier's unconcern  
And his courageous fate;  
Better to perish in the strife  
Than to preserve the coward's life.

Before my heart's fire pondering long,  
As 'twere a bivouac,  
I heard last night the solemn song,  
Which I have summoned back.  
It seems my sombre mood to cheer,  
And is my greeting to the year.

New year, if you were bringing youth,  
As you are bringing age,  
I would not have it back; in sooth,  
I have no strength to wage  
Lost battles over. Let them be,  
Bury your head, O, memory!

You can bring nothing will surprise,  
And nothing but dismay,  
No tear again in these old eyes,  
No darkness in my day.  
You might bring light and smiles instead,  
If you could give me back my dead.

I have beheld your kiss, new year,  
Full fifty times, and none  
That was so happy and so dear,  
I wept when it was done.  
Why should we weep when years depart  
And leave their ashes in the heart?

Good-bye, since you are gone, old year,  
And my last life, good-bye,  
I shed no tear upon your bier,  
For it is well to die.  
New year, your worst will be my best;  
What can an old man want but rest?

—R. H. Stoddard.

### ALL ABOUT OSTRICHES.

There are quite a number of ostrich shows in California, where these lordly birds are kept in small pens and admission fees are collected from visitors. But this is not ostrich farming; and, although the birds are a familiar sight on the Pacific coast, few are at all acquainted with their raising and management.

Mr. Edwin Cawston, of Los Angeles, Cal., has probably the largest ostrich farm in the United States, and is the most experienced handler of ostriches. He has at present more than one hundred birds on his grounds at Norwalk, and has sold and distributed along the California coast an equal number. The food consists chiefly of alfalfa, cut short and moistened before feeding; sugar beets, sorghum, corn, and in fact almost anything that would be fed to a cow is relished by the birds. Through winter they are permitted to roam over the fields, but in summer they are corralled and fed. The breeding birds are confined to smaller pens and mated in pairs. Laying begins early in the spring, and if the eggs are removed promptly laying will continue until forty or fifty eggs are produced by each female. Hatching is done both naturally and artificially, the latter method being preferred, as sitting injures their plumage, the most valuable part of the bird. Incubators are manufactured especially for ostrich hatching. Unfertilized eggs are blown and the shells are ready sale at \$1 each. The ostrich consumes about the same quantity of food as sheep, to wit: Three to four pounds of hay per day. Breeding birds are given one pound of grain extra per day. The larger the range the less feeding is required. The birds are plucked at seven months old, the first crop being worth only about \$4 per head. Thereafter they are plucked every nine months, the average returns being about \$20 per bird at New York wholesale prices.

There is ready sale for these plumes in New York, as they are protected by a duty of 25 per cent. Cape Colony exports annually \$7,000,000 worth of these feathers, of which more than one-half comes to the United States. So there is little danger of the business being overdone.

In a country like western Texas ostriches would be farmed as they are in south Africa, on unlimited range, allowing about the same area as for a similar number of sheep. The breeding birds would be kept in corrals of about twenty acres each, fenced with plain wire. Ostriches have the home instinct largely developed, and will not stray off from the farm where raised, and will remain near their watering place, like cattle. We have before us official quotations from the regular bi-monthly sales of ostrich goods, from Lewis & Peat, Mincing Lane, London. White primes are quoted at £11 to £14 10s.; firsts, £9 to £11; seconds, £6 10s. to £9; thirds, £4 to £6 per pound.

There is probably good money in raising

ostriches in western Texas. In fact, it would take good money to start with, but with proper management a good profit could be secured, as the climate and conditions are favorable. We do not advise all our friends to rush headlong into ostrich-raising, not because the business might be overdone, but because some of our friends might; and also because our advice would not be taken, anyway. If some person, with enough of both faith and money, would give ostrich farming a fair trial, we would be satisfied.—*Southern Cultivator.*

### He Was Caught in a Quicksand.

James K. Rochester, who is said to hail from near Boston and who has been in the neighborhood of Flatwillow, Mont., for some weeks for the purpose of possible purchases of land for ranch runs, had a few days ago an adventure that, had it not been for the arrival of timely assistance, would have terminated not only fatally, but left his death or loss a mystery until the day of judgment. Rochester had ridden out from this place to the ranch of J. Littleton, with whom he had business, and was returning home when he was caught in one of the numerous quicksands on the Musselshell river, a small stream tributary to the Missouri.

Mr. Littleton had accompanied Rochester a part of the way for the express purpose of pointing out to him a place where the river could be forded in safety, but the Easterner blundered in the direction, and before he was aware of it his horse began to flounder in the yielding sand. He endeavored to wheel the animal about and get out of the trap, but the horse's legs were already immersed nearly to the knee, and though he tried desperately to obey the rein and extricate himself from the danger, which he seemed to understand as well as his rider, it was too late, and his wild plunging only served to involve him still further.

Mr. Rochester then made an attempt to throw himself from the horse's back to the bank of the stream, which was not more than five or six feet distant, but owing to the struggling of the animal he fell short and into the sand. With the strength of desperation he caught at the bridle of the horse and managed to regain the saddle, trusting that the quicksand might prove not too deep for the steed and that presently he would cease to sink, but by this time the panting creature was submerged to the body and the rider was obliged to rise in the saddle and cling to his back.

With anxious eyes the unfortunate man scanned the country about seeking some help, and presently saw some distance off a horseman quietly plodding after some sheep, which he was driving. This man Rochester hailed several times without at first attracting his attention, but the sheep dog with the drove evidently heard the cries, and with the ready intelligence of his species broke away from his woolly charges and tore to the banks of the river barking wildly as he went. His owner in vain tried to whistle him back, then suspecting that the dog had probably scented some wild animal he set out in a gallop after him.

As he drew near the stream he heard Rochester's shouts of despair and redoubled his speed, unloosing as he did so the horsehair lariat he carried at the pommel of his saddle. On reaching the quicksand he found that the man had sunk up to his arm pits, while the horse had been completely drawn under, and was, in all likelihood, dead of suffocation. He threw the rope to Rochester, who caught it and managed to secure it about him, when, wheeling his horse about, the herder dragged him from the mire. The poor fellow, overcome by the horror of his late position and the narrowness of his escape, fainted as soon as his feet touched the solid earth, and even on recovering his senses was so weak that his rescuer had to bring him to town on his horse.

Rochester, who is a man of means, presented Young, the man who had saved him, with a piece of ground of 400 acres and fifty head of sheep as a token of his appreciation of his promptness and courage, while he purchased the dog, which had first gone to his rescue, from his owner for a good sum. The quicksand in which he was caught is the most dangerous in Montana, and it is said to be responsible for the loss of hundreds of cattle every year. It will be fenced in now by subscription.—*Montana Exchange.*

### Licorice.

Licorice has been known and used for many centuries in oriental lands, especially in Syria, where it is principally sold in a weak decoction as a refreshing drink, the extract being made by a special process to avoid extracting any of the bitter tastes, and is sold by street vendors, nicely cooled, and is really a delicious and healthy drink when properly prepared. In the vicinity of Damascus the root has been gathered from special localities, where, probably owing to the kind of soil, it is sweeter than from other parts, then dried and crushed under heavy stones drawn around on it by mules, in the same manner that olives are crushed

for the extraction of the oil. In this form it is exported in sacks, very largely to Egypt, Arabia and many parts of Africa, where it is used almost entirely for making licorice water, which is considered very healthy for drinking in hot climates.

The plant dies down every year, and in appearance resembles a small rose plant with a single green stem growing to the height of from one to three feet, and sometimes even higher, having small leaves growing out from each side of the stem and some of the plants bearing a small blue or purple star-shaped flower, followed by a small seed pod enclosing two or three small seeds. The plant propagates itself from the root, and it is almost impossible to eradicate from the soil, for if the earth be dug over to a depth of two feet or more, and all the roots be apparently taken out, enough small fibres will remain, so that after three or four years the plants seem to be more thrifty and the root more abundant than before.

The growth of three years is required before the root is of much value, says the *Pharmaceutical Era*. When the root is freshly dug in its green state it resembles in texture a small parsnip and cuts easily in much the same way, is of a pale, slightly green color, varying according to the soil in which it grows. It has a rather unpleasant sweetish taste, somewhat resembling that of a raw sweet potato, and when dry loses about one-half its weight. The bark, in decorticating, has to be cut off, as there is nothing that can be peeled off, as in most roots. The proper time for digging the root is during the winter months, after the plant has dried up, as it then has more strength than when the plant is in vigorous growth.

In Syria and Asia Minor, the fields where most of the plant is found, are at a distance from the villages, and a contractor or purchaser often finds it necessary to erect huts for the gatherers to sleep in, and also to provide provisions to sell them while they are at work. They also establish certain centers or places where scales are placed, with an agent to weigh and credit the root as it is brought in. A certain price is paid to the owner of the land, or government as the case may be, for the privilege of digging according to the quantity of the root found.

FACTS VS. ARITHMETIC.—Teacher: "You say, Jimmy, your father bought a horse for \$300 and sold him for \$250; now how much did he lose?"

Jimmy: "About \$600."

"Why, Jimmy, I'm surprised. There isn't another scholar in the class who would not have given a correct answer."

"There ain't one of them what knows anything about it. That horse kicked a \$100 setter to death. He smashed a new buggy so the maker didn't know it. He broke pap's leg, and cracked two ribs for our Jersey cow."—*Harper's Bazaar.*

If afflicted with scalp diseases, hair falling out, and premature baldness, do not use grease or alcoholic preparations, but apply Hall's Hair Renewer.

### Pond's Business College,

601 Topeka avenue, Topeka, Kansas, has turned out the best business writers, the best book-keepers, the most successful business men. On these three points their past record stands 25 per cent. above any other business college now running in Kansas. Any farmer's son can get a full business course here for only \$30, or three months \$15.

Many diseases arise from one cause—blood impurity.

**Beecham's Pills**

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Purify the blood and, thus, go to the root of many maladies.

25 cents a box.

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## A Gentleman

Who formerly resided in Connecticut, but who now resides in Honolulu, writes: "For 20 years past, my wife and I have used Ayer's Hair Vigor, and we attribute to it the dark hair which she and I now have, while hundreds of our acquaintances, ten or a dozen years younger than we, are either gray-headed, white, or bald. When asked how our hair has retained its color and fullness, we reply, 'By the use of Ayer's Hair Vigor—nothing else.'"

"In 1868, my affianced was nearly bald, and the hair kept falling out every day. I induced her to use Ayer's Hair Vigor, and very soon, it not only checked any further loss of hair, but produced an entirely new growth, which has remained luxuriant and glossy to this day. I can recommend this preparation to all in need of a genuine hair-restorer. It is all that it is claimed to be."—Antonio Alarrun, Bastrop, Tex.



Ayer's Hair Vigor, and very soon, it not only checked any further loss of hair, but produced an entirely new growth, which has remained luxuriant and glossy to this day. I can recommend this preparation to all in need of a genuine hair-restorer. It is all that it is claimed to be."—Antonio Alarrun, Bastrop, Tex.

## AYER'S HAIR VIGOR

FREE 16-page Illustrated Book giving dates and prices paid for Send two stamps National Coin Co., 335K, Exchange Bld., Boston, Mass.

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# KANSAS FARMER.

ESTABLISHED IN 1863.

Published Every Wednesday by the  
**KANSAS FARMER COMPANY.**OFFICE:  
No. 116 West Sixth Street.

SUBSCRIPTION PRICE: ONE DOLLAR A YEAR.

An extra copy free fifty-two weeks for a club of six, at \$1.00 each.

Address **KANSAS FARMER CO.,**  
Topeka, Kansas.A MEMBER OF THE  
**WESTERN AGRICULTURAL JOURNALS ASSOCIATION.**BUSINESS OFFICES:—649-51 The Rookery,  
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Frank B. White, Advertising Representative.

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

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

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

Electros must have metal base.  
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.

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

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

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

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

Congress adjourned December 21 to meet January 3.

It has been suggested that Buffalo Bill would not resist the Democratic nomination for Governor of Nebraska.

The KANSAS FARMER sends its greetings to its thousands of readers and wishes them each a Happy New Year.

John W. DeHart, postmaster at Freeman's, West Virginia, in sending in his subscription, announces the significant fact that he expects to raise quite a club, as several of his patrons contemplate going to Kansas during 1894.

The day of our usual market reports fell on Christmas this year, and so, of course, no transactions were had. There has been but little change since last week's report, a little decline in wheat being the most important variation.

Seventeen hundred and ninety-nine rabbits were killed in Prowers county, Colorado, last Friday, to furnish a Christmas feast for the needy of Denver and Pueblo. Fifty men participated in the hunt, twenty-five on a side.

That great "Star of the East," the enterprising *National Stockman and Farmer*, published at Pittsburg, Pa., has opened an office at Chicago and will hereafter have a Western edition. Such enterprise these times is refreshing and especially so for the spirit displayed to come more in touch with the West.

The Alameda, Cal., Sugar Company reports for four weeks ending December 10, 1893: Production, 1,461,191 pounds dry granulated sugar. Test of sugar in beets, 14.8° to 15.2°. Density of juice, 12.2° to 12.5°. The weather remains fine. The Western Beet Sugar Company, Watsonville, Cal., reports as follows to December 14: The mill has run 1,962½ hours, received 58,735 tons of beets and cut 51,271 tons and produced 5,851 tons of sugar (all 2,000 pounds per ton). The weather was fine until the 13th, when it commenced to rain.

Most bankers are scared at the ghost of shipment of gold to the old world, and see in it the immediate necessity for the issuance of some millions of dollars of government bonds to call it back. Henry Clews takes a different view. He says in his latest circular: "It might be rather fortunate than otherwise to part with \$15,000,000 or \$20,000,000 of our gold. The effect at home would be to reduce the unhealthy surplus of money; and abroad to produce an ease in the money markets calculated to develop a demand alike for our securities and our products."

## THE KANSAS FARMER FOR 1894.

This issue completes another volume of the KANSAS FARMER. When the paper was established, in 1863, it was more as a hope than a realization. Nevertheless the "Old Reliable" has gone pretty steadily forward and has always been in the front rank of Western journalism. To-day the pride of the publishers is not smitten on comparing it with the oldest, and it easily takes rank with the best agricultural papers in the United States. Its generous support by the farmers and stock-raisers of Kansas has made this possible.

Its readers well know the plan of the make-up of the paper by departments, whereby each general topic is treated under the appropriate head. These departments have been strengthened from time to time and have received such help from able contributors as to make them most valuable depositories of information and discussions of matters most interesting and important to the tiller of the soil and to every member of his family. The list of writers whose talent and information will be at the service of readers of the KANSAS FARMER is being continually increased. Besides the impersonal editorial force the following well-known special writers are mentioned from among the many who will contribute to the excellence of the KANSAS FARMER for 1894: C. C. Georgeson, Professor of Agriculture; S. C. Mason, Horticulture; E. A. Popenoe, Entomology; I. D. Graham, Secretary, and N. S. Kedzie, Domestic Economy and Hygiene in the Kansas Agricultural college; F. A. Waugh, Professor of Horticulture in Oklahoma Agricultural college; F. D. Coburn, ex-Secretary of the State Board of Agriculture and a writer of recognized ability on live stock matters, and Judge F. Wellhouse, the most successful and widely known orchardist in the United States. Dr. H. W. Roby will continue to instruct people how to live longer and enjoy life better, giving such advice and information as the "Family Doctor" deems wise. During 1894 he will consider all the vicissitudes of life and being from the cradle to the grave, not as a dry, dull thesis on health and infirmity, but interspersed with enough of the soul and poetry of existence to make it an eagerly sought department for its interest as well as its information. A. E. Jones, himself a practical dairyman in the sense that he takes care of the milk, cream and butter with his own hands, a man who makes money at dairying, and is willing that KANSAS FARMER readers shall know how he does it, a ready writer of wide information, will continue to make the Dairy department too valuable to allow a number to be missed. Dr. S. C. Orr, the able Veterinarian who has in the past answered every inquiry from our readers, and without cost to them saved many valuable animals, will continue to give specific and general information through the columns of the FARMER to all inquirers. Our "Home Circle" and occasional writers are so numerous and yet so valuable that we halt between the impulse to name them and the necessity of making this notice brief.

Every number of the KANSAS FARMER for 1894 will be so valuable that the subscriber who fails to get the worth of a year's subscription from it will do well to inquire whether he has read it thoroughly.

There is probably a better day ahead for the owner of farming land. But to avail himself of the advantages open to him it is more than ever necessary for the farmer to be fully up with the times. Information as to the best that is known about his business is as essential to the best success of the farmer as of any artisan or professional man. Indeed the multifarious nature of the farmer's vocation renders it necessary that he make special studies in several lines instead of one, as in most other pursuits. The successful farmer in Kansas will be found to be the reading and thoughtful, as well as the industrious man, and you will probably find the KANSAS FARMER in his house. Send in your subscription and have every number for 1894.

The estimate of the world's sugar

crop for the current season places the aggregate at 7,185,000 tons of 2,240 pounds each, an increase of 651,900 tons over the crop of last year.

## THE SITUATION.

The KANSAS FARMER would gladly record an improvement in the financial and industrial situation, such as was impliedly promised as a result of the recent legislation as to silver. But, above all things, it is important that the individual, who has present conditions to meet, be correctly informed as to what these conditions are, whether this information accords with his preferences or is at variance with them. Below we present a few excerpts from last Saturday's financial report of R. G. Dun &amp; Co. and from Bradstreet's business review of the week.

Dun &amp; Co. say: "With scanty buying wheat has changed little in price, though Western receipts have been only 2,746,400 bushels against 4,198,016 last year, and Atlantic exports only 574,095 against 2,138,012 last year. Russian exports are beyond all precedents. In October and November 26,600,000 bushels against 20,800,000 bushels exported a year ago and the country is selling at ruinously low prices because the producers find it necessary to realize. Corn has declined 14 cents with Western receipts of 1,744,000 bushels against 2,445,705 last year, while exports declined to 334,456. Pork products have been somewhat active and lower. Pork is 75 cents and lard a quarter lower. Wheat is 9 cents lower than a year ago; corn, 15 cents; pork, \$2.50 per barrel; lard, \$2.60; hogs, 11 cents; cotton, 2 cents.

"The failure of the Crane Iron Company last week, with some other small failures, outweighed in influence the resumption of work by a few iron works and has increased depression at the East. Bessemer iron is shipped to Philadelphia from Pittsburg, where it sells at \$10.75 and Grey Forge sells for \$9.35 at Mahoning Valley furnaces, but even in that region the manufacture keeps only 8,425 of the Connellsville coke ovens at work, while 9,088 are idle. The reduction in price of bleached cottons last week and of leading white sheetings this week, has been less effective in stimulating trade than was expected and print cloths are selling at 3 cents. Woolen manufacture has started three more mills, but six have stopped, one employing 3,000 hands, and others are reported about to stop when stocks on hand are worked up. The sales of wool at the three chief markets were only 2,505,000 pounds for the week, against 5,597,400 last year, and throughout the week trade was completely paralyzed. The shoe manufacture does somewhat better, though shipments from Boston show a decrease of 24 per cent. for the week, and many factories are working on orders now nearly exhausted, while few new orders come in and sales from stocks are comparatively rare.

"Foreign trade still shrinks, exports for three weeks having been 10 per cent. less than last year and imports at New York 20 per cent. less.

"The liabilities in failures reported last week appear to have exceeded \$6,220,587 in amount, including \$3,395,950 for manufactures, and \$2,084,919 for trading concerns, against \$5,459,409 for the previous week."

Bradstreet's report says: "The features of the business week are the increased uniformity in reports that general trade is quite as much or more depressed than previously; that holiday trading has been unsatisfactory and far below that of a year ago, and continued closing down of important industrial establishments, reductions of wages and increased instances where short time is being enforced.

\* \* \* \* \*  
"Special telegrams from 179 important cities indicate the total number of employees in industrial and other lines of work at this time from all causes, together with the total number of people directly dependent for support upon those so rendered idle, is nearly 3,000,000."

Notwithstanding the serious nature of these reports from representatives of interests which have usually, it may be said almost always, been on the opti-

mist side, interests which have favored practically all of the legislation so far had which in any way affects the situation, notwithstanding the fact that these reports are made with the essential purpose of conveying accurate information, and do, when fairly considered, give as nearly as possible, the exact present state of business and industry, there is in the prospect really no more of discouragement than when these authorities were quoted to disprove the existence of cause for alarm.

That a winter of distress and much human misery in this and all other countries is being endured, and that the worst has not yet been reached, can scarcely be questioned. It is probably equally true that reaction will take place in the spring, and it is not unlikely that the farming States of the West will be among the first to benefit by it. Every great depression of the industries of the East has been followed by a disposition on the part of the more thrifty to get away from the precarious conditions for making a living there prevalent and to plant themselves on farms in the West, where at least the food supply can be with certainty produced. Heretofore the resulting movement has spread itself over new lands and has added immensely to the areas seeded to wheat. Now the new lands are no more, except as they shall be slowly brought into use under irrigation. There are, however, millions of uncultivated, or only partially cultivated acres along the western borders of the arable belt, on the more intensive cultivation of which hundreds of thousands of people, in addition to those already here, may make a living. Many a farmer who, a few years ago, added to his acres until he is now "land poor," has seen his error and will divide his possessions with the newcomer at prices which will enable the thrifty man of moderate means to become, as compared with his dependent situation in the East, an independent farmer. That such a movement, such a dividing up of large holdings, such a beginning of the crowding of population in this section will be among the first effects of the spring reaction will not be doubted by any thoughtful person who is acquainted with the situation and knows the history of the past in respect to movements of population after panics. That those who come with sufficient pluck, energy and savings to take advantage of the opportunity will be benefited by the move cannot be doubted, neither is there any doubt of the advantage which will accrue from the reduction of their holdings to many who are overstocked with land.

## THE SANTA FE RECEIVERSHIP.

Last Saturday evening, the United States court, sitting at Little Rock, Ark., appointed receivers for the Santa Fe railroad system, including the Frisco lines, and immediately turned the property over to their care. The receivers are J. W. Reinhart, President of the system; J. J. McCook, general counsel of the company, and Joseph C. Wilson, Clerk of the United States court at Topeka. The receivership was asked by the Union Trust Company and the Mercantile Trust Company, both of New York, and acting for the bondholders.

The pressing obligations of the company are summarized as follows by President Reinhart: Time notes and loans on collateral, due December, 1893, to June, 1894, \$4,100,000; notes and loans on collateral on call, \$2,200,000; total notes and loans, \$6,300,000; coupon interest and other fixed obligations, due January 1, 1894, \$3,900,000.

This is, however, only a small part of the total indebtedness of the company, which, according to complainants' petition, consists of \$150,000,000 4 per cent. bonds due in 1899, and \$80,000,000 5 per cent. bonds, also due in 1899, making the total indebtedness about \$231,000,000. The capital stock of the company is placed at \$102,000,000, making the total liabilities to stockholders and creditors \$333,000,000.

The entire system comprises 9,316 miles of road, so that the entire capitalization and indebtedness amounts to nearly \$37,000 per mile. On this



amount the property is not able to earn interest.

The receivers are by the court directed to operate the road. This means that the operating expenses are to be the first claim upon the earnings, whereas, heretofore, the interest claims of the bondholders have absorbed the earnings, even to the extent of crippling the ability of the company to pay its employees and necessitating sweeping reductions of operatives and shop men. The opinion of those in position to know best, is that the receivership will result beneficially to the country served by the Santa Fe system, because now the revenues will be applied to enabling the road to perform its functions. Betterments of the property, increase in rolling stock, prompt and regular pay of employees, with probability of few changes, are among the advantages expected. Whether this course will enable the property to earn so much money that it can eventually be returned to the care of the stockholders is one of the undetermined questions.

#### TO HELP THE POOR.

A. E. Jones, who resides near Topeka, sets an example of sharing his prosperity with those less fortunate than himself. Mr. Jones is a dairy farmer and edits the Dairy department of the KANSAS FARMER. In an open letter to the public he says:

"In all movements of public charities, those living in the larger cities are more heavily taxed, or are the first to be called upon to contribute to the needy poor, and in consequence of the heavy demands that are likely to be made on the more generous ones through the coming winter, and in a measure to give a respite to those in Topeka who have so nobly and generously aided the unfortunate and needy, I wish to inaugurate a movement among the farmers in this county which, if carried out, will go a long way in alleviating the sufferings and distress which is sure to come with the advent of cold weather.

"As a representative of the farming community I think these reminders of duty to our fellow creatures have not been brought near enough to our doors to touch the chord that makes all men kin.

"For the harvest just past the tiller of the soil has generally been rewarded with overflowing granaries and well-filled larders, and it now becomes our duty to contribute of our substance to those deserving of aid. At the beginning of the new year I will set an example by having a load of the best corn ground into meal and put up in sacks, and left at some place where those in need can be supplied free of charge while it lasts. Now let other farmers in the county follow with whatever they have that will brighten or add strength through the long winter months to those in need of substantial recognition."

#### UNCLE SAM AS A RAILROADER.

The following table gives statistics of receiverships of railroads in the United States for ten years past:

Year.	No. roads.	Mileage.	Capital.
1884	37	11,038	\$714,755,000
1885	44	8,285	855,460,000
1886	13	1,799	70,346,000
1887	9	1,045	90,319,000
1888	22	3,270	156,814,000
1889	22	3,083	99,664,000
1890	26	3,963	105,007,000
1891	26	8,158	84,479,000
1892	38	10,508	337,682,000
1893	72	31,878	1,645,550,000
Totals 10 years.	307	76,744	\$3,748,986,000

This includes the A., T. & S. F. receivership. These receiverships are under the direction of United States courts, so that our Uncle Sam is really quite a railroad man now.

The Secretary of the Treasury, in his report issued last week, estimates that there will be a deficit of \$28,000,000 at the close of the present fiscal year, June 30, and asks authority to issue \$200,000,000 in bonds. The deficit is large enough but the bond authorization asked is enormous. If our government cannot live on its income during a time of peace and superabundant crops, what is to be expected in case of war or famine?

Get up a Club for KANSAS FARMER.

#### KANSAS' WORLD'S FAIR PRIZES.

The following is a list of awards on Kansas products in the Agricultural building, Columbian Exposition, Chicago, Ill.:

**Red Winter Wheat.**—S B Wilson, Clay Center; W H Smith, Topeka; A C Rait, Junction City; John Lazdier, Linn; Thos Gillespie, Salina; G B Donmeyer, New Cambria; H W Hoffman, Salina; S H Cramer, Ottawa; J H Sayles, Norcatur; A Shrieve, Wamego; Cyrus Wray, Salina; N I Dalton, Topeka; Wm Rundle, Clay Center; B D French, Concordia; W W Eddie, Marysville; P E Butler, Glasco; Gotlieb Adam, Marysville.

**Hard Winter Wheat.**—J D Foster, Washington; J H Edwards, Phillipsburg; H A Huston, Junction City; S T Collins, Belleville; S Detwiler, Hiawatha; W S Lower, Holton; L Landon, Russell; G Y Johnson, Willis; J L Johnson, Marysville; A Anderson, Marysville; J H Fritz, Riley; Frank Delong, Belleville.

**Red Winter Wheat in Straw.**—Orville Webber, Pellerville; Wm McHenry, Grantville; T S Runyon, Medicine Lodge; Aug Neck, Emporia; C W Stover, Topeka; J B Reed, Tecumseh; C O Kreepe, Tecumseh; J A Butler, Topeka; S Elmore, Topeka; Henry Stone, Medicine Lodge; J F Goodwin, Menoken; John Kern, Bonner Springs; A P Collins, Salina; T J Anderson, Topeka; J F Greene, Lawrence; Frank McConnell, Salina; E A Goodell, Topeka; S Climents, Grantville.

**Hard Winter Wheat in Straw.**—J P Carter, Solomon City; Fred Auble, Medicine Lodge.

**White Ear Corn.**—James Irwin, Gardner; Wm Johnson, Gardner; T A Cullinan, Junction City.

**Yellow Ear Corn.**—J F Streeter, Junction City; J B Hammett, Schroyer; Charles Reed, Prairie Center; A P Collins, Salina; P K Fisher, Morrill; Adam Rankin, Olathe; F E Myers, Whiting; G W Stevenson, Sabetha; W E Snyder, Hiawatha; F Lemley, Hiawatha.

**Ear Corn, Sweet.**—F. Lemley, Hiawatha.

**White Shelled Corn.**—E V Sayers, Ottawa; James McFarland, Ottawa; C F Wolf, Ottawa.

**Yellow Shelled Corn.**—J C Currie, Quenemo.

**Yellow Corn on Stalk.**—S Severy, Reading; J H Jones, Troy; N I Dalton, Topeka; N E Bartholomew, Topeka.

**Corn on Stalk.**—Five samples yellow, five samples white; in ear, five samples white, six samples yellow, Adam Rankin, Olathe.

**Red Kaffir Corn.**—Joel A Stratton, Reading.

**Red Oats.**—Erick Weiberg, Clay Center; J R Knox, Manhattan; F Fry, Salina; W S Lower, Holton; A C Rait, Junction City; N I Dalton, Topeka.

**Black Oats.**—Thomas Anderson, Salina; James Sullivan, Salina; W G Swift, Clay Center; H W Hoffman, Salina.

**Red Oats in Straw.**—Washburn College, Topeka; Buche Bros, McPherson; Otis Dalton, Topeka; N E Bartholomew, Topeka; J B Case, Abilene; T J Anderson, Topeka.

**White Oats in Straw.**—J H Jones, Troy; J Cowgill, McPherson; L Goosey, Topeka; L Landon, Russell.

**Barley in Straw.**—J Begole, Burlingame; A P Riordan, McLouth.

**White Barley.**—S H Williams, Abilene.

**Rye, White, in Straw.**—N E Bartholomew, Topeka; J G Pratt, Maywood; Geo Frisbie, Grantville; S Detwiler, Hiawatha; J H Jones, Troy; L Landon, Russell; J C Necum, Tecumseh; Eli Benedict, Medicine Lodge.

**Orchard Grass.**—H H Kern, Bonner Springs.

**Timothy.**—I Begole, Burlingame; T J Anderson, Topeka; H H Kern, Bonner Springs.

**Millet in Straw.**—N E Bartholomew, J B Sims, T J Anderson, N I Dalton, A E Jones, Topeka.

**Millet Seed.**—F Driscoll, Wichita.

**Alfalfa.**—Otis Dalton, Topeka; Thomas Anderson, Salina; Andrew Shrieve, Clyde; Samuel Westbrook, Garden City; John H Churchill, Dodge City; N I Dalton, Topeka.

**Blue Grass, Kentucky.**—A P Riordan, McLouth; H H Kern, Bonner Springs; T J Anderson, Topeka.

**Blue Grass, English.**—John Kern, Bonner Springs; E Zimmerman, Hiawatha; Baxter Waveland, Topeka; Adam Kathay, Hamilton.

**Red Clover.**—G G McConnell, Menoken; S Detwiler, Hiawatha.

**Red Clover Seed.**—J H Delivan, Lawrence.

**Red-Top Grass.**—D P Hogland, Olathe; Thomas Hart, Hiawatha.

**Potatoes.**—John Armstrong, E R Hayes, S H Downs, Topeka; J P Stevenson, Sabetha.

**Onions.**—R W Scott, Junction City; Kansas State Agricultural College, Manhattan; H P Ewing, Loring.

**Flax for Fiber.**—Joseph Sturdy, Waveland, Kas.

The following is a list of awards on Kansas products in the Horticultural building: **Collection of Grapes.**—State Horticultural Society of Kansas.

**Collection of Apples and Pears.**—State Horticultural Society of Kansas.

**Collection of Stone Fruits.**—State of Kansas.

#### DAIRY AWARDS.

**Butter.**—J Scheinberg, Florence; White Water Creamery Co, White Water; Heston Creamery Co, Heston; Abilene Creamery Co, Abilene; Heizer Creamery Co, Heizer; Meriden Creamery Co, Meriden; Ellinwood Creamery Co, Ellinwood; Bell Springs Creamery Co, Abilene; Ramona Creamery Co, Ramona; Enterprise Creamery Co, Enterprise; Abilene Creamery Co, Abilene; John Gardner, Meriden; J P Dell, Florence; Geo Hobbins, Florence; J E George, Burlingame.

#### HORSES.

Henry Balliet, Tonganoxie, French Coach stallion, sweepstakes, fourth premium, with official ribbon. Premium paid by Board of Managers, \$25.

#### CATTLE.

**Herefords.**—Makin Bros., Florence. Bull, 8 years or over, fourth premium, \$15; bull, 2 years and under 3, third, \$20; bull, 1 year and under 2, third, \$20; heifer, under 1 year, second, \$30; young herd, consisting of one bull and four heifers, all under 1 year old, bred by exhibitor, fourth, \$25; two animals of either sex, the produce of one cow, first, \$30. Premium paid by Board of Managers, \$200.

**Holstein-Friesians.**—C. F. Stone, Peabody. Bull, 8 years and over, fourth premium, \$15; bull, one year and under 2, fourth, \$15; cow, 4 years and over, second, \$35; cow, 8 years and under 4, first, \$50; heifer, 2 years and under 3, first, \$50; heifer, 1 year and under 2, second, \$30; heifer, under 1 year, second, \$30; herd graded by ages, fourth, \$25; young herd consisting of one bull and four heifers, under 2, second, \$75; four animals, either sex, the get of one sire, second, \$75. Premium paid by Board of Managers, \$200.

**Jerseys.**—La Veta Jersey Cattle Co., Topeka. Premium paid by Board of Managers, \$200.

#### SWINE.

**Poland-China.**—R. S. Cook, Wichita. Boar, under 6 months, fourth premium, \$20; sow, 6 months and under 1 year, first, \$40; sow, 6 months and under 1 year, fourth, \$20; boar and three sows under 1 year, second, \$50; boar and eight sows under 1 year, first, \$75; four pigs, the get of same boar, second, \$75; four pigs under 6 months, produce of same sow, second, \$75. Premium paid by Board of Managers, \$43.83.

**Wm. E. Gresham, Burrton.** Boar, 6 months and under 1 year, third premium, \$25; boar, under 6 months, first, \$40; sow, under 6 months, fourth, \$20; four pigs under 6 months, third, \$55. Premium paid by Board of Managers, \$48.33.

**P. A. Pearson, Kinsley.** Premium paid by Board of Managers, \$58.33.

#### SHEEP.

**Mertno.**—E. D. King, Burlington. Ram, 2 years and under, second premium, \$25; ram, 1 year and under 2, third, \$20; ewe, 2 years and under 3, second, \$25; ewe, 2 years and under 3, third, \$20; ewe, 1 year and under 2, fourth, \$15; ewe, under 1 year, first, \$25; ewe, under 1 year, second, \$20; ram and three ewes, all over 2, second, \$30; pen of five ewes, 2 years or over, second, \$35; pen of two rams and three ewes, second, \$35; pen of two rams and three ewes, third, \$25. Premium paid by Board of Managers, \$100.

#### EDUCATIONAL.

District schools, Douglas county, J. E. Peairs, Superintendent, school work.

Leavenworth schools, J. E. Klock, Superintendent, school work.

McPherson schools, C. S. Ludlum, Superintendent, high school work.

Emporia city schools, W. M. Reece, Superintendent, bound manuscript.

Public schools, Kansas City, A. S. Olin, Superintendent, school work, grades below high school.

Atchison public schools, J. H. Glatfelter, Superintendent, school work, lower grades, and class work.

Kansas State Agricultural college, Geo. T. Fairchild, President, industrial work.

Public schools, Manhattan, G. D. Kaube, Superintendent, bound manuscript.

Wichita public schools, Wm. Richardson, Superintendent, pupils' work.

Rural schools, Dickinson county, D. F. Shirk, Superintendent, school work.

Rural schools, Shawnee county, W. S. Wright, Superintendent, pupils' work.

Rural schools, Mitchell county, Irwin Stanley, Superintendent, manuscript.

Rural schools, McPherson county, I. G. Law, Superintendent, manuscript.

John Macdonald, Topeka, bound volume *Western School Journal*.

State of Kansas, school work.

Kansas State Normal school, Emporia, A. R. Taylor, President, students' work.

Kansas State Normal school, model school, pupils' work.

State university, F. H. Snow, Chancellor, courses of study and work.

#### MINING.

Cement from Gypsum.—Best Bros., Medicine Lodge.

Vitrified Brick.—Vitrified Brick & Paving Co., Topeka.

Rock Salt.—Lyons Rock Salt Co., Lyons.

R. S. V. P. Table Salt.—(Agricultural building) Kansas Salt Co., Hutchinson.

Metallic Lead and Zinc.—(Two together)

Lead from W. B. Stone, Galena; zinc, Cherokee Spelter Co., Weir City.

Lead and Zinc Ores.—(From Galena) The J. M. Cooper Mining & Mercantile Co., lead; W. F. Sapp, zinc.

#### MISCELLANEOUS.

North American Manimals.—L. L. Dyche, Lawrence.

Windmill.—B. T. Stauber, Concordia.

The Acme Cement Plaster Co., Salina.

The award was made on the following qualities: Hardness, durability, fire-proof qualities, tensile strength, beauty of finish and susceptibility to high polish.

Atchison, Topeka & Santa Fe Railroad.—Miniature train, Kansas building.

Mrs. Elora Bate Kenney passed expert jury on both piano and pipe organ.

#### LA GRIPPE CURED.

No Failures—Great Excitement—Everybody Taking Pe-ru-na.

Everybody, everywhere, is finding Pe-ru-na to be the only remedy for la grippe. Louise Wyttenbach, Emmetsburg, Ia., writes: "My mother had la grippe for the third time. We called a physician, but she continued to get worse. We quit him, and four bottles of Pe-ru-na cured her." Mrs. S. N. Mercer, Greenville, Tex., says: "I had la grippe, my physician did not cure me. I commenced to take Pe-ru-na, and in a short time I was sound and well. Pe-ru-na saved my life." Alfred Cheney, Kinderhook, Mich., writes: "I had la grippe. Physicians treated me with little benefit. Pe-ru-na cured me." Mrs. Mary M. Pruitt, Pierce City, Mo., says: "I am 68 years old, and Pe-ru-na cured me of la grippe." Rev. H. Petty, Cherriton, Va., says: "I had la grippe very bad, and Pe-ru-na was, indeed, a panacea to me. I recommend it to others."

#### FREE MEDICAL BOOKS

on catarrh, la grippe, coughs, colds and consumption will be sent prepaid for a short time to any address by the Pe-ru-na Drug Manufacturing Company, of Columbus, O.

#### Publishers' Paragraphs.

The F. A. & I. U., the organ of the State Alliance, has been consolidated with the *Helping Hand* and the new paper is double the size of either. The subscription price is but 25 cents a year, or we will send it free one year to any subscriber who will send us one new subscriber for the FARMER and \$1.

**WOMAN, CHURCH AND STATE.**—At no time since the inauguration of Kansas history has there been a time when the women of the State have taken the interest they are now doing towards securing their complete enfranchisement, which will be decided at the coming election, next November. "Woman, Church and State" is the title of a new book, just out, by Matilda Joselyn Gage, and published by Charles H. Kern & Co., Chicago, Ill. The work is one of deep research and embraces about all that is found in history of the injustice inflicted by man upon woman since Adam's time. It is a revelation and ought to be read extensively by mothers and daughters everywhere. The author, in her prefatory remarks, says: "This work explains itself and is given to the world because it is needed. Tired of the obtuseness of church and state; indignant at the injustice of both toward woman; at the wrongs inflicted upon one-half of humanity by the other half in the name of religion. \* \* \* Read it; examine for yourselves; accept or reject, from proof offered, but do not allow the church or state to govern your thought or dictate your judgment." The book comes substantially bound in cloth, contains 554 pages, and within the reach of all, at \$3 per copy.

#### Of Interest to Farmers.

All farmers and breeders of swine have and will have more or less difficulty with sows not being able to deliver their pigs at farrowing time. To lose a farrowable brood sow next spring means, with her litter, anywhere from \$75 to \$200 loss, at present prices for pork. Mr. J. N. Reimers, of Davenport, Ia., has overcome all this difficulty by his invention of Reimer's Patent Pig Forceps. They are long, light and smooth, and are nicely tinned and are as bright as silver. It is impossible to injure a sow with them as is often done by the use of wire hooks so commonly used. These forceps clamp over the head or feet of the pig and do not injure it.—*Iowa Homestead*.

#### California Excursion.

The great central route weekly excursions to California via the Union Pacific are the thing.

Time, trouble and expense saved by joining one of these parties. Passage may be taken at any point between Chicago and Ogden, Utah. For full information call on or address F. E. Shearer, Manager, 191 South Clark street, Chicago, or your nearest Union Pacific agent.

E. L. LOMAX, General Passenger and Ticket Agent, Omaha, Neb.



## Horticulture.

### CULTIVATING APPLE TREES AFTER TEN YEARS PLANTED.

By A. H. Buckman, read before the Thanksgiving meeting of Shawnee County Horticultural Society.

I do not know of any part of the United States where all natural conditions are perfect for the wants of an apple tree after it is matured sufficiently to bear apples.

The make-up of our Kansas soil, no doubt, has about all the ingredients in it that are required for the nourishment to produce best results in an apple tree, providing moisture is sufficient in quantity and regularly supplied so that the tree can consume this nourishment.

Provision of moisture or equalization of it, is what the orchard man has to attend to, not only in Kansas, but in nearly all of the apple belt of the United States. If there are exceptions they are where soil and subsoil are sufficiently porous and, at the proper distance from the surface, underlaid with a stratum of water. Such a soil will not need much of man's assistance in drainage or equalizing of moisture by cultivating. But such soil will have to be fed with nourishment or the trees will starve before they are old. I shall not undertake to tell you just how much water the average twelve-year-old tree requires in a given length of time, to produce a given amount of wood, leaves or apples. You may call on your scientific friend to do that.

There has always been an abundance of moisture in the soil every spring since 1870. During August and September the orchard man's best endeavor should be brought into action, to make amends for the great consumption of moisture by the trees and evaporation by sun and winds. Every farmer knows what condition is best for his corn field to be in, during July and August. The same general reasons or principles for cultivating corn are applicable to an orchard. And that is, keep the surface of the ground loose and well pulverized. Clover, no doubt, is the best substitute for cultivation, providing you can grow a crop sufficient to act as a mulch. That depends upon the age of trees, distance apart and condition the ground is in. Every year, after your trees have been planted ten years, your clover crop will be less. After eighteen or twenty years and your trees only twenty-five or thirty feet apart it will not do much as a mulch, and will not answer the purpose of cultivation. In the family or farm orchard, where longevity is a great consideration, the ground should not remain in clover more than three years at one time, without some kind of cultivation, because the inclination of roots is to grow near the surface where there is a mulch.

Our farm machinery men have not yet given us a machine or tool to cultivate our orchards properly and economically. If you will allow me to make a suggestion, without having any experience to prove its correctness, it will be the disc harrow, followed with a heavy roller.

My experience teaches me there is danger of forcing young trees into too much growth. The wood does not properly mature. There is too much green sap in it when a cold, changeable winter begins. Then a jump into summer, and your trees have the black-heart body and the twig blight. After ten years planted, the danger lessens every year.

In cultivating with our present machinery, it is necessary to do some trimming. If I could cultivate my orchard to suit myself without, I would do no trimming after trees are well in bearing, except to cut off water-sprouts and dead and unhealthy limbs. In many of our best bearing kinds of trees, especially those having low heads or spreading ones, the lower limbs are the healthiest, make the best growth and bear the best apples.

Soil and exposure to wind does affect the general make-up of trees, in spite of man's trimming and cultivation. If I was managing a commercial orchard on a large scale, where quick returns in dollars and cents were expected to

knock off a mortgage, and expenses kept at the lowest amount possible for the returns, and my trees and ground in good condition, when the trees had been planted ten years I would sow clover and use the mowing machine, and leave all remain on the ground.

You may think me somewhat cranky for making a distinction between the commercial orchard and the average farm orchard. An orchard on a large scale should be composed of winter varieties, and we here in Kansas want them to remain on the trees as late in the season as possible. All you old apple-pickers know that trees with limbs on the ground or low down are the last ones to mature, or ripen and fall off. The ground under a tree with limbs touching the ground all around does not feel the effect of hot sun and wind as does that under the tree that has been trimmed so you can drive a team under in order to cultivate. The tree that has been well trimmed up will color its fruit best, but what does that signify if three-fourths of it fall off and rot before cool weather sets in so we can keep the fruit.

There is not much Kansas soil that will need fertilizing in the orchard the first fifteen years, if managed right.

There are so many considerations and conditions that confront the orchard man, that no established rules can be given, that will answer the best purpose at all times.

No animals except hogs should be allowed to run loose in the orchard, and they after gathering time, and then only so long as to gather what has been left.

#### American Grape Training.

EDITOR KANSAS FARMER:—The recent publication of Prof. L. H. Bailey's notes on American grape training, serves to set before us a subject upon which a discouraging amount of ignorance prevails. The broad general subject of grape training needs to be better understood by the multitude of agricultural practitioners and better methods need to be inculcated.

Prof. Bailey opens his notes with a statement of the habits of the grape vine. Special attention is called to the fact that fruit is borne on green, growing wood, put forth from canes produced the year before. All the pruning—a necessary part of grape training—must, therefore, provide the proper amount of canes of the current year's growth to furnish bearing wood and renewal canes for next year.

For almost any vine, twelve to twenty buds are enough to leave for this purpose. It may be often less than twelve, but almost never more than twenty. It must be a very vigorous vine, under exceptionally good circumstances, which can mature the fruit of twenty buds. Among farmers having no special horticultural training this is the point of greatest mistake. They are afraid to trim their vines closely enough to do any good.

Of the various systems of training practiced in America, outside California, there are three general classes, viz., the horizontal, the upright, and the drooping arm or Kniffin systems. The classification depends upon the direction given the fruiting arms on the trellis.

In the horizontal arm systems the renewal canes are carried vertically upward to the top wire and the fruiting arms are brought out horizontally from them along the wires of the trellis. Though this disposition of the wood is moderately well suited to the habit of some varieties, like the Delaware for example, it has few recommendations and is but little practiced.

With the upright systems the renewal canes are carried horizontally along the lower wire or wires and the fruiting arms are directed upward from these and tied to the wires above. These systems are the ones in most general use in the United States, and have only a recent rival for favor in the Kniffin systems. The so-called "fan" systems of training belong to this type, for though the old canes are not placed on the trellis in horizontal positions, the fruiting wood is approximately vertical, and this determines the classification.

The Kniffin or drooping arm systems

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

# Royal Baking Powder

## ABSOLUTELY PURE

are of more recent introduction, but are gaining a remarkable degree of popular approval. In these systems the canes are either renewed at the top of the trellis, or else the renewal canes are carried to the top of the trellis in a nearly vertical direction. In either case the canes or parts of canes for the production of fruiting wood lie along the top wire and the fruiting arms simply hang down from them. This point gives these styles of training an important advantage over the upright systems. By the latter it becomes necessary one or more times during the year to tie up the fruiting wood to the wires. All summer tying and pruning is avoided by the drooping systems and this amounts to a considerable cash quantity in a large commercial vineyard.

The Munson system, adopted here at the Oklahoma Experiment Station, and described some weeks ago in the KANSAS FARMER, is a peculiar variety of the Kniffin class. F. A. WAUGH, Oklahoma Experiment Station.

#### The Ways of the West.

EDITOR KANSAS FARMER:—In this semi-arid locality, many of the most advisable methods of doing things are quite different from the prescribed usages of other countries. To illustrate, the formula in managing an asparagus bed is to mow and rake off the tops in the fall. Here it is usually best to let the old stalks remain until spring. About a year ago we had almost the only snow in the last eighteen months. It drifted so as to leave much of the ground bare, but asparagus beds not mown got the benefit of it and made a fair crop the past dry season when everything else failed.

If the asparagus beds had been mown as recommended in the books for other localities, the snow would have blown away from them and the last year's crop of that toothsome vegetable would have been a failure, as well as most everything else. If, however, people want to, and will cut down their asparagus in the fall, the tops make the best covering for strawberry beds. This kind of covering seems to be lighter and more porous, as well as much deeper, gathering more snow, and thereby aiding in early spring moisture, so much needed for the early crops herein mentioned.

MARTIN ALLEN.

Hays City, Kas., December 15.

#### Trees and Shrubs for Winter Relief.

EDITOR KANSAS FARMER:—Everybody loves to see colors, yet only a very small proportion of Kansas homes have any but the trees and shrubs that give them color during the growing season. With a proper selection, there is no need of any home being without the cheer of tree and shrub both winter and summer. When frost removes the leaves from most deciduous trees, I always admire the homes where there is something bright and cheerful. The first requisite is to not plant too many shade trees; the next is a general understanding of the sorts to be used. Plant shade trees where the shade is needed, leaving balance of the ground for evergreens, shrubs and roses. Plant all evergreens in full sunlight, using dwarf mountain for small places and hedge-rows. The tree is very dwarfish and can be used in many ways. Red cedar does not require very much room: the same with American white spruce. Both of these can be used in many ways about the home. However, the cedar does not stay green during the winter months, yet there is color enough to make it very valuable. Both of the above can be clipped back to

make them grow stocky. The Austrian pine is a fine winter tree, a regular sentinel, standing duty against the coming storm and extreme cold weather. This tree should be given plenty of room, for a well-grown specimen twenty-five or thirty feet high will have a spread equal to the height. The ends of all lower branches can be removed, making the tree grow taller and requiring less room.

Of hardy shrubs, privet heads the list, as it is almost an evergreen, and can be grown in any shape and is splendid for planting to separate the front from the back yards. The sweet-scented honeysuckle is perfectly green until Christmas time. A well-grown plant at each end of a front porch, with a few yuccas planted in front make a beautiful picture. The yucca is an evergreen, has a large number of blade-like leaves, growing in height from fifteen to eighteen inches and two and one-half feet in diameter, and sends up one very large flower in June, from two and one-half to four feet high. Barberry is a beautiful plant in the fall and early winter. There is nothing special to recommend, except it is the prettiest when most everything is bare and brown.

In order to make the above collection a grand show for the fall and winter months, they should receive proper care during the growing season, both as to culture and manure. In using manure always use old and well-rotted. In no case apply to tree or shrub when there is a great amount of heat, as it will surely do great damage, and in many cases kill outright.

The trimming of evergreens should be done during the month of April, or it may be done in November. Shrubs can be trimmed the same as shade trees. To those who have none of the above growing on their place, let me suggest if you are overrun with shade or have none at all, plant, if only a few; treat them with respect and you will soon learn to love and cherish them. Consult the advertising columns of this paper, where a large number of responsible nursery men have their cards. Topeka, Kas. GEO. W. TINCHER.

Grape pruning may be attended to at any time from now till the buds start in the spring. The wood cut away may be made into cuttings and used for increasing the stock next year. To do this they should be cut into lengths of about three buds each, tied in bundles and stored in sand or buried butts up in a dry location till spring. Then they may be set in the open ground, and a good proportion may be expected to grow.

**Strawberries -- Wanted:** To let berry-growers know that our new Robinson strawberry is the ideal for market purposes. Is large, strong, staminate, firm as Captain Jack. 700,777 plants of other well-known varieties for sale. Send for price list. B. F. SMITH, Box 6, Lawrence, Kas.

## LOST OR FAILING MANHOOD.

### General and Nervous Debility.

Weakness of Body and Mind, Effects of Errors or Excesses in Old or Young. Robust, Noble Manhood fully Restored. How to Enlarge and Strengthen Weak, Underdeveloped Organs and Parts of Body. Absolutely Unfailing Home Treatment—Benefits in a day. Men testify from 50 States and Foreign Countries. Write them. Descriptive Book, explanation and proofs mailed (sealed) free. **ERIE MEDICAL CO., BUFFALO, N. Y.** "This company is too widely known and stands too high to stoop to dishonorable methods, like their ignorant and unprincipled imitators. Men who write them do not have their confidence violated."—N. S. Hearst.



## In the Dairy.

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

### PRIVATE DAIRYING.

Paper read by A. E. Jones, at the seventh annual session of the Kansas State Dairy Association.

It can be truthfully said that private dairying is the mother, grandmother and great-grandmother of all the various branches of this industry that has grown from ancient methods to a business representing hundreds of millions of dollars invested, and an income larger than any other calling in connection with farming life. Until within a few years the private dairy held absolute sway in both butter and cheese-making, and from the old red cow that went dry about four months in the year, and the dash-churn used by our mothers, has been laid the foundation of our success. When the early settlers of America crossed the Atlantic they brought with them their favorite domestic animals, including the family cow. But dairying for a long time in this country appears to have been confined mainly to producing supplies for the family of the dairyman. It was not until quite a recent date that dairying sprang into commercial importance. But to-day dairying cannot be considered second to any other calling, as to either magnitude or importance, and it is a patent fact that in those sections where dairying is most extensively and successfully carried on the farming community is the most prosperous and happy. The growth of the dairy will probably never exceed the growth of population so long as the present heavy tide of immigration continues to set toward our shores.

To accommodate farmers living remote from large towns, the creamery and the co-operative dairy have sprung into existence; but to supply the immediate wants of the enormous growth of our country, the private dairy will always occupy a large place in the production of butter and cheese, especially the latter. Within a reasonable distance of a good home market the private butter-maker can realize more for his product than can a farmer who is obliged to take his milk to the creamery; and again, if he makes a choice article, he can control the price throughout the entire year with very little fluctuation, and the by-products can be turned into ready cash in a variety of ways. The road to success lies in the ability to cater to the taste of fastidious customers, and should be the one object in view, and when once you have secured your "bon vivant," then, with the best that can be made and fair dealing, you have enlisted a life purchaser. Such tastes can be cultivated to a certain extent, and the dairyman who is alive to his best interests will see to it that the most exacting palate has no cause for complaint. With the machinery and appliances now in vogue, the private dairyman with a dozen cows, and an eye to business, no longer need set the milk in crocks, and the cream in the chimney corner to ripen, or churn with the old dasher, or work his butter in a bowl with a hand ladle, or put it in grotesque shapes and take it to market done up in old garments.

Science has knocked the bottom out of all these old-time methods and substituted the separator, the ripening vat, the barrel churn, the roller and level butter-worker, the improved varieties of butter salt, attractive ways of putting up butter for market, and finally, parchment paper to put on the finishing touches. These are within the reach of all, and none are so blind as those who will not see. I wish to say in this connection that a few of these improvements are being adopted in this country, and still there is need of many more. It is not strange that creamery goods bring a little more in the open market than dairy, which lies mainly in the fact that in the creamery all the various operations are under control of a few persons, thereby securing a uniformity of the output, while in a great number of private dairies the various methods used in their manipulations accounts for so large a percentage of low-grade butter, as we see thrown on the market. This does not argue, however, that some of the very best butter is not made in private dairies. The fault lies mainly among those who keep only a few cows, and think they cannot afford to give it any special attention, but leave the care of this most important branch of farming to the children or some inexperienced person. No dairyman or farmer can

afford to make butter and put it on the market for less than 17 cents any season of the year, and they are in a large measure responsible for the low price that prevails through the warm weather to the inferior quality of the goods offered. Just how to remedy this evil is a question that does not admit of an easy solution, but taking some of the older dairy States as a guide, considerable reformation has been effected through dairy schools and institutes. No doubt something of the kind in Kansas, if operated in towns where dairying is most prominent, would return three-fold for all the exertion expended. We believe the possibilities of Kansas as a field for dairy work is second to no other Western State, and certainly if our cheap feed was converted into 25-cent butter, private dairying would be much more profitable here than in the older Eastern States.

It is not every novice that can take up the business of dairying and carry it on successfully, yet some of our most enterprising dairymen were comparative strangers in the business. Quick observation and sound judgment are important qualities in this calling. These qualities are not always acquired by long experience, but are often the gifts of nature, hence it frequently happens that men of quick discernment step into a new business and achieve success where others have met only years of failure. Improvements in all callings are apt to be made by sharp lookers-on, who are not bred in the habits of routinism nor prejudiced against radical innovation. They see at a glance where the plodder fails and fearlessly apply the remedies, often a short cut to ends that have hitherto been reached with much difficulty and hard labor, and here is where the real inventor finds his greatest fields of usefulness.

### PASTURES.

Good pastures, with a variety of nutritious grasses growing in them, are essential to success in dairying, especially in butter-making in summer. In the absence of such pastures, soiling crops must be substituted to furnish an equivalent through the hot months. The cows must not be worried or overworked in rambling over poor pastures to get sufficient food.

### WATER.

Plenty of clean water must be conveniently at hand for the cows to drink. The water ought to be sweet and clean enough for the human stomach. Abundance of such water is just as essential in the pasture for the cows while secreting milk that contains 87 per cent. of water, as it is in the dairy-house where the milk is set or to wash the butter after churning.

### WINTER FOOD.

In winter, the food must be in proper condition, rightly balanced between the nitrogenous and carbonaceous materials, and in full supply, all the cows can digest and assimilate. At least one ration a day should include roots or other succulent food to aid in the separation of the butter from the cream by action of the churn, it having been proven that all dry feed not only reduces the flow of milk, but makes churning slow and difficult, leaving a portion of fat in the buttermilk.

### THE STABLE.

While in the stable the cow must have plenty of pure air and good water, and must not be chilled in obtaining either. Without pure air the cow becomes debilitated and diseased, and the milk impure and unwholesome. Impure water both taints and corrupts the product. A proper temperature, certainly above freezing, should be kept up. Remember, the cow standing still cannot resist cold as she could if free to move about. It is cheaper to build warm stables, always providing for proper ventilation, and even to resort to artificial heating, than to compel the cow to burn an extra amount of carbonaceous food in her system to keep up the proper temperature of the body. Not only is fuel cheaper than food, but the system of the cow cannot devote to milk secretion the energy which is expended in secreting and consuming fat to maintain a proper amount of vital heat.

### SHELTER.

Proper shelter in summer from the scorching rays of the mid-day sun, and from beating storms and winds is necessary. This should be easily accessible. Especially in early spring and late fall do the animals suffer severely from exposure and neglect, which will soon be felt by a diminishing flow of milk and a rough, staring coat.

### DAIRY-HOUSE.

Every dairyman should have a good house distinct from the dwelling apartments. It need not necessarily be a separate building, but it should not be

subject to the inflowing odors from the kitchen or other rooms where anything would contaminate milk or cream. The dairy-house should be so constructed that the temperature may at all times be under control. There should be no surrounding cesspools or other malodorous sources of taint, and the ventilation the best that can be secured in each case. No matter what method of setting milk or churning may be adopted, there is a decided advantage in having the dairy-house, or any other work shop, separate from the dwelling, so that the work of one shall in no way interfere with the other. Almost all dairymen fail to some extent in not having the dairy-house entirely separate. It would cost but little extra, and until dairymen look upon the business as their life-work, and build and plan accordingly, we need not expect the best possible success in dairying.

### CLEANLINESS.

Cleanliness everywhere, and at all times, is an absolute necessity. There is not the least danger of being too clean. But very few dairies are seen without defects in this particular, yet most people mean to be clean and suppose they are. Lack of information is often the cause of uncleanness, and habit goes a great way in making people indifferent to untidy surroundings. It is safe to copy the attractive features found in every dairy, as well as to avoid the offensive ones. It is well to keep making comparisons on this point, until no unfavorable comparisons with anybody's dairy can be found. And these should extend to the surroundings of the cows, the manner of milking, the handling of the milk, the cleansing of the milk utensils, and all the various processes, from beginning to end. The dairy-house should not only look clean, but be, as it were, fragrant with neatness, and it is all-important that the clothing and person should be clean and neat to a fault. A sweet temper, even, is no drawback.

### THE HERD.

The proper selection or rearing of dairy stock is essential to success. The cow should not only be a good milker, but give milk suited to the line of dairying to be pursued. If cheese-making is the object, there should be a large flow of milk rich in fat and caseine. In butter-making, a great flow of milk is not so essential, but there must be a larger percentage of fat in it than for cheese. There is no more important subject connected with the dairy than that of selection and rearing of stock. The herd is the fountain-head. If there is a failure here, there is failure everywhere. Many a dairyman has remained poor all his days because he spent his time and energies on an unprofitable herd. This is the first thing to be looked after. The selection of a herd is a matter of both knowledge and judgment—knowledge of the characteristics of breeds and of the requisites of a good dairy cow, and judgment as to whether the individual cow in question possess these characteristics and requirements. As a rule, it may be said to be the duty of every dairyman to breed from the very best blood obtainable, and to rear the heifer calves from the best cows. Unless this condition is fulfilled, the dairy, as a whole, must run down.

The private dairy is both an educator and a pupil. It is constantly giving instruction, and there is no limit to the knowledge that may be acquired by a persistent study of the laws that govern butter and cheese-making. It is an undertaking that calls for the higher faculties of the dairyman, and brings into play all the finer sensibilities of the student who will make it a study. It is a business in which no sluggard will ever succeed. All this is a step in advance of what would be required by simply selling milk to a creamery. However, this comparison is not to be construed as raising antagonistic feelings between the two systems. Each has its mission to fill. The private will stand in the front rank, disseminating knowledge and supplying its friends with the fruits of its labor, while the creamery will operate in sections of the country where the market would not be available for individual sales of dairy goods. The same rules apply to one as the other, as far as the production of milk is concerned, and both have the same interest at stake, viz., the production of rich milk

cheaply, and if they do the best they can for themselves, each one must use just as good sense in their application as the other.

The private dairyman has written on his door-plate, "No panic here." Failures were seen on every hand, but the dairyman kept right along about his business, paid his debts and had some money to spare, and cases have been reported where some of them even offered to loan money to their less fortunate neighbors. The reason of this is the dairyman has been getting old-time prices for his butter and cheese, hence they always have ready cash to pay down for whatever they buy, and cash goes farther than credit. A dairyman has no use for the cry of "hard times," and even those that made store butter at 12½ cents a pound are still doing business, and if their goods had been choice enough to reach the 25-cent mark, why they would have retired to private life in a few years. But my advice is, do not all go into butter-making, for among the many that might offer themselves, but few would reach the standard of what a butter-maker should be.

Wheat is quoted at 50 cents a bushel and oats at 25 cents. Butter is worth 25 cents a pound. There is the equivalent of between three and four pounds of butter, if fed to a good cow, in every bushel of wheat and oats ground together. We believe they would make an excellent combination, yet some men will let their cows nearly starve on dry pasture, and equally as bad fare when they come to the barn, rather than take their wheat or oats from the bin or stack and sell them to their cows for double what the market would bring. To sum up, the system of butter making can be classed under the following heads: (1) Selection of cows; (2) intelligent feeding; (3) care and shelter; (4) cleanliness; (5) milking; (6) setting milk; (7) mixing and ripening cream; (8) selection of churn; (9) churning at the right temperature; (10) butter-worker; (11) salting and working butter; (12) packing for market. In order to make good marketable butter, the above points must be rigidly adhered to and improved upon, as experience may suggest. With all the appliances and machinery adapted to butter-making, no person should be guilty of offering any for sale that would score less than 90 points. Point 1 is very important, as many ordinary cows will not make butter up to the standard of color, even under the most favorable circumstances.

The older dairy States in the East are being compelled to yield up their laurels to some of the progressive Western States in the manufacture of fine butter, as we notice that one of the latter carried off the prizes at the World's Fair.

The pig is the legal adjunct of the private dairy. He is the scavenger that turns into cash everything that would otherwise go to waste. The two may be said to be one and inseparable. The pig and the cow are the arbiters that put the balance on the right side of the ledger. The pig holds, in the particles of fat that makes up his anatomy, the same relation to the dairyman that he does to the stock feeder. The pig and the cow, if given a fair chance, will solve the financial questions of this country quicker than all the oratory in a whole session of Congress.

The profits on a good dairy cow may be summed up somewhat as follows: 250 pounds of butter at 25 cents, equals \$62.50. Cost of keeping a year, \$35. This leaves a profit of \$27.50, to say nothing of the skim-milk, buttermilk, the manure and the calf.

Gentlemen, if we would raise more cows and less fast horses, and apply our faculties to making butter and cheese instead of expending them on toe-weights and over-checks, our State would increase in value 20 per cent. in ten years.

The gold medal of the State Dairy Association was awarded to J. E. Nissley, of Abilene, for the best exhibit of butter from Kansas on a total score on four exhibits of 385, or an average of 96½. Also \$25 for the first premium on same butter exhibited in the class for prints. This medal was donated by Krull & Volgar, commission merchants, of Kansas City, and presented at the meeting of the State Dairy Association by Mr. R. L. Wright.

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## The Apiary.

Edited by REV. E. T. ABBOTT, St. Joseph, Mo., to whom all communications relating to this department should be addressed. Inclose a stamp if you desire a reply by letter. We invite questions and communications from any of the readers of KANSAS FARMER who may be interested in bee culture.

### Location of Hives, Etc.

It is not a good plan to set hives on a high bench as we sometimes see them. The hives are not only inconvenient to handle thus located, but I am of the opinion that bees do better when on or near the ground.

Four bricks laid flat on the ground make a very good rest for a bee-hive. The back end of the hive should be slightly higher than the front. There should be a drop-board in front of the hive reaching to the ground, which will enable the bees to run directly into the hive without taking wing when they alight in front of it. This is called an alighting board, and may be fastened to the front of the hive with hinges, but a simple board laid on small blocks to bring it up so it will touch the bottom of the hive will answer. Every one who has carefully watched bees when they were busy at work and gathering honey rapidly knows that they frequently return to the hive so completely exhausted and tired out that they will fall down in front of it and remain there some time before they can take wing again, if it is necessary for them to do so before they can enter the hive. If the hive is near the ground and fitted with an alighting board, as suggested above, the moment they alight they will run in, as it is their wings and not their legs that are "tired out," as we sometimes say. At first thought this loss of time does not seem to amount to much, but when we remember that during the working season there are 40,000 or 50,000 bees in a good strong colony, it becomes quite an item if each bee loses from three to five minutes every time it returns with a load. Forty thousand times three minutes repeated many times a day counts up in the course of a honey season, so that it is something of an item after all to have the hive so arranged that the workers can reach the combs with the least possible delay when they return from the field with their honey sacs filled with nectar and their pollen baskets filled with pollen. They do not carry very much each time, perhaps not more than half of an ordinary drop, but they make a great many trips during the day. As there are many bees in a strong colony, so many workers make light work, if all can work without a moment's delay from morning till night.

There are other reasons for having the hive near the ground which will be apparent when we come to talk of wintering.

The hives in an apiary should not be too close together, as this sometimes causes the loss of young queens during mating season by their making a mistake and entering the wrong hive when they return from their "wedding trip." They should be set at least two feet apart, and I prefer them three or more, if one has plenty of room. Do not set them in rows, one behind the other, but let them alternate, placing the second row of hives in front of the open spaces between those in the first row, and so on to the end. It is well to have plenty of room between the rows, so one can work at a hive without getting in the way of the bees in the row back of him.

The hive should face the south where it is convenient. If not, then east or west will do. A good location for an apiary is on ground that slopes slightly to the south. It will be found an advantage to have the hives shaded during the heat of the day, and with this in view they can be arranged in an orchard so the sun will shine on them in the forenoon, but not during the middle of the day. Grape vines make an excellent shade, and where one owns his place he can manage to shade the hives and secure a crop of grapes and honey on the same ground.

It will also be an advantage if the apiary is so located that it will be protected on the north and west by a high fence from the cold winds of winter.

After what I have said about the im-

portance of not having the bees lose any time, it will be hardly necessary for me to say that the grass, if permitted to grow at all, should be kept short in front of the hives, and weeds and other obstructions should not be permitted to grow in front of them. I feel it will not be a waste of time to say this much, as I have seen so many apiaries where one could scarcely see the hives for the weeds and grass, and I judge from this that all have not learned the importance of giving the bees a fair chance to do their work. Some use sawdust and others sand in front of the hives to keep the weeds and grass down, but I think by a little effort one can keep the grass short with less trouble than to fuss with these.

If the hives are painted, and I think it pays to do this as a matter of economy as well as looks, some kind of light-colored paint should be used. White or light cream is best, but a light yellow will do. Black, red or green are not good, as these colors attract heat and make the hives very hot in the summer, where they are not shaded.

### Gossip About Stock.

W. H. Wren, of Marion, Kas., proposes holding a public sale soon of thoroughbred Poland-Chinas and a number of draft horses and mares.

Every stock feeder will be interested in the corn and cob crusher advertised this week by E. A. Porter & Bros., Bowling Green, Ky.

Kansas swine-breeders are anticipating a large and enthusiastic annual meeting at Topeka on January 10, 1894. See the program published in this issue.

Ira K. Alderman, Maryville, Mo., Secretary of the Standard Poland-China Record, writes that entries for Volume 8 will close January 15, 1895. Patrons will please govern themselves accordingly.

The annual meeting of the Illinois Sheep Breeders' Association will be held in the State capitol, Springfield, Ill., on Wednesday, January 3, 1894. C. I. Pulliam, Chatham, President. Jno. G. Springer, Springfield, Secretary.

The sheep interests now need the most careful attention, and breeders and wool-growers cannot do better than consult with one another. The meetings of the several State associations afford the best opportunity for consultation, and this interest will be greatly benefited by a large attendance and full discussions at these conventions.

Entries for Volume V. of the Southdown Record are being made in large numbers, breeders taking advantage of the rule that permits the registry of lambs of 1893 at one-half the regular fee, providing they are recorded before January 1, 1894. But the principal cause for continued demand for these sheep is that farmers desiring only a small flock are now looking to the mutton instead of the wool-producing qualities.

Campbell, Hunt & Adams, composed of George W. Campbell, A. B. Hunt and J. W. Adams, unfurl their flag to the trade on the 1st of January, 1894. For the past thirteen years they have been the working force of the Campbell Commission Company and the James H. Campbell Company at the Kansas City stock yards. Judging from their past successful record we are assured the future for them is quite promising, and shippers of stock will do well to consider the merits of this company, and give them a trial, especially as their knowledge and experience in the handling of live stock is excelled by none, and conducting a commission business in its strictest sense, a shipper's interests is closely identified with their own, making it therefore perfectly safe. Their experience ranges from fifteen to twenty-five years, and they are energetic, efficient and reliable, well posted and conservative men.

Frank Iams, St. Paul, Neb., the successful breeder and importer of black Percherons, French draft, Shires and Clydesdales, reports that the one hundred head of stallions, mares and colts composing his stud are in fine form and are justly entitled to be known as the "sweepstakes stud" of the trans-Missouri country. He says: "They won, at the Nebraska State fair of 1893, forty-five first and second prizes out of a possible fifty, amounting to over \$600; six sweepstakes, a part of which was over the Nebraska World's Fair winners; scooped in the \$200 prize offered by the Nebraska State Association for best herd of draft horses shown; the two silver medals by fair association for best stallion and four of his get; also best mare and two colts." He farther states that all his winners are included in his offerings at hard times prices, at one, two and three years times at 5 per cent. interest. He challenges comparison and pays freight on all horses sold. Write him, or better, go and visit the stud. He will treat you white.

### January Notes.

Begin the the new year by keeping accounts.

This is a good time to plan out the next season's work.

Begin the new year by knowing how you stand financially.

While there is leisure is a good time to make out the list of seeds wanted.

By keeping the manure hauled out as made, time will be saved later on.

On dairy farms at least, a good ice house will prove a paying investment.

When the animals must depend upon dry feed alone, a variety is most essential.

If the trees get loaded with snow, shake it off; it may prevent their breaking down.

When the weather is severely cold, it will usually be best to increase the grain rations.

When the stock needs to be looked after daily, the farmer can least afford to be away from home.

When there is sufficient snow on the ground, a sled will be found convenient for hauling out manure.

The harness that is used will need more frequent oiling during the winter than at any other season.

Breeding animals need special care at this season, if thrifty, vigorous offspring are expected later on.

When the manure is reasonably well rotted and fined during the winter, is a good time to top-dress the meadow.

If trees are to be set out in the spring, the ground can be marked out and a stake put where each tree is to be set.

Take every opportunity of doing all of the preparatory work possible now, as a saving of time when the season opens.

If there is a thaw-out, it will often be found a good plan to plow the sod land intended to be planted to corn in the spring.

When muddy, make it a rule to wash off the horses' feet and legs at night when they come in from work. Dry off with a cloth.

When grass or clover seed is to be sown late in winter or early in the spring, it will pay to secure the supply in good season.

When the stock are allowed to run to the straw stack, care must be taken to see that they do not undermine it so as to bury themselves in it.

With grass, clover and oats, earliness is essential in securing the best results, and it will be an item to make all the preparation possible in advance.

If the stock are compelled to go to ponds or running streams for water, be sure that the ice is cut so that they can secure what they need without being compelled to go on to the ice.

Usually there is less opportunity for doing outdoor work this month than almost any other month in the year, but studying and planning indoors may often be made very profitable.

N. J. SHEPHERD.

### TO OUR SUBSCRIBERS.

The SPECIAL ANNOUNCEMENT which appeared in our columns some time since, announcing a special arrangement with Dr. B. J. Kendall Co., of Enosburgh Falls, Vt., publishers of "A Treatise on the Horse and his Diseases," whereby our subscribers were enabled to obtain a copy of that valuable work FREE by sending their address (and inclosing a two-cent stamp for mailing same) to Dr. B. J. Kendall Co., is renewed for a limited period. We trust all will avail themselves of the opportunity of obtaining this valuable work. To every lover of the horse it is indispensable, as it treats in a simple manner all the diseases which afflict this noble animal. Its phenomenal sale throughout the United States and Canada makes it standard authority. MENTION THIS PAPER WHEN SENDING FOR THE TREATISE.

For 2 cents (a stamp) any reader of KANSAS FARMER can have a sample copy of the New England Magazine by dropping a card to its publisher at 5 Park Square, Boston, and can obtain a club rate on the magazine and this paper by addressing the publishers of KANSAS FARMER, Topeka, Kas.

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### MISCELLANEOUS.

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## The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER. Give age, color and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. Sometimes parties write us requesting a reply by mail, and then it ceases to be a public benefit. Such requests must be accompanied by a fee of one dollar. In order to receive a prompt reply, all letters for this department should be addressed direct to our Veterinary Editor, DR. S. C. ORR, Manhattan, Kas.

**WIRE CUT.**—I have a colt that was cut on the fetlock by wire six months ago. It is all healed except on the outside; the skin keeps breaking and making him lame. What can I do to heal it? L. M.

Wellington, Kas.

**Answer.**—Put on a warm flaxseed meal poultice for a few days to soften the skin, then apply a little of the following twice a day: Oxide of zinc, 1 ounce; carbolic acid, 2 drachms; lard, 2 ounces; mix. If there is proud flesh in the sore touch it with lunar caustic.

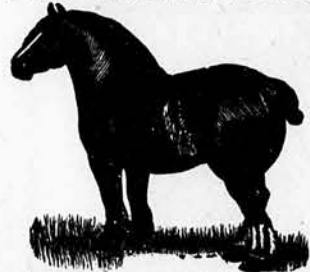
**WHAT CAUSED THE DEATH.**—I had a mare which I found eating wheat through a break in the granary; it was impossible to tell how much had been eaten. I gave one tablespoonful of pulverized alum and followed it with one pint of linseed oil and twenty drops of croton oil in about three hours. In two hours more I gave another quart of linseed oil and asafetida, but could get no passage through her, and about 4 p. m. she died. I opened her but found no great quantity of wheat, not enough to cause death. I gave her no water but found the paunch and entrails full of water. Give your opinion of death and treatment in the case, and your idea of treatment for wheat founder. J. W. C.

Leoti, Kas.

**Answer.**—According to your own statement the mare did not eat enough wheat to kill her, and you do not give any symptoms of disease nor even say that she was sick; hence I must conclude that your heroic treatment was the cause of death. As the supposition was that the mare had eaten an over dose of wheat, she should have had a purgative as soon as possible, but, instead, you gave a dose of alum, one of the most powerful astringents. Then when you did conclude to give a physic you gave oil, which, in a gorged stomach, is too bulky. An ounce of Barbadoes aloes would have been the proper thing to give. The croton oil was entirely unnecessary, besides being too irritating. The great quantity of water in the stomach and intestines was the result of the irritation caused by the croton oil. If the mare exhibited no signs of uneasiness no medicines were necessary. All grain should have been withheld for twenty-four hours and water given sparingly and in small quantities. If there were symptoms of pain an ounce of aloes should have been given at once and the pain relieved with sulphuric ether. If you give me the symptoms of what you call "wheat founder" I will give you my idea of treatment. I treat each case according to the symptoms.

If you have a troublesome cough, don't keep nibbling sweets, and so ruin your appetite. A dose or two of Ayer's Cherry Pectoral will do you more good than pounds of candy, and assist rather than impair your digestion. Always keep this medicine in your house.

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## The Poultry Yard.

### Weak Legs.

**EDITOR KANSAS FARMER:**—The question from one of the readers of the KANSAS FARMER whose fowls have weak legs has been referred to me. From my own experience I find the cause of weak legs is the feed. In years of the past when I fed corn alone I was troubled with weak legs in my fowls, but after changing my feed to bran, shorts and corn meal I never have had a case. The cure is, change your feed. Shut those up that show signs of weak legs and feed them soft feed made of bran and shorts. Add a little ginger and put in about ten drops of tincture of chloride of iron in a little hot water to each fowl you have up and mix the feed. Within four or five days stop the iron. Feed oats and wheat in afternoon, but no corn.

J. R. COTTON.

### Pullets Not Laying.

"What is the matter with my pullets? They are not laying, though their heads are blood red."

The Iowa Homestead answers: "One great reason may be their condition. They are probably too fat. Some people have an idea that over-fat troubles only belong to hens; but in that they are mistaken, as quite a number of cases have come under the observation of the writer where the pullets were not only too fat to lay, but which laid a number of soft-shelled eggs when there was plenty of lime within reach. In raising up to the age and condition of laying, corn and corn meal form an important part, but when that point is reached there must be a lessening of the fattening material (which also includes too much meat), and egg foods must be substituted. These egg foods are contained in bran, ground oats, a small quantity of corn meal and middlings, and whole wheat. The ground material should be made up in hot mash and the whole wheat should be strewn among a lot of leaves and litter to induce exercising. Of course, green food must not be forgotten, as well as good sharp grit. The houses must also be warm and dry. If, after all this feeding, the eggs do not yet appear, a little condition powder should be given to the birds in their soft feed. This being highly concentrated, stimulates the egg organs and opens up the avenue for continued egg production during the entire winter. But it must be understood that these remarks only apply to birds that were hatched during the months of April, May and June. Late summer-hatched pullets will hardly lay before spring. The cold winter will retard egg production with them. It should be the aim of every farmer to get out each April or May from fifty to one hundred pullets, and these would give him a generous supply of eggs for market at this time of the year, and the supply would keep up until warm weather."

### To Keep Fowls Confined.

Confinement is an unnatural condition for fowls, therefore, if it is necessary to keep them confined the greater part of the time, good management must be exercised or the business will prove a complete failure, says Dola Fay, in *Farm, Field and Fireside*. The first six requisites for success in poultry-raising are:

1. Small flocks. Trying to keep too many fowls in a house is an error too often made. If you wish a healthy flock keep few in a house. If large numbers are kept together they are apt to get diseased. If you wish a large number, divide them off in separate quarters; they will do better and keep healthier. Allow ten square feet to each fowl.
2. Cleanliness in the house and yard. The poultry house should be whitewashed or painted with coal tar twice a year. Saturate the roosts once a week with kerosene. If the droppings are removed daily, there is no reason for foul odor in the poultry house. Clean the nest boxes semi-monthly, and dust well with insect powder. Either fumigate or use a disinfectant twice a month. When the fowls are out of the house put a small kettle containing one-

fourth pound of cayenne pepper and one-half pound of sulphur in the house and ignite. This will destroy all vermin. Two gallons of water and one pound of copperas make an excellent disinfectant for house and yard. If possible, have changeable yards, so as to grow a crop in one yard while the fowls are occupying the other.

3. Proper food. Feed regularly and a variety. The best foods for egg production are good grains, chopped vegetables, and clover hay cut and steamed and thickened with bran or shorts. A mess of lean meat once or twice a week during winter is excellent. Liver and lights cooked tender are invigorating, and increase the egg production.

4. Sharp grit and material for egg shells. Provide plenty of sharp grit. Powdered chinaware, glass and charcoal are good. Fine soft coal is also good. The hens will not accept anything not suitable, and no danger need be feared. Lime and oyster shells should be in constant reach of the fowls. Save all the bones, burn them, pound as fine as corn grains and feed to them. They will lay better, feather better and not eat their eggs.

5. Pure water. Pure, fresh water should be provided; it is one of their essential needs.

6. Exercise. Make your hens scratch and work if you do not want them over-fat, or to die on the roost of apoplexy. If possible have a scratching shed attached to the poultry house and cover the floor with a litter of some kind, and scatter grain in the litter. Fowls that are confined acquire the habit of plucking feathers unless they are kept busy.

### State Forestry Notice.

Those wishing to avail themselves of the free distribution of seedling forest trees can make application any time before the 1st of March, 1894. Results prove that there are varieties of trees that thrive on the upland in central and western Kansas, even in the driest years, while there are others that will not; some of these promise well, yet finally bring disappointment. Any county that wishes the Commissioner to deliver an address on trees and tree culture will find him ready to help in arranging a date, and to give the results of experiments in the State experimental parks and elsewhere in the State. Also, if desired, will include the subject of practical irrigation in Kansas. County papers please copy. Address E. D. Wheeler, or Commissioner of Forestry, Ogallah, Kas.

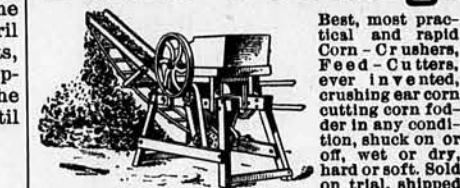
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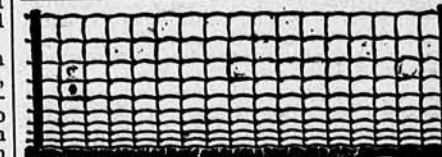
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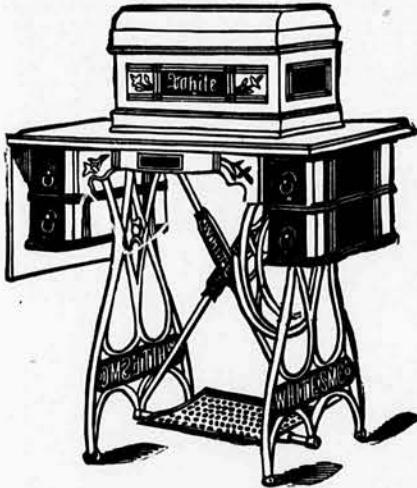
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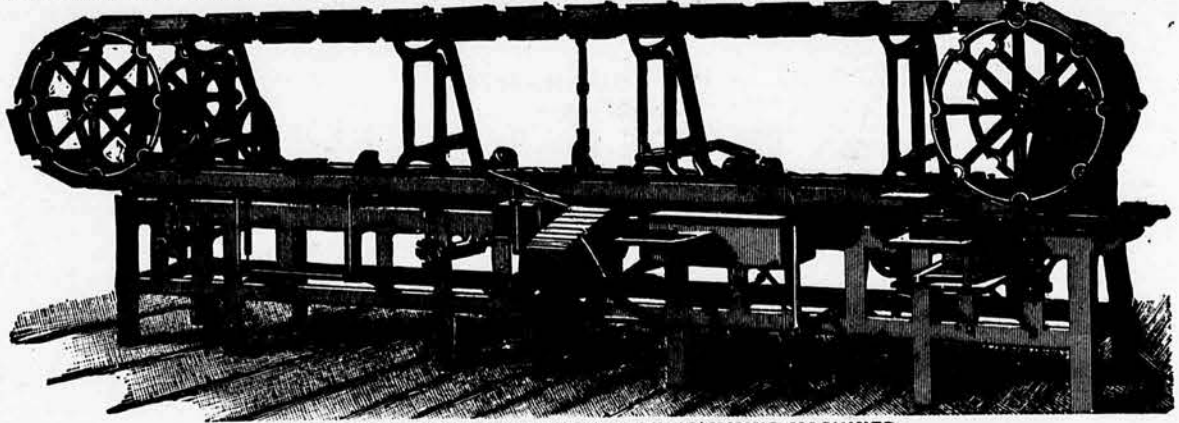
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And add \$1 in value to your Cockerels. Invented by me, after practical experience of many years at caponizing. They do the work right. Cause no deaths. A boy can do the work with them. Are simple, plain, durable, practical and cheap. Will last a lifetime. Explicit instructions sent with each set. Price, \$2.50 postpaid. Dow's "Caponizing" a book that tells you all about the work. The advantages, tools required, how to do it, age, time, how to feed and dress a Capon. Everything. By mail, paper, 25 cents; cloth, 50 cents.  
Address **GEORGE Q. DOW, North Epping, N. H.**

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	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts, 1892.....	1,571,155	2,397,477	438,268	32,505	97,462
Slaughtered in Kansas City.....	727,981	1,806,114	218,909		
Sold to feeders.....	213,923	4,290	29,076		
Sold to shippers.....	440,501	586,563	48,269		
Total sold in Kansas City.....	1,385,405	2,395,937	296,246	15,974	

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Entirely of Steel. No Castings to break. Strongest and simplest Lever Arrangement on the market. Write for Descriptive Circular.  
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**Can You Cut New Bread or Cake**

—really new—into thin slices? Not with an ordinary knife but with the wonderful

**Clauss Bread & Cake Knives**

It's easier than cutting stale bread with any other kind. It is equally good for new bread, cake or meat—as you can cut thinnest slices without crumbs—never needs sharpening; made of finest steel; used in the hands of hotels, and has been sold heretofore at 75 cents per knife. Send \$1.00 to C. S. HUTTON, Topeka, Kan., and receive postpaid a set of three—one bread knife, 14 in. by 2 1/2 in.; one cake knife, 11 in. by 2 in., and one paring knife.

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TELLS ALL ABOUT THE WEST. Will be sent free to you and your friends. Address **JOHN SEBASTIAN, Gen. Ticket and Passenger Agent, Chicago, Rock Island and Pacific Railroad, Chicago, Ill.**

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PRICE 50c. pint. Let those who have pale faces try it. It is a GREAT RESTORATIVE TONIC that acts upon the blood immediately.  
**Be Sure You Get BURNHAM'S.** Our formula is a secret. No other is "just as good." All grocers sell it. Six 1/2 pint bottles expressed for \$1.50. Send stamps for book—"Household Hints."  
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A safe simple home treatment that cured me after years of suffering with uterine troubles, displacements, leucorrhoea, etc., sent free to ladies with full instructions how to use it. Address Mrs. D. L. Orme, South Bend, Ind.



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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. Initials or a number counted as one word. Cash with the order.  
Special:—All orders received for this column from subscribers, for a limited time, will be accepted at one-half the above rates, cash with order. It will pay. Try it!

**FOR SALE**—Fifty choice Light Brahma cockerels; five yearling male birds. Felch and Autocrat strains. Some extra good in dark points. Also fine Bronze turkeys. Mrs. Emma Brosius, Topeka, Kas.

**CLEVELAND BAY STALLIONS TO TRADE**—We have a few good recorded Cleveland Bay stallions to trade for land, cattle, mares or geldings. Let us hear what you have to offer. Stericker Bros., Springfield, Ill.

**EARLY OHIO SEED POTATOES**—Grown in northern Minnesota. Car lots. Write. W. H. Davy & Co., Moorhead, Minn.

**MAMMOTH BRONZE TOM**—June hatch, weight twenty-two pounds, score 83½ by Hitchcock, World's Fair judge. Price \$10. J. H. Taylor, Pearl, Kas.

**FOR EXCHANGE**—Two hundred and forty-two acre farm in Charlton county, Missouri. Want a farm in northeast Kansas. We have bargains of all kinds. John G. Howard & Co., 423 Kansas Ave., Topeka.

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Crop of 1893. Pure and fresh. Address McBeth & Kinnison, Garden City, Kas.

**FOR SALE**—A few choice Bronze toms. Weighed twenty-one pounds at six months. Wm. B. Parker, Lakin, Kas.

**CHOICE BARRED PLYMOUTH COCKERELS**—At \$1.50 apiece. Also White Holland turkeys. Young toms \$3 each, \$5 a pair. Mrs. E. P. Mason, Belle Plaine, Kas.

**JOHN G. HOWARD & CO.**, dealers in farms, ranches and city property. Live stock specialty. Florida and Texas land for sale cheap. For trades see us or write. 423 Kansas Ave., Topeka, Kas.

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**MAMMOTH BRONZE TURKEYS**—Young toms, \$3 each; hens, \$2 each; pair, \$5; trio, \$7. No better turkeys in the West. Have large flock to select from. Can mate pairs or tries not akin. No inferior birds shipped on mail orders. A. P. Williamson, Mulvane, Kas.

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**LEGHORNS, LANGSHANS AND BRAHMAS**—Handsome, hardiest and heaviest on earth. Also Yorkshire hogs, bees, honey, and alfalfa seed. James Burton, Jamestown, Kas.

**JACK FOR SALE OR TRADE**—One four-year-old black jack, good bone, sure foot-getter, weighs 1,000 pounds. Also a fine pure-bred Percheron stallion, 4 years old, good bone and blocky and splendid foot-getter. Address Thos. Brown, Box 55, Palmer, Kas.

## HOLIDAY SALE.

Six Jersey Bull Calves, all solid colors, four to eight months old, descendants from tested cows, delivered to any point in Kansas, for \$25 each, if sold in January. Now is your chance. Improve your dairy stock. The LaVeta Jersey Cattle Co., Topeka.

**SEVEN LARGE FINELY-MARKED POLAND-CHINA** males. Two registered Holstein bulls; breeding first-class; will trade one for Poland China gilts. First sale first choice. Prices cut one-half. John Ziller, Hiawatha, Kas.

**WANTED**—Pure Red Texas Oats and Barley. McBeth & Kinnison, Garden City, Kas.

**FOR FRESH ALFALFA SEED**—Address Carter & Son, Garden City, Kas.

**LARGE, FINELY MARKED POLAND-CHINA** males. Two registered Holstein bulls; breeding first-class; will trade one for Poland China gilts. First sale first choice. Prices cut one-half. John Ziller, Hiawatha, Kas.

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## THE STRAY LIST.

FOR WEEK ENDING DEC. 13, 1893.

Lyon county—C. W. Wilhite, clerk.

**COW**—Taken up by D. W. Stouder, in Center tp., P. O. Olpe, one red and white pided cow, 12 years old, dehorned, branded O on right hip, smooth crop off left ear; valued at \$15.

**STEER**—Taken up by J. Harvey Wells, in Emporia tp., one two-year-old steer, red with a few white spots, marked with cut in left ear; valued at \$14.

Anderson county—J. T. Studebaker, clerk.

**MARE**—Taken up by Hans Jensen, three miles northeast of Welda, one dun mare, about 4 years old, no marks or brands visible.

**STEER**—Taken up, one red steer, 2 years old, white spot on left hip, some white in face; valued at \$12.

Greenwood county—J. M. Smyth, clerk.

**MARE**—Taken up by John Epp, in Quincy tp., one three-year-old bay mare, branded W on left shoulder; valued at \$12.

**STEER**—Taken up by G. W. Holman, in Janesville tp., near Utopia P. O., one black muley yearling steer, half under-crop off left ear; valued at \$15.

Russell county—Ira S. Fleck, clerk.

**2 PONIES**—Taken up by Geo. M. Morton, in Center tp., P. O. Bunker Hill, November 13, 1893, two mare ponies, one roan and one dark bay, marks and brands cannot be deciphered; valued at \$25.

Osborne county—Harry Gray, clerk.

**STEER**—Taken up by Benjamin Brown, in Natona tp., November 20, 1893, one dehorned red and white steer, end of left ear off; valued at \$14.

Riley county—Chas. G. Wood, clerk.

**FILLY**—Taken up by M. L. Clark, in Manhattan tp., P. O. Ma hattan, November 3, 1893, one gray filly, 2 years old, left hind foot white, white spot on right hind leg; valued at \$25.

FOR WEEK ENDING DEC. 20, 1893.

Bourbon county—G. H. Requa, clerk.

**COW**—Taken up by G. T. Enloe, in Walnut tp., December 4, 1893, one red cow, 9 or 10 years old, swallow-fork in right ear and under-bit in left ear, branded 2 on right hip.

Douglas county—F. D. Brooks, clerk.

**MARE**—Taken up by John Anderson, in Clinton tp., November 30, 1893, one sorrel mare, sixteen hands high, about 15 years old, blaze face, right hind foot and leg white, no brands; valued at \$15.

Crawford county—Peter McDonnell, clerk.

**STEER**—Taken up by C. W. Daley, in Sherman tp., P. O. Fallington, December 2, 1893, one red and white steer, white face, red around eyes, notch in under side of left ear.

Wabunsee county—C. O. Kinne, clerk.

**MARE**—Taken up by S. S. Smith, in Maple Hill tp., P. O. Maple Hill, one black mare, 5 years old, no marks or brands; valued at \$15.

**HORSE**—By same, one bay horse, 4 years old, no marks or brands; valued at \$15.

**PONY**—By same, one dun mare pony, 15 years old, no marks or brands; valued at \$10.

**MARE**—By same, one gray mare, 10 years old, no marks or brands; valued at \$10.

**PONY**—By same, one dun horse pony, 8 years old, no marks or brands; valued at \$10.

**MARE**—By same, one bay mare, 15 years old, no marks or brands; valued at \$10.

Marion county—W. H. Evans, clerk.

**MARE**—Taken up by M. B. Riggs, in Fairplay tp., P. O. Florence, November 15, 1893, one sorrel mare, 4 years old, three white feet, little white in forehead, wire cut on right front leg; valued at \$15.

Coffey county—O. P. Mauck, clerk.

**COW**—Taken up by —, one red cow, point off of left ear, slit in right ear, 9 years old; valued at \$17.

Allen county—E. M. Eckley, clerk.

**COW**—Taken up by T. S. Williams, in Marmaton tp., December 1, 1893, one red and white cow, 3 years old, no marks or brands; valued at \$10.

**MARE**—Taken up by H. D. Dugan, in Marmaton tp., one bay mare, 4 or 5 years old, no marks; valued at \$30.

**HORSE**—By same, one black horse, 10 or 12 years old, no marks; valued at \$15.

**HORSE**—By same, one black horse, 15 or 20 years old, many illegible brands; valued at \$1.

Montgomery county—G. H. Evans, Jr., clerk.

**COW**—Taken up by T. L. Anderson, in Fawn Creek tp., November 15, 1893, one white and brown spotted cow, 8 years old, swallow-fork in left ear and crop off right ear, branded with a bar on left hip.

**COW**—By same, one brown cow, 6 years old, marks and brands same as above; valued at \$22.

Lyon county—C. W. Wilhite, clerk.

**COW**—Taken up by John Gentner, in Jackson tp., December 1, 1893, one red cow, 7 or 8 years old, recently dehorned; valued at \$12.50.

**PONY**—Taken up by A. S. Clark, in Center tp., one dark bay pony, 4 or 5 years old, left hind foot white, branded J. E. W. on left hip; valued at \$20.

**PONY**—By same, one light bay pony, white spot in forehead, right hind foot white, branded J. E. W. on left hip; valued at \$15.

FOR WEEK ENDING DEC. 27, 1893.

Harper county—Wm. Duffy, clerk.

**2 MARES**—Taken up by T. D. Richardson, in Eagle tp., November 24, 1893, two mares—one bay and one brown; valued at \$35.

**HORSE**—Taken up by J. W. Zauch, in Eagle tp., October 31, 1893, one sorrel horse, 8 years old, no marks or brands; valued at \$50.

**MARE**—By same, one iron gray mare, 2 years old, no marks or brands; valued at \$40.

**MARE**—By same, one dark brown mare, 2 years old, no marks or brands; valued at \$40.

**MARE**—By same, one iron-gray mare, 1 year old, no marks or brands; valued at \$30.

**PONY**—By same, one black mare pony, 12 years old, no marks or brands; valued at \$25.

Chase county—M. K. Harman, clerk.

**MARE**—Taken up by N. W. Beecock, of Matfield Green, November 14, 1893, one bay mare, left hind foot white; valued at \$20.

**MARE**—Taken up by M. Nowland, of Matfield Green, November 15, 1893, one black mare, white on nose, white on forehead, white on right hind foot and left fore foot; valued at \$20.

**STEER**—Taken up by H. M. Giger, in Diamond Creek tp., P. O. Eldale, December 31, 1893, one black muley steer, some white on belly, both ears cropped, branded Y. E. T. on right side; valued at \$18.

Cherokee county—P. M. Humphrey, clerk.

**MARE**—Taken up by W. H. Vickers, in Spring valley tp., P. O. Lowell, one bay mare, fifteen hands high, 12 years old, white spot in forehead, blind in left eye; valued at \$15.

Russell county—Ira S. Fleck, clerk.

**MARE**—Taken up by Chris. Knabe, in Lincoln tp., P. O. Russell, December 12, 1893, one iron-gray mare, 3 years old, white face, one white hind foot; valued at \$15.

Wyandotte county—Chas. E. Bruce, clerk.

**HORSE**—Taken up by William Pasho, in Wyandotte tp., one and a half mile west of Armourdale, November 29, 1893, one bay horse, sixteen hands high, white in face and three white feet; valued at \$50.

Labette county—D. H. Martin, clerk.

**COW**—Taken up by William Sharp, in Hackberry tp., P. O. Bartlett, December 7, 1893, one red dehorned cow, 7 years old, large mark on left side; valued at \$10.

**STEER**—By same, one two-year-old dehorned

**SEEDS** J. G. PEPPARD 1400-1402 UNION AVE. KANSAS CITY, MO.  
MILLET A SPECIALTY.  
Red, White, Alfalfa and Alsike Clovers, Timothy, Blue grass, Orchard grass, Red Top, Onio sets, Tree seeds, Cane seed.

**SEEDS** T. LEE ADAMS, 419 Walnut St. Kansas City, Mo. Clover, Timothy, Blue Grass, Red-Top, Millet and Cane Seed, LANDRETH'S GARDEN SEEDS, Sheridan & Pratt's Poultry Food.

**SEEDS** ALFALFA A SPECIALTY. Cane, Millet Seeds, Kaffir, Rice and Jerusalem Corn, Yellow and White Milo Maize—all grown in 1893. For prices address McBETH & KINNISSON, Garden City, Kansas.

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Spokane's population 1890, 19,000; is now 36,000 and growing. Eight railroads and the finest Agricultural, Horticultural and Mineral country surrounding for four hundred miles. Finest health, climate and good schools in the world. Is growing rapidly; will be as large as Denver by 1900.

## My Avondale Addition (250 Lots)

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Satisfactory Terms on Sales and will Exchange a few lots for clear farms in Eastern Kansas and Western Missouri. For further information address the owner

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For us. Cash pay weekly; business men, professional men, mechanics, farmers—their sons, daughters and others, work for us the year round—because nothing else brings them so much quick cash. Beginners taught; our men sell where others fail—our prices half others, our Whole Root Trees live (one customer planted 18,300 and every tree living), hardy sorts for the North—let Choice sorts for every State in U. S., guaranty with every order, we pay freights, insure satisfaction, build up trade, hold it; you work direct, no middlemen; 900 new outfits just ready, the finest ever used. Write quick (giving age, reference, etc.) to STARK BROS. NURSERIES & ORCHARDS CO., Salesmen's Dept., LOUISIANA, MO., or ROCKFORD, ILL. Founded 1825; 1,000 acres Nurseries; 20,000 acres Orchards. Send two stamps for Orchard Book, photographs of Fruits, Nurseries, Orchards, etc., full of exact information about trees and fruits.

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A 12-Tons-a-Day Machine at a 10-Tons-a-Day Price. Our Warranty Goes with Each Machine. The Southwick Baling Press is a 2-horse, full-circle machine. It has the largest feed opening of any Continuous-Baling, Double-Stroke Press in the World.



Bales tight; draft light. Capacity; Construction; Durability—all the BEST. SANDWICH MFG. CO., 126 MAIN ST., SANDWICH, ILL.

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AN ELEGANT Gold-Filled Dueber Hunting Case Watch

beautifully engraved, handsome design and guaranteed to give satisfaction. The finest thing ever offered for the money. We will supply you with Elgin, Waltham, Columbus or Hampden movement. Stem wind and Set. All the latest improvements for \$10.00. We can furnish either gentlemen's or lady's watch on this same offer. How do we do it? Why, we are the Farmers and Manufacturers Commercial League and have recently closed a contract with the manufacturers for the above line of watches and give them to the farmers and their families at less than wholesale cost. We are also offering other special sales of Sewing Machines, Organs, Dress Goods, Etc., Etc. Send 6 cts. for illustrated catalogue and ask for the Constitution and By-Laws of League. Charges prepaid.

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## WANTED.

A competent, experienced man as foreman for a large dairy farm. Must be an expert butter-maker and understand running the Danish separator and the care of blooded stock. Send applications, stating experience and wages expected, to Box 418, Colorado Springs, Colo.

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