

Agricultural Matters.

KAFFIR CORN—SORGHUM.

A paper by W. T. Hotchkiss, read at the Berryton (Kas.) Farmers' Institute, February 4, 1898.

KAFFIR CORN.

Kaffir corn has a coarse, strong stalk, and the shortest period of growth and ripening is about 100 days. The stalk and leaves and grain are all excellent food for horses and cattle, and in the Kaffir countries the meal is prepared in various ways for food. Kaffir corn has the same climatic limits as Indian corn, and an early spring, warm summer and late fall are the essential climatic conditions for an abundant crop. Its yield is greater than Indian corn, and, in my judgment, it is destined to become, in the very near future, an important factor in American agriculture.

In the cultivation of Kaffir corn, the first thing to be considered is the breaking or turning of the soil—shall it be broken in the fall or spring? shall it be deep or shallow? or shall a middle course be pursued? are questions upon which there are very considerable differences of opinion among Kansas farmers.

I am in favor of fall plowing, for several reasons. First, because by turning over the sod and turning under the stubble and weeds in the fall, decomposition has so far advanced, during the four or five months between plowing and planting, that a much larger share of plant food is in a state of readiness to be absorbed by the young corn plant than if the operation had been deferred until a few days before planting. Second, because I have found the yield greater than on spring-plowed land; and third, because, as a measure of economy, the work can be done at a third less cost than during the pressure of spring work.

Is deep plowing advisable? That depends upon circumstances. If we plow in the fall we may plow considerably deeper than in the spring; or in case we manure very heavily, we may plow deep, say six or seven inches. But don't plow too deep, for if you do you practically embalm or preserve that which it should be our aim to convert into an active plant food.

Having prepared a good seed-bed by thoroughly pulverizing the soil, care must be taken not to plant the seed before the ground is warm. A good rule to follow is, to seed immediately after corn planting is finished.

Kaffir corn may be grown either in hills or in drills; and whether planted in hills or drilled in rows, it should be given about the same cultivation as Indian corn. I plant with an ordinary two-horse corn-planter with drill attachment, and cultivate the first time the same as corn. If other cultivation is needed, it should be shallow, because the roots reach out eight or ten inches in all directions, and deep cultivation would destroy the feeders and weaken the plants. It cost me one-third of my crop last season to acquire this information.

The crop should be cut as soon as ripe. I use a corn-harvester, bind in bundles, and shock the same as wheat.

When grown for fodder, the most common error is too thick seeding. When thickly sown, the fodder is apt to fall and rot; and if saved is watery and not fit to feed, since full development of the plant does not take place.

If grown for fodder, there should be about four plants to the foot, and the rows should be from two feet and a half to three feet apart, and seeded about one and one-half inches deep. If grown for grain, plant about the same as Indian corn.

For fodder, I like Kaffir corn better than Indian corn, because there is less waste, and horses and cattle eat it clean. For chickens there is nothing better, and there are more eggs in a bushel of Kaffir corn than in any other kind of grain.

But the chief recommendation of Kaffir corn for this locality lies in the fact that it will produce a crop on less rain than is required for corn, and is not affected so seriously by the hot winds. When corn has once been stunted by drought or hot winds it never recovers; but Kaffir corn will remain stationary and curled up for weeks, and when the rain comes it will revive, and if not too late in the season will produce a good crop of grain.

There are no statistics of which I have knowledge that give the magnitude and extent of the crop of Kaffir corn raised in this State, but I am sure that the acreage is steadily increasing, and I believe that in the years to come Kaffir corn will be one of the permanent staple crops of Kansas, excelling in certainty and amount of yield all other crops.

SORGHUM.

Sorghum belongs to the same family

as Kaffir corn, and, in the preparation of the soil, seeding and cultivation, requires about the same treatment. The soil must be warm and free from weeds to start with; an occasional stirring with the cultivator produces good results.

The sweet, or sugar, sorghum is my favorite variety, and the one with which I have experimented most, and I regard it as the very best forage crop that can be raised in this climate. It will not raise quite as much grain as Kaffir corn, but what it does produce is equally good for feed, and the fodder is very much better.

On deep, rich soil, kept clean of weeds, two or three cuttings may be made in one season, yielding from three to ten tons of cured fodder to the acre. I believe the time is coming when the farmer will quit the old-fashioned methods of pasturing his lands, and all the upland meadows will be turned into sorghum fields. For instance, under the present system of pasturage, forty acres will scarcely feed twenty head of cattle five months in the year, while the same forty acres in sorghum, properly cared for, will give the twenty cattle three meals each day and a lunch at midnight, and keep them in good condition twelve months in the year.

Sorghum is especially good for dairy stock, and as a milk-producing feed has no equal. I am feeding it now with well-cured clover hay to milch cows, and while the cows pick over their clover they eat the sorghum clean as it comes. So I say, after a thorough trial, that there is no better food for the production of a full flow of rich milk and at the same time for keeping the cow in a thriving condition, than sorghum fodder, and especially when fed with well-cured hay.

The introduction of Kaffir corn and sorghum will, in my opinion, be an immense boon to the dairy interests of the State of Kansas. But nothing can be gained without work and cost and struggle and waiting, for it is the same in farming as in every other department of business. All work has its due return, and comfort and independence and a clear conscience will come to those who willingly work and then are willing to wait while the grain which their toil has planted ripens.

The Hedge-Trimming Law.

Editor Kansas Farmer:—Some time since I noticed in Hon. P. P. Elder's paper that the farmers of Franklin county were organizing to test the present hedge law. I am glad they have decided to do so, for the law as it now stands is an outrage and should not have been passed. As it stands now, the people in cities can say whether or not this extra tax shall be added onto the farmer. Why was the law framed in this way? The farmers have nothing to say about the streets or sidewalks in the cities, and should not, for they would not be the ones to pay the taxes. Yet this bill allows every voter in either town or city a vote as to whether or not the farmer shall have this extra work put on him. I think the bill, while purporting to give local option, was purposely framed in this way because the framers knew the city voters almost to a man would vote yes. As every county that grows hedge has a large portion of its voters in the cities, it settles the question without the consent of the farmers themselves.

Again, the hedges grow on the farmer's own land. Why should the law compel him to destroy the fence any more than the grove or the orchard only a few feet distant? These hedges have in the past been encouraged by law and have been of vast benefit to the State. Now the law steps in and compels the farmer to destroy not only a large part of the forest trees of the State but the fence that guards his farm and keeps in his stock; for, trimming a pasture fence is only the preliminary work to grubbing it out of the way; because, if the stock do not entirely destroy it they will destroy so much of it that the farmer will be only too glad to substitute some other fence that he will not have to spend half his time repairing. As a general thing, it is very easy to pick out the advocates of the law. Just wait until the first time the roads are bad, and go to your neighbor's or to your own front yard where the hedge is trimmed and blue grass growing on the roadside, and no matter how well the road is graded the hedge-trimmers will take to the side and try to cut the grass, till it is in worse shape than the center of the road. It would have been more sensible to pass a law protecting the rights of the man who wanted to beautify his farm and keep it neat.

Again, when it comes to cleaning the roadside, one man has a strip of brush or trees along his roadside, while the next has nothing but prairie grass. The

land has been confiscated and the farmer has no control over it, yet he is compelled to go to the expense of grubbing and clearing for the traveling public. This is unequal taxation. It is no more a just law than if it also compelled every farmer to construct and keep in repair the bridges and culverts joining his land.

The law as it now stands pleases the cities and benefits the railroads, who are enabled by it to purchase indestructible fence posts at less cost than they formerly paid for poor ones, but in so doing it is decidedly unjust to the owner of the land.

E. W. MELVILLE.
Eudora, Kas.

Save the Soil Moisture.

Editor Kansas Farmer:—It will be only a short time now until every practical Kansas farmer will be watching the soil tumble over as the plow is drawn through it, and his mind will be very busy thinking, while his eyes watch the furrow as it turns over.

The best thoughts of the farmer's life come to him while his body mechanically follows the horses, and he is by no means the "clodhopper" that many suppose he is. Now, as we follow the plow and watch the mould-board toss the soil to one side, let us observe how it is done. First, we notice that the soil is in a good condition to plow, as it is neither too wet nor too dry, as no farmer would think of plowing his soil when too wet or too dry. Why is this? Because he knows he will injure the soil if he works it when too wet, and when it is too dry it does not plow good. Now, then, if he will not plow his soil when it is too wet, why will the very same farmer harrow it when it is too wet?

Most of the farmers plow whole fields, and the atmosphere rapidly dries out the freshly-turned soil, and they do not harrow until it rains, and then, as they are in a hurry, they start the harrows when the soil is too wet, as is proven by the bunches of rootlets that wrap around the harrow teeth and are pulled off at the end of the field.

Now, why should a man be particular about plowing and so careless about harrowing? Is there any sense in this way of doing? If the soil is in such nice condition when plowed, why is not that the time of all times to harrow the soil? Why will the farmer turn over the soil and put about four inches of air into it, thus establishing a free circulation of air through the soil, then allow this condition of things to continue until the whole field is plowed or until it rains? Is not such work a downright calamity to the soil? Plowed soil thus treated will very rapidly evaporate its moisture, and all the moisture found in this turned-over soil at the end of a week of pleasant weather is the moisture at the bottom of the furrow that has been drawn up from below as the surface moisture evaporated. Any farmer will agree that a few pleasant and hot days with a warm south or "drying wind," as he calls it, will rapidly dry out the freshly-plowed land that has not been harrowed, but he thinks that if the weather is cold and cloudy that the evaporation ceases and it will do no hurt to let the soil lie and harrow it later on.

Now, while our heads are down and we are watching the soil turn over in the furrow, let us study out just how a cold and cloudy day will stop the evaporation from the soil. We know that when a plow is set to run about four inches deep, that the land-side of the freshly-made furrow will measure about seven inches, as the plow point has raised the soil the same as a subsoiler point does, or the exact depth of the plow shin, and the freshly-turned furrow will measure fully eight inches in depth; and we slap ourselves and tell our neighbor that we are plowing seven to eight inches deep, when we have only turned four inches of soil over, but we have added four inches of air to the soil, which is enough to starve any plant to death. Now, with so much air in the soil, the surface air has free access, and as the soil has become thoroughly warmed up to about 55° to 60°, then a cold wave down to almost 32° comes along and continues about a week, with cloudy weather, we feel easy about the evaporation from the soil, but as we look over to the pond in the pasture we see the warm pond water steaming up into the air, and we say: "What's the matter with that pond, anyway?" Just then we notice that our breath turns to steam in the cold air. Why is this? Why, the cold air is very rapidly condensing the moisture into visible particles of water that are carried away by the air, both from the pond, from our breath and also from the soil that it has free access to.

Why, many is the time that we have seen a very cloud of steam arise from the



freshly-plowed soil. Now, this steam is vapor so dense that we can see it, and it all comes out of the soil and passes away in the air.

Do my brethren realize how fast the moisture is drawn out of the soil under these conditions? When it is about 32° out of doors, go and blow your warm breath on the window glass, and you will see tiny drops of vapor deposited on the glass, and if you repeat this a few times a little drop will start and trickle down the glass and form a miniature lake on the window sash. Go out of doors and repeat this on a hand looking-glass, and you will see the same thing. But wait a little while and you will see the deposited moisture all pass away into the cooler air that absorbs it. This is just how the cooler air absorbs the moisture in the soil when it has free access to it. If the moisture is in the soil so as to be as easily seen as on the looking-glass, and the four inches of air in the soil allows free circulation of air through the soil, why will not the air absorb the moisture from the soil just as rapidly as from the glass in our hand? The air cannot penetrate the warm pond, yet it absorbs moisture so rapidly as to make a visible vapor that is thick enough almost to hide from view the objects beyond.

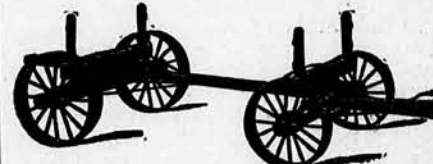
Next week I will continue this subject, and I ask my brother farmers if I have not drawn the picture about correctly?
CLARENCE J. NORTON.
Morantown, Kas.

Wheat on Western Kansas Upland.

Editor Kansas Farmer:—If any one living in the country lying south and west of Great Bend, Larned and Dodge City has been successful in raising wheat in that section on upland for five or six years without failing, I would be glad to know the method pursued in preparing ground, sowing, etc., and if reply comes through the Kansas Farmer it may be of great benefit to others as well.
Warsaw, Ind. E. E. HICKMAN.

A Good Cheap Farm Wagon.

In order to introduce their low metal wheels with wide tires, the Empire Mfg. Co., Quincy, Ill., have placed upon the market a farmer's handy wagon, sold at the low price of \$19.95. The wagon is only 25 inches high, fitted with 24 and



30-inch wheels, with 4-inch tires. This wagon is made of best material throughout, and fully guaranteed for one year. Catalogue giving full description will be mailed upon application to the manufacturers, who also furnish metal wheels at low prices, made any size and width of tire to fit any axle.

Home-Seekers' Excursions.

Tickets will be sold on the first and third Tuesdays of January, February and March via the Union Pacific to points in Missouri, Arkansas, Indian Territory, Oklahoma, Texas, Louisiana, Arizona and New Mexico, where the minimum round trip rate is \$7 or over, at one fare for the round trip, plus \$2. For exact territory and full information or tickets call on or address F. A. Lewis, City Ticket Agent, or J. C. Fulton, Depot Agent, Topeka.

Send \$1.25 for Kansas Farmer one year and book, "Samartha at Saratoga."

Ever was the first victim of a smooth-tongued liar about the quality of fruit he was interested in! The oldest swindler in the world, yet now no one more easily secures victims!

Reading Congressional and other political proceedings suggests that public officials think they swore to support a political party instead of the constitution of the United States!—Farm, Stock and Home.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

MARCH 8—T. J. McCreary, Aberdeen-Angus cattle, South Omaha, Neb.
MARCH 16—Jas. A. Funkhouser, Gudgell & Simpson, Herefords, Kansas City, Mo.
MARCH 17—W. T. Clay-H. C. Duncan, Short-horns, Kansas City, Mo.
APRIL 13—T. F. B. Sotham, Herefords, Chillicothe, Mo.
APRIL 15—Scott & Marsh, Herefords, Belton, Cass Co., Mo.
APRIL 28—M. J. Bagley, Short-horns, Kansas City, Mo.

HOW SELL SURPLUS BREEDING STOCK?

Paper by Col. J. N. Harshberger, Lawrence, Kas., read before annual meeting of Kansas Swine Breeders' Association.

On the subject assigned to me for this meeting, "The Best Method of Disposing of Surplus Stock," I shall only attempt a few thoughts or pointers as my experience in the breeding and selling of breeding animals may dictate. It is a subject which is engaging the most thoughtful minds of up to date breeders. Ours is a progressive country, and methods practiced and means used twenty years ago will not do to-day. As our country advances in the arts and sciences of intellectual development so it must advance in the art of the disposition of all the products of our land, both animal and vegetable.

The breeding industry of to-day has world wide proportions as compared with the industry twenty years ago. As the animals for breeding purposes increase so must the facilities for the disposition or selling the same be increased. The facilities for handling a car of wheat or corn have become so perfected that to market a load of either one gives the farmer but a moment of thought. Not so with a herd of cattle or swine intended for breeding. I well remember and possibly many of you may remember seeing in the early settlement of Illinois and Iowa, large herds of thoroughbred Short-horn cattle driven overland from Ohio and Kentucky and sold out singly or in pairs as was desired to farmers and persons who were able to buy and wanting improved stock.

One method was to select some central location and from that point send out runners informing the people for miles around in every direction of what they had for sale and inviting inspection of their cattle. In this way their surplus stock were disposed of with profit to the owners as well as purchasers. These were days when there were not the facilities for travel that we have to-day, and buyers and sellers were a long ways apart. To-day, our railway facilities are such that buyer and seller are closely located.

In order to arrive at a proper conclusion on any subject, you must give that subject a proper analysis. There are two factors which enter into this matter and they are closely allied. One is the ability of the seller to put his stock in the best possible condition and to advertise the same in a manner that will draw the attention of fellow breeders. The other is the transportation facilities and the ability of the buyer to recognize good stock when he sees it. There is a tendency among breeders to look upon theory with some degree of suspicion. They regard theory as belonging to the college professor or the newspaper editor. Without theory, there would be little advance in practice beyond what is already known. No one is ready to admit that all that can be known has already been learned. A practical farmer or breeder strikes a new theory in his line of business, puts that theory into practice, and, finding it good, will be doing a good thing for his fellow breeders if he will make it known to them that they may be able to realize the correctness of his theory.

There are two methods at present of selling surplus stock—one by private treaty, and the other at public vendue.

They both have their claims on the seller, and there is naturally a difference of opinion as to which is best. The object of every breeder is to realize the most dollars out of his product with the least expense. Here comes in theory put into practice. One says, "My theory is to sell at private sale as long as possible and then invite the public in to buy my tailings." Another says, "I will not sell anything except at public sale." They both have a theory, and the question is, which theory will stand the test of experience? We have read that nothing valuable is attained without some cost. Hence the value of experience in these matters, these different methods. These experiences should help us to arrive at a proper conclusion on the subject. One says, "I sell a pig or a calf whenever I find a buyer. I need a few dollars in my business, and instead of borrowing, I

sell my stock. I save interest, feed, liability to disease and consequent loss thereby. I retain my retail trade, and then," he adds, "if I don't some one else will."

The result of this method is that one-half the product is sold, the money is spent, and nothing visible to show for it; quite a number left unsold and called by the seller the average of his herd, but which, in fact, are the tailings. There are hardly enough left to invite the public to buy and almost too many to lose, and the outcome is an "ad." in the "Special Want" column of our agricultural papers, and a few straggling sales for the next month or so, the result. A few years of this kind of business, to the breeder, and the breeder loses interest in his work, his ambition fails him, and in a short time he goes out of business. The other says, "I save the entire product of my herd for public sale. My reasons for so doing are that my herd is not culled. I can thereby make a better showing to the public of my herd and breeding operations. I get all my money at once, and can use it to pay some obligations or add new blood if wanted, and above all I get rid of the care and responsibility pertaining to a herd of breeding animals." These are the experiences of breeders every day. Josh Billings once remarked to a friend that he always ate hash at a hotel. On being asked why, answered: "Because I know just what I am getting, the leavings of other people's plates." The best method, in my judgment, is to commence at breeding time with this end in view—the selling at public sale. Breed your sows as early as the accommodations at farrowing time will permit. Feed with the same end in view, and with the best and most nutritious bone- and muscle-making foods. After farrowing time, and your pigs are fairly on the way to hoghood, claim your sale date in our agricultural papers (which by the way is cheap advertising). Grow your hogs to the fullest extent, so as not to interfere with their usefulness in other hands; advertise judiciously, not overdrawing the picture. We often find this mistake, and it as often proves detrimental to a successful sale. When you give breeders to understand that you have just what you advertise, or a little better, you have made a long stride towards success. Let it be known through your advertising mediums that you have kept your entire product for your annual sale, and under no consideration will you sell at private treaty before that time, and I think that you will see a great deal more interest manifested and a larger attendance at public sales. We have some cattle breeders who are pursuing this last method and I am informed that they are entirely satisfied with the results. So far as I know, we have no swine breeders who have as yet made the attempt. I am aware that there are many obstacles in the way of young breeders and many having only moderate-sized herds in pursuing this course, yet I believe with older breeders, whose reputations are established and with all conditions favorable, this will be found the proper course to pursue.

Artichokes for Hogs.

Editor Kansas Farmer:—Any one who reads and observes cannot help but know that, in all systems and combinations of feeds written upon for the best results in the feeding of hogs, roots of one kind or another are invariably advised as a part of their rations, especially for the season of the year when there is no grass. The roots generally mentioned are potatoes, beets, artichokes, turnips and carrots. Now this advice is all right and no one will deny that the hog-raisers who make it a point to feed a liberal ration of roots to their hogs have their porkers always in a thrifty and growing condition. My own experience and observation has proved this to my mind beyond a doubt. Experience has also taught me that there is a great deal of difference in the cost of raising and feeding of roots to hogs, and have found from several years' experience in raising artichokes that they are the easiest and surest crop to raise of any of the roots mentioned; also the easiest to feed, as the freezing of them in the ground does not injure them. Therefore they can be left where grown and let the hogs harvest them, which they will do with pleasure to themselves and profit to the owner. As corn is the king of grains for hogs so is the artichoke the king of roots for hogs, because they are the best liked and the easiest raised to feed. The artichoke is very hardy and will grow anywhere corn or potatoes will and will yield 300 to 400 bushels per acre, owing to soil and season. They are planted and cultivated about the same as potatoes. Are a bone and muscle-making food, causing shoats to thrive and grow

very fast. I have found that five or six acres would carry about seventy-five shoats over from fall till late spring with some corn in addition. It appears to me that as hogs are so naturally fond of them and that they seem so healthy when fed on them that the artichoke was intended as food for them. At any rate I am satisfied that no healthier or cheaper pork can be produced than from artichokes and corn. These two feeds seem to make a perfect balanced ration for health, fast growth and fat.

GEO. A. ARNOLD.

Hayden, Phelps Co., Neb.

National Live Stock Association.

Editor Kansas Farmer:—The fact that the greatest convention of live stock men ever assembled on this continent recently adjourned in this city after organizing the National Live Stock Association of the United States, is now known by every man in the Union interested in any branch of this great industry.

No one now doubts the wisdom of convening this convention. There has been no such gathering as this since 1885, and the time was ripe. The previous efforts made to establish a permanent national organization at St. Louis were put forth at a peculiarly unfortunate time and they failed. This one will succeed. The idea was conceived and promulgated from the proper point, one in the very center of the stock-growing region. It has energy, liberality and leading men engaged in the industry behind it, a combination great enough to guarantee its success.

No better reasons for calling these men together can be given than those set forth in the call, which are as follows:

"The live stock industry of America, and particularly of the United States, has lately experienced a revival. With that revival it is discovered that the business is entering upon a new era. Old methods are giving way to modern ideas and systems. The territory once devoted to the range has yielded to the man with the hoe, and the stock from the Western ranges now stop in the corn fields to fatten before going to market. All this is comparatively new and has brought growers face to face with new conditions. This being so, it is of the utmost importance that those interested should get together and discuss these questions. This has created a strong sentiment among stock-raisers that the influence of a centralized association representing every branch of the industry will promote and bring into closer relationship the common interests, whether of the owner of a small herd of fine stock on the Atlantic coast, or the man who controls thousands of cattle, horses or sheep on the Western plains."

The national organization was perfected upon this high plane and will result in inestimable good to the industry, which has long since outgrown its narrow confines.

The question is now asked: "What are the purposes of the new organization and what will it accomplish?" There is no denying that a combination of interests is an assistance to every branch of an industry, and therefore a benefit to all engaged in it. A national organization has more power and influence in accomplishing the desired ends than a State or county association.

There has been a great evolution in the business during the past thirteen years. This is a new regime, and by reason of it stock-growers are prospering as never before, thus making the necessity for a centralized association, free from the machinations of political promoters, almost imperative.

In an interview upon this subject, Hon. John W. Springer, President of the association, to-day said:

"We can have our State and county organizations, as cattle men, as horse men, and as sheep and hog men. But it is certainly desirable that once each year we should all come together as members of the National Live Stock Association of the United States to discuss collectively matters pertaining to the best interests of all individually. We need no expensive machine, as each State association can look after its own local interests, but nationally we should present our demands in the strongest manner possible. We should then be able to speak by authority of the live stock interests of the Union.

"We want just laws on the subject of quarantine regulations, on the stamping out of contagious diseases, the least amount of governmental interference compatible with the general public good. We need to be largely left alone from the legislative standpoint, if we work out our own salvation.

"We want equitable freight rates for the transportation of our stock, based on services rendered and distance hauled, rather than rates arbitrarily based to

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The Great Cures by Hood's Sarsaparilla Are Indeed Marvelous.

"My husband suffered with stomach trouble so bad at times he could not work. He has taken Hood's Sarsaparilla and it is helping him wonderfully. He also had a scrofulous humor but Hood's Sarsaparilla cured this and he has had no trouble with it since. My little boy, too, has been taking Hood's Sarsaparilla and it has given him a good appetite. We have great faith in Hood's Sarsaparilla." MRS. J. H. EDWARDS, 50 Edinburg St., Rochester, New York. Be sure to get Hood's because

Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier. Sold by all druggists. \$1; six for \$5.

Hood's Pills are the best after-dinner pills, aid digestion. 25c.

earn dividends on grossly watered bonds and stock. We want more consideration from the stock yards of the country and lower rates than we have paid under protest for years.

"While we have been prosperous, we have only reached the edge of the shadows we have passed through. We shall yet walk out in the full light of a prosperous nation. We have started out in the right way, and every month brings us into a better general condition.

"The stockmen are becoming a power in the land. When we ask for any legislation and stand united politicians will stand in the rear.

"We need, finally, a broader reciprocity—a more equitable give and take policy with our neighbors—dealing with them as our friends, our customers, not as our enemies. We must attend to our own business, let the governments of the old world alone to fight it out among themselves, if we would be the universal arbiter of disputes, of whom we trust it may be truly said, 'equity and justice in America prevails from the mountains even down to the seas.'

"In addition to these questions of national importance, this association can gather important data and statistics as to the best method of feeding, breeding, the best classes of grasses and grain for dissemination among its members, which can be gathered from no other agency, and which will be of incalculable value.

"These are some of our purposes. What we will accomplish depends solely upon the men who are interested in this great work and who are officers and members of this association. Many years of dealing with these men has demonstrated to me that they are a class who never fail in any honorable undertaking, and therefore I am satisfied that the future of the National Live Stock Association of the United States will be one of the most successful ever organized in this country." C. F. MARTIN, Secretary.

Denver, Col.

The principle of smaller farms better tilled is obtaining new converts every day; and the consciousness that a small farm paid for is heaven while a big farm under a mortgage in the other place is rapidly spreading.—Exchange.

The bluebird is hailed as the harbinger of spring. It is also a reminder that a blood purifier is needed to prepare the system for the debilitating weather to come. Listen and you will hear the birds singing: "Take Ayer's Sarsaparilla in March, April, May."

Don't Tobacco Spit and Smoke Your Life Away.

To quit tobacco easily and forever, be magnetic, full of life, nerve and vigor, take No-To-Bac, the wonder-worker, that makes weak men strong. All druggists, 50c or \$1. Cure guaranteed. Booklet and sample free. Address Sterling Remedy Co., Chicago or New York.

Illinois Echo.

Mr. J. K. P. Fleming, prominent horseman of Freeport, remarks: "I have used Quinn's Ointment in my stable; find it does all you advertise. I can highly recommend it." For curbs, splints, spavins, windpuffs, bunches, it has no equal. Trial box 50 cents, silver or stamps. Regular size \$1.50, delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

Summer Land in Winter.

Southern California; the California Limited takes you there in 54 hours over the Santa Fe Route. Most luxurious service.

Have You Noticed the New Lights?

The Santa Fe chair cars, coaches and dining cars are illuminated by electricity generated by the revolution of the axle. 'Tis the first line to adopt the system.

Sheep Department.

Conducted by J. CLARENCE NORTON, Moran, Kas., to whom all letters should be addressed.

A Word, Introductory.

Owing to many urgent calls from the flockmasters of Kansas it has been deemed best to commence a regular "Sheep Department" in Kansas Farmer, hence I begin this week my work in this department, and whether it is a success or a failure depends largely upon the flockmasters of Kansas, whose active support I must have, and whose encouragement I greatly need, in order to successfully carry on this department.

I am not authority on all sheep matters, and must largely depend on my brother shepherds for support.

It is my ambition to make this department valuable to all interested in sheep in Kansas, and I earnestly request my brethren in the craft to write me as often as they can and to give me their hearty support.

A Shepherds' Directory.

I have thought that a "Shepherds' Directory" for Kansas would be a nice thing to have, in order that the flockmaster who takes the Kansas Farmer can always have on file the names and addresses of all the active breeders in Kansas, and with this object in view I desire every breeder of sheep in Kansas to send me his address and state the kind of sheep he is breeding, also the name of all others who are breeding sheep or are likely to engage in the business, and whether they are subscribers to the Kansas Farmer or not, and I will print the list once a month, as it comes in, and at the end of the year it is hoped that a complete list will have been printed, and that every one of them will be a member of the Kansas Farmer flock.

The following names are all I have on my list at present, and they will not be printed again, so it is important that you preserve this paper for future reference, as we will have at some future date a great gathering of the flockmasters of Kansas, at some central point, probably Topeka, for the purpose of bettering ourselves and our interests. (Notice who the bell wether is.)

Kirkpatrick & Son, Connor, Kas., Shropshires.
B. C. Lucky, Golden, Kas., Shropshires.
Guy Seroice, Emporia, Kas., Shropshires.
H. Welde, Yates Center, Kas., Shropshires.
Frank D. Silvis, Richfield, Kas., Shropshires.
Grant Benedict, Olpe, Kas., Shropshires.
H. M. Holcomb, Holton, Kas., Shropshires.
J. O. Hottenstein, Humboldt, Kas., Shropshires.
C. U. Bardshar, Mt. Hope, Kas., Shropshires.
Wm. Fischer, Wheaton, Kas., Shropshires.
James Townsend, Iola, Kas., Shropshires.
J. A. Robinson, Iola, Kas., Shropshires.
M. R. Remsburg, Iola, Kas., Shropshires.
Tom Peckham, Moran, Kas., Shropshires.
J. C. Norton, Moran, Kas., Shropshires.
Hague & Son, Walton, Kas., Shropshires.
Geo. W. Brown, Garnett, Kas., Shropshires.

Some Inquiries.

An inquirer at Hutchinson, Kas., asks: "What breed is best for both wool and mutton? How much grain will it take to fatten a lamb until it is a year old? How many sheep can be kept on the feed of one cow? Are sheep liable to have scab? What is the remedy for scab? How long do lambs suck their mothers? How many ewes to one ram?"

Any of the mutton breeds produce good wool also, but the wool breeds do not cut up to so good advantage as the mutton breeds. At present the Shropshires have many friends.

H. M. Kirkpatrick, of Connor, Kas., says of the Shropshire sheep: "They have been bred pure for a long period of years and are, therefore, strongest in prepotency, making them the best of all mutton breeds for crossing on the common breeds of the country, as well as breeding pure. They produce the largest and highest-priced fleece of any of the mutton breeds, and a carcass that is not surpassed for quality of meat. Their early maturity, great feeding qualities, their adaptability to the different sections of the country, their hardiness and vigor of constitution, their power of impressing their qualities on other breeds,

their size and thick, meaty, plump, smooth bodies, the sweetness and juiciness of their meat and its entire freedom from the wool taste, their quick fattening qualities, their heavy, fine, long staple fleeces, combine to make them the best sheep for the farmer, the ranchman or the fine stock fancier."

Lambs born in January or February can be put on the September market well fattened without ever tasting a bit of grain. Lambs dropped in May and June will have to be fed some grain, and it is said will need a bushel per head each month they are fed. Three-months feeding ought to finish them, and at present such lambs bring \$5.50 to \$5.75 per hundredweight in Kansas City, while export steers bring \$4.80 to \$4.90.

Ten sheep can be kept on the feed of one cow, or 1,000 pounds mutton to 1,000 pounds beef. Sheep never have scab unless they catch it from already infected sheep. Two dippings in Cooper's sheep dip or any other reliable dip will destroy it. Sheep never have ticks unless they get them from other sheep that have them. I killed every tick on the farm six years ago with one dip, and have not had to dip any since. Ewes free from ticks are worth \$1 per head more than those that are infested with ticks. Be careful who you buy of and you need not buy any ticks. Pay for a clean sheep and insist on getting one.

Lambs usually are weaned by their dams at about four months old.

A vigorous ram is half of the flock, and the flock may number 100 head. Hence, to get a good ram, you must expect to pay a good price, as his influence is half on 100 or more lambs each year.

Our Western Letter.

The winter thus far has been a very good one for range sheep on the plains east of Denver, and the nominal losses cannot be charged against the weather.

Some very common Mexican goats have lately been purchased at Las Vegas, New Mexico, a thousand or so of them, and have been shipped to Iowa to browse on hazel brush and finally be sent to Chicago as prime mutton.

The most profitable sheep in a flock, so long as they continue strong and hearty, are the old ewes. They produce stronger lambs, with better vitality and rear them better than young ewes. So long as the lamb crop has much importance, it will usually pay to keep the old ewes. Note the best, and watch for indications when the season of their usefulness is waning.

The breeders of the various types or Merinos are going to demand a separate classification at the Omaha exposition this year. They object to being bunched as one breed, claiming, and rightfully too, that there is now a very decided difference between the American, Spanish, French blacktop, Rambouillet, Delaine and one or two other types in the great family.

It would seem that some of our enterprising sheepmen ought to turn their attention to raising better rams for the export trade. Out of 50,000 high grade Merino rams furnished Australia, less than 200 were shipped by the United States. It is claimed that there are not 400 Merino rams in the United States suitable for the Australian trade, but in this our English cousins may have ideas of their own which are difficult to meet.

In feeding lambs it is necessary to test varieties and combinations of feedstuffs; as this is the only means by which we can determine best results at least expense. Bran, middlings and oats are bone- and muscle-producers and should be fed to increase size, while corn is a fat-producer and should be fed in combination to finish up mutton products. Alfalfa hay and corn stalks make the best coarse foods. Flocks fed on timothy hay alone will rapidly retrograde into scrubs.

Nebraska is largely in the sheep feeding business this winter, and it is learned that fully 1,000,000 are on corn there now and just beginning to move to market. Feeding conditions there are somewhat different than here. Frank Hershey, of Buffalo county, a recognized authority on sheep feeding as carried on in Nebraska, estimates that on a ninety-day feed sheep will eat three bushels of corn each, and for a four or five months' feed five bushels each. These figures are given as averages, taking the sheep feeding as it is operated generally.

The modern type of the Cotswold breed is very different from the high-standing, lathy animal that was once considered standard. We find the breed now with a broad back, square and well-built body, wide-set quarters, with a head set prompt and firm, close to the shoulders, still giving them a predominance of style over any breed that goes into the show ring. The fleece must be soft as well as dense, and of lustrous fiber. We like a good forelock, and also wool on the face shows

KIDNEY AND BLADDER TROUBLES QUICKLY CURED.

You May Have a Sample Bottle of the Great Discovery,
Dr. Kilmer's Swamp-Root Sent Free by Mail.

Men and women doctor their troubles so often without benefit, that they get discouraged and skeptical. In most such cases serious mistakes are made in doctoring and in not knowing what our trouble is or what makes us sick. The unmistakable evidences of kidney trouble are pain or dull ache in the back, too frequent desire to pass water, scanty supply, smarting irritation. As kidney disease advances the face looks sallow or pale, puffs or dark circles under the eyes, the feet swell and sometimes the heart acts badly. Should further evidence be needed to find out the cause of sickness, then set urine aside for twenty-four hours; if there is a sediment or settling it is also convincing proof that our kidneys and bladder need doctoring. A fact often overlooked is that women suffer as much from kidney and bladder trouble as men do.

Dr. Kilmer's Swamp-Root is the discovery of the eminent physician and scientist and is not recommended for everything, but will be found just what

is needed in cases of kidney and bladder disorders or troubles due to weak kidneys, such as catarrh of the bladder, gravel, rheumatism and Bright's disease, which is the worst form of kidney trouble. It corrects inability to hold urine and smarting in passing it, and promptly overcomes that unpleasant necessity of being compelled to get up many times during the night.

The mild and extraordinary effect of this great remedy is soon realized. It stands the highest for its wonderful cures. Sold by druggists, price 50 cents and \$1. So universally successful is Swamp-Root in quickly curing even the most distressing cases, that to prove its wonderful merit you may have a sample bottle and a book of valuable information, both sent absolutely free by mail, upon receipt of three 2-cent stamps to cover cost of postage on the bottle. Mention Kansas Farmer and send your address to Dr. Kilmer & Co., Binghamton, N. Y. This generous offer appearing in this paper is a guarantee of genuineness.

a distinctive point of good breeding. The color of face and legs can be white or gray. A bright pink skin is notable with Cotswolds. Cotswold rams at maturity should weigh 300 to 400 pounds and ewes 250 to 300 pounds, and a good flock should average fourteen to fifteen pounds of wool a head.

Sheep in Demand.

Notable features of the sheep trade this year are the large proportion of lambs to the total receipts, and the large proportion of Westerns among the sheep. A great many of the Illinois, Indiana, Michigan and Ohio fed sheep now being marketed are Westerns, which feeders had to buy or do without, for the native could not be had. If our information—from correspondents in the Middle and Eastern States—is correct the number of sheep to be marketed by these States is much less than last year, but the deficiency will probably be made up by the increase in the fattening flocks of the West and Northwest. The price of wool is a greater factor in the market than it has been for some years, and more sheep will be held till they are shorn.—National Stockman and Farmer.

Sheep and Wool Notes.

Have you received your twine and wool sacks for the coming clip? If not, watch this department for wool buyers' advertisements.

Parties desiring to buy Kansas wool

should advertise in this department, as every Kansas breeder will be a reader of this paper.

Shearing will begin the last of March in eastern Kansas, and will be completed in June in the western part. Have you engaged your men to shear? If not, insert an "ad." in this department, and I will guarantee that good, careful hands will reply at once.

Almost every mail brings me inquiries about sheep, and any one having any sheep for sale should advertise in this department, and if his sheep are good ones I will guarantee him an opportunity to sell at once. Always ask to have your "ad." in the "Sheep Department."

State of Ohio, City of Toledo, Lucas County, ss.

Frank J. Cheney makes oath that he is the senior partner of the firm of F. J. Cheney & Co., doing business in the city of Toledo, county and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of catarrh that cannot be cured by the use of Hall's Catarrh Cure.

FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1886. A. W. GLEASON, Notary Public.

Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Sold by druggists, 75c. Toledo, O.

YOU CAN MAKE MONEY

BY USING The Best Separator on the Market
THE IMPROVED UNITED STATES SEPARATOR

Send for catalogues filled with testimonials.

It excels all others in close skimming, ease of running and cleaning, durability, etc.

COMUS, Md., Apr. 24, 1897.
I thought I could not afford to pay \$125 for an Improved U. S., but one day's trial convinced me I could. I sell my butter for 25 cents, and the gain will pay for the machine in 180 days. It has cost me only 30 cents for repairs in two years. I have turned the Sharples and DeLaval, and my No. 5 turns at least one-third easier than either. T. B. JOHNSON.

DAVENPORT, IOWA, July 17, 1897.
I have had experience with other separators, and can safely say that for light running and perfect skimming and durability, the Improved U. S. leads them all. JESSIE ARMIL.

BLOOMING PRAIRIE, MINN., July 15, 1897.
In one year the Improved U. S. has more than paid for itself in extra amount of butter gained. I concluded to buy it after looking over the "Baby" and Sharples' "Safety," and think it much the best machine in every respect. N. C. WARTENBERG.

MORRIS RANCH, TEXAS, September 24, 1897.
I am delighted with the Improved U. S. It is a thorough skimmer. I have never been able to find a particle of cream on the separated milk. It runs very easily, and is positively no more trouble to wash than half a dozen milk-pans. I thoroughly investigated the matter before buying, and found that the U. S. is undoubtedly the best machine on the market. MRS. GEORGE MORRIS.

CLEMSON COLLEGE, S. C., Nov. 15, 1897.
I send you by mail the diploma awarded the Improved U. S. at our State Fair for "Best Cream Separator in operation." J. W. HART, South Carolina Exp. Station.

Catalogues free on application.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

THE CREAMERY BUTTER-MAKERS.

SIXTH ANNUAL NATIONAL CONVENTION HELD IN TOPEKA.

WEEK OF FEBRUARY 21-25, 1898.

The greatest butter convention ever held was that of the National Creamery Butter-makers' Association, at Topeka, last week. As a convention it was a big one—one of the biggest ever seen at the Kansas capital.

TUESDAY AFTERNOON MEETING.

The big parade disbanded in front of the Hamilton building and the delegates flocked into the hall to listen to the opening addresses of the convention.

President Irwin Paul called the assemblage to order and introduced Governor John W. Leedy, who extended a welcome to the delegates on behalf of the State of Kansas.

GOV. LEEDY WELCOMES THEM.

"It becomes my pleasant duty," said Governor Leedy, "to welcome to the State of Kansas the dairymen from the East and from all the States of the Union.

"My first experience was with a short-horned cow that kicked like a mule. When I came to Kansas I thought I had reached a place where the dairy business would never overtake me.

"I don't know whether Kansas will get to the front or not, but I will serve fair notice that the State of Kansas expects the State that does take the lead to hustle.

MAYOR FELLOWS' WELCOME.

Mayor Fellows welcomed the visitors on behalf of the city. He said:

"It would be a mere waste of words for me to say to you that the people of Kansas and its capital city appreciate the importance of the industry you represent.

"No better butter is produced than here in Kansas, but our well-known modesty forbids me to mention that. We are paying our mortgages—and many of them reach to the kitchen stove—by the dairy route.

"I want you all, gentlemen, to feel that you are indeed welcome. Topeka is yours, and on behalf of the people of this city I extend to you a true Western welcome."

SECRETARY COBURN'S WELCOME.

Secretary F. D. Coburn, of the State Board of Agriculture, represented the great agricultural interests of the State.

"You have no doubt heard of the land of Canaan, the land flowing with milk and rich in honey. As the special spokesman of the men who produce the milk and the women who are our honey, I

am here to announce that you have reached it; that we are favored by your presence and delighted to bid you hail, to show you the warmth of our hearts and extend to you our glad hands.

"You have heard much, at long range, of general prosperity; as one of his hardest working press agents it is my pleasing privilege to tell you that you are now his guests; that he has not simply 'arrived,' but lives here, and he authorizes me to welcome you in his name to his ranch—his favorite hacienda.

"If you don't see what you want, leave your order and we will have it forwarded C. O. D., P. D. Q. You all need salt; nature has made Kansas the depository of the purest and best yet discovered—the salt of the earth. If you Minnesotans want more of our Kansas wheat from which to go on making your famous Minneapolis high patent flour we will grow it for you.

C. H. PATTISON SUMS UP.

C. H. Pattison, speaking for the creamery-men of Kansas, said:

"After the hearty welcome extended to you by the Governor, the Mayor and the Secretary of the State Board of Agriculture, there remains little to be said, but as it just requires the little things to make a great occasion, I take pleasure in adding the hearty welcome of the Kansas creameries.

"We want to make your visit complete and one of long and happy memories.

"To men of your disposition and cultivated tastes, the freedom of this great State, the liberty of this beautiful city and the unrestricted privilege to roam at will over the 80,000 square miles of our beautiful farm and stock lands, would prove to be a bondage still, unless spread liberally with that crowning luxury, 'good butter.'"

"You will find Kansas people and among them her creamerymen, the most hospitable of any who inhabit the globe. The quintessence of hospitality is what has given Kansas a queer name. The Kansas man individually never questions his ability to cope with the world, the flesh or the devil, but he does dislike to see his friend or neighbor injured.

"If you hear a Kansan called a crank you may know that it is because his milk of human kindness has overflowed. You may possibly find a Kansan dogmatic, but he will be tolerant of your views.

"Among the sisterhood of States, Kansas has been likened to a stormy petrel, and perhaps the simile is not bad. You can all remember a day of darkening clouds, and driving rain, and howling wind, and just before the eventide there is a break in the west, and the sun shines through and floods woods and the hills and plains with purple and golden splendor.

"We welcome you again to the homes of the Kansas creameries, the land of sunshine, pure air and clean pastures; the land of alfalfa, sorghum and Kaffir corn, the unfailing products of which

will sustain all the dairy products the world may demand."

C. E. BENNETT'S RESPONSE.

C. E. Bennett, of Iowa, responded briefly to the addresses of welcome.

"We are beginning to learn a new gospel of agriculture," said Mr. Bennett. "We still pray for our daily bread but not for our butter. We pray for the necessities but we must work for our luxuries.

"There are more birds singing to-day, there is more love, more of life, more of happiness, in the world to-day than ever before, and we are all glad to welcome prosperity."

President Paul's annual address was short. He reviewed briefly the history of the organization and suggested improvements by which its importance might be extended and enlarged. He called attention to the Pure Food Congress, to be held in Washington, D. C., in March, and urged its consideration by the delegates.

Mr. Paul declared that the successful butter-maker of to-day is the man of the widest information. Science has done much to further its interests, but even greater development is expected in the future.

TREASURER NISSLEY'S REPORT.

At the afternoon session J. E. Nissley, Secretary and Treasurer of the organization, presented his annual report. The Secretary's report was in the nature of suggestions for future improvements.

The Treasurer's report was as follows:

Table with columns for Receipts (Received from former Treasurer, Received in membership fees, Contributions, Advertisements) and Disbursements (Printing, Stenographers, Badges, Postage, Miscellaneous).

It will not be possible for the Kansas Farmer to give in one issue a complete report of all the proceedings. Most of the papers were confined to discussions of the technical points of butter-making.

THE BUTTER CONTEST.

The butter-makers presented samples of their products in competition for prizes and for honors in the score. The butter was judged by three commercial experts from the great markets. Below is presented the result of the score, in which the points of perfect butter were considered to be—

Table with columns for Flavor, Body and grain, Color, Salting, Package and Total score.

The record is here presented by States, with averages for the several States:

Large table listing exhibitors by state (Kansas, Indiana, South Dakota) with their names and scores.

Table listing exhibitors from Minnesota with their names and scores.

MINNESOTA.

Table listing exhibitors from various states (Minnesota, Iowa, Wisconsin, etc.) with their names and scores.

The Home Circle.

HIS MOTHER'S HIS SWEETHEART.

"His mother's his sweetheart—the sweetest, the best!"
So say the white roses he brings to my breast;
The roses that bloom when life's summers depart;
But his love is the sweetest rose over my heart!
The love that hath crowned me—
A necklace around me,
That closer to God and to Heaven hath bound me!

"His mother's his sweetheart! Through all the sad years
His love is the rainbow that shines through my tears;
My light in God's darkness, when with my dim eyes
I see not the stars in the storm of His skies.
When I bow 'neath the rod
And no rose decks the sod,
His love lights the pathway that leads me to God!

"His mother's his sweetheart." Shine bright for his feet,
O lamps on life's highway! and roses, lean sweet
To the lips of my darling! and God grant His sun
And His stars to my dutiful, beautiful one!
For his love—it hath crowned me—
A necklace around me,
And closer to God and to Heaven hath bound me!
—Frank L. Stanton, in February Ladies' Home Journal.

ITEMS OF INTEREST FROM INDIA.

"Home Circle" has been kindly remembered by a well-beloved missionary friend in India, who sends a copy of the Madras Mail, dated January 6, 1898. Many interesting matters are printed in the paper, among which a few items are selected as specimens of what interests the people "on the other side of the world." The following will tell how the ladies and gentlemen enjoy picnics in winter time:

A PLANTER'S PICNIC.

(From a Fair Correspondent.)

"We ladies all know that bachelors make the best hosts, and never was this more clearly proved than when the bachelors of the Nelliampathy Hills gave their New Year picnic. Let me try and tell you something about it. We started fairly early on Saturday morning, our road running through miles of magnificent forests. Every few miles we were joined by riding parties from different sides of the district, all full of fun and expectation. Up, up, we climbed, following an elephant track, especially cleared for our benefit, until we reached a bare, rocky hill, where we stopped to breathe our ponies and to admire the exquisite view of low country and distant ranges of blue hills. Then a short, steep descent, another pull, and we were at the picnic site, receiving on all sides hearty wishes and greetings for the New Year from our merry hosts. Everything that could be thought of had been done for our comfort and amusement. Two white tents, pitched against the green hill, with a bit of dark jungle in the foreground and a long grass building showing up against the blue sky and low country view, made the prettiest picture you can imagine. Inside the grass house was a table, quite thirty feet long, covered with flowers and all sorts of good things, the chief ornament to our eyes being a lovely gold bracelet suspended by a ribbon from the ceiling. Of course we knew that it was for us, or one of us, and was to be competed for later on.

"We were soon seated round the table, twenty-six in number, and in less than no time all was as merry as champagne, wit and good company could make it. Healths and toasts were drunk and responded to right heartily, and it was with great glee we ladies heard that the bachelors' New Year picnic was to be an annual one, though we felt doubtful when one of the most energetic of our hosts announced that all present hoped to join the rank of Benedicts before New Year, 1899! We appreciated the compliment, but still, bachelors do make the best hosts, as I said before! After breakfast we looked on at a Moplah dance. I will say something about this later on, as we saw it again by moonlight. The next event was the gentleman's revolver shooting, which was very good, considering only one man in four owned a revolver. The ladies' shooting competition for the bracelet was to have followed this, but as there was so little time it was decided that the married men should race for their wives. Of course there was much excitement among the wives, and great amusement was caused by the 'bookie' with his regulation top hat and little book. The prize fell to one of the most popular ladies. Then came tea and badminton until it became too dark to see; then a pretty display of fireworks, and we went back to our green canopy for dinner.
"Then came the Moplah dance by

moonlight. How can I describe it, weird, fantastic and most fascinating! No graceful dusky damsels here, but nine powerful men, the light glancing on their bare arms and shoulders. Slowly they pace round a central figure, crossing, recrossing, and yet circling round, with the short sword stick in each hand clashing in most accurate time, now to the right, now to left, then to the center, and yet no man is stationary. Faster, yet faster they swing and leap around, clashing, shouting, and then silence! They are still—that figure is over, but there are a score or more to follow, all different but for the clashing of the sword sticks. One of our hosts explains that the Moplah at his own feasts uses short swords or knives in place of the sword stick, but that the dancing and singing so excites them that on ordinary occasions only sticks are allowed. I must not forget to mention that one of the dancers did the most wonderful acrobatic feats. It was now late, so we donned hats and coats, and after a farewell toast rode home under a lovely moon, escorted by many torch-bearers to light us through the dark jungle. One and all agreed, as we said good night, that the New Year picnic of 1898 given by the Nelliampathy bachelors was a perfect success."

But the people (some of them) in India are deeply interested in serious subjects, as is indicated by the following:

"A great deal of interest has been aroused among the Tenkalai community by the liberal interpretation given by a Poonamallee Brahmin of his powers and privileges as a pundit. In some respects the Tenkalais are much broader than the other section of Vishistadvalists, the Vadakalals, and particularly in the matter of caste. Still, it has always been the custom, when a Panchama has been admitted to the religious rights which are the accompaniment of the ceremony of Sankham and Chakram, that the ceremony shall be relegated to a Sudra to perform, and, so far, Brahmins have not undertaken the work personally. But Pundit Sattvicacharia, of Tirumolisi, near Poonamallee, has performed the ceremony himself in the case of a Panchama who has for some time been studying under him. The matter is of importance in that once this ceremony has been undergone, even a Panchama is on equal footing with a Brahmin as far as religion is concerned. There is at present a difference of opinion as to the pundit's action, but he has a strong following."

Sometimes the young fellows of Madras are inclined to go astray, as shown in this item:

EGMORE POLICE COURT.

(Before Mr. P. Rajaratna Moodelliar.)

"Two Old Offenders.—Velu and Anthoni, old offenders, were charged by Inspector Smithers, of D division, one with picking the pocket of one Shaik Ibrahim of one rupee, the other with aiding and abetting him.

"His Worship, after recording the evidence of a few witnesses, convicted the first accused, a boy of 12 years, and directed him to be sent to the Reformatory School at Chingleput. The second accused was convicted and sentenced to three months' rigorous imprisonment and to receive twelve stripes."

That the native population are loyal to Victoria is plainly to be seen from the following:

"At the instance of the Mahomedan Union a representative meeting of the Mahomedans of the northern part of Calcutta was held to tender their grateful thanks to Her Most Gracious Majesty the Queen-Empress and to adopt an address of congratulation to Her Highness the Nawab Begum of Bengal on the occasion of her receiving the exalted distinction of the Imperial Order of the Crown of India. The Honorable Mr. R. M. Sayani, of Bombay, presided, and in an eloquent speech made mention of Her Highness' beneficent acts and noble virtues. A deputation headed by the Honorable Mr. R. M. Sayani will wait on Her Highness to present the address."

In order that "Home Circle" readers may not be late at the depot, the "time table" for one of Madras' trains is quoted:

"A special train for the conveyance of the Head Quarters Companies of the Madras Railway Volunteers to the Camp at Ambatur will run as follows on Saturday next:
"Royapooram departure, 15 o'clock.
"Central Station departure, 15:25 o'clock.
"Perambore departure, 15:50 o'clock.
"Ambatur arrival, 16:5 o'clock."

It is quite plain that any one arriving after 15 o'clock will "be left." No trains run on that railway after 24 o'clock until the next day.

A copy of Kansas Farmer will be sent

OILY LAMPS

Hardest things in the house to clean. Most contrary things to keep clean. Most unpleasant when not cleaned. Are made clean and kept clean easily with that enemy of oil and grease and dirt—

GOLD DUST Washing Powder

Largest package—greatest economy.
THE N. K. FAIRBANK COMPANY,
Chicago. St. Louis. New York. Boston. Philadelphia.

to Rev. J. H. Harpster, D.D., at Guntur, India, to show him that his favor has been appreciated.

Domestic Matters.

What has become of "Englishwoman" and other old-time contributors? Can she or some one else who knows tell what book is best for home study for a woman who would fit herself for the care of the sick?

Who can tell the readers of the Kansas Farmer any uses for persimmons, and the methods of preparing them? I have taken them when ripe, filled Mason jars with them, then turned granulated sugar in until they were completely covered, tightening the cover, and after a few weeks the sugar will be dissolved, which I turn off and strain, then boil it down thick for jelly or turn it over the fruit again. A friend told me once the finest jelly he ever ate was made from this fruit.

Who will tell us how to crochet an ice-wool squares?

In order to do my part, I will give

A LIST OF CHOICE CAKE RECIPES.

These are cheap, as well as excellent, and having used them many times, commend to all who like nice cakes but not expensive.

Cake—(Which is capable of many changes). Beat together one cup sugar and a piece of butter size of an egg. Add the yolk of one egg; beat again; add one cup sweet milk and flour enough for a soft dough, in which one teaspoonful of baking powder has been thoroughly mixed. Then add the white of the egg, beaten to a stiff froth.

Cottage Pudding.—Flavor the above with lemon and serve hot with a nice sauce. Is delicious.

Spanish Bun.—The above, baked in a square tin, flavored with nutmeg and a cupful cleaned, dried and floured currants stirred in.

Layer Cake.—Bake in jelly cake tins, and spread with white icing. It is delicious.

Boiled Icing.—Put one cupful granulated sugar and a scant one-half cup boiling water in a clean, smooth saucepan. Let boil until it spins a thread. (To determine this, dip a spoon in the mixture, lift it out, and when the liquid falls from the spoon in a slender thread it is done.) Take it off instantly and pour it over the white of an egg which has previously been beaten to a stiff froth. Beat until cool and flavor.

Chocolate Layer Cake.—The icing: Put a pan of water upon the stove and in this stand a bowl in which you melt the chocolate. Grate four ounces chocolate, put in bowl to melt and add to it one tablespoonful of milk. When perfectly smooth take from the fire and add one cupful pulverized sugar and one egg. Beat it all together; if not perfectly smooth put bowl back in pan of water and let it remain until it becomes right.

Orange Icing.—To one cup of pulverized sugar add one tablespoonful boiling water; then add enough orange juice to make a thick, smooth paste. This hardens quickly and must be used as soon as made. Ice the pieces of cake; lay one on top of the other, ice the tops and sides.

.....A pretty way to fix it for tea.—Bake the cake in sheets about an inch thick, then with a cake-cutter cut in round pieces about two and one-half inches in diameter; make an icing of one of the foregoing recipes and ice the pieces; place one on another and on top of each place one-half an English walnut.....Another fancy way, pretty for tea or to be served with ice cream or at parties: Bake the cake in thin sheets. When cold, cut in strips two inches long and three-fourths inch wide; then with

a fork dip these strips into icing, using boiled chocolate, orange or coconut for a variety. Put the fork under the cake, dip it so it will be all covered; lift out, place on paper to dry.

Another Valuable Cake—(When not to be used fresh). One and one-half cups sugar, one cup of milk (sweet), three eggs, piece of butter size of an egg, two teaspoonfuls baking powder, two and one-half cups flour. Mix together as first formula.

Old-Fashioned Gingerbread.—Two quarts of molasses, two pounds butter, one-fourth pound ginger, one-fourth pound alum, one-fourth pound saleratus. Scoop out the center of the flour, put in the molasses, butter and ginger; dissolve the alum in one pint of boiling water, the saleratus in one pint of cold water, and pour them into the other ingredients; mix, not very hard; bake in a quick oven. The friend who made this said the reason so many fail in making this right is, it is almost impossible to get good molasses now. She used to get her spending money from selling this kind of cake, about sixty years ago.

Ginger Snaps—(The very best). One large cup of butter and lard mixed, one coffee cup of sugar, one of molasses, one-half cup water, one tablespoonful ginger, one of cinnamon, one teaspoonful of cloves, one teaspoonful of soda dissolved in hot water, flour to make pretty stiff dough. Roll out thin, cut and bake quickly. They keep well.

VIOLA MAY.

The Old Lady and the Eggs.

In Kansas Farmer, dated February 17, a puzzle was given, concerning the old lady and her egg basket. The first correct answer we have received is dated from Waterville, Kas., February 20, 1898, from Geo. Binder, in which he says: "In Kansas Farmer I saw an article headed, 'Can You Work This Out?' on page 9. In answer, I would say that the old lady had 301 eggs in her basket."

Another answer from Oxford, Ohio, is as follows:

Editor Kansas Farmer:—You were kind enough to send me a marked copy of your interesting paper. As I am confined to the house with rheumatism, I read much to kill time, and find even the puzzles interesting now. When able to get out, I have wondered what publishers put such things in their papers for.

The old lady with her basket of eggs interested me for half an hour. Here is my solution: It is clear that the answer must be some multiple of seven. Three hundred is divisible by 2, 3, 4, 5 and 6, but not by 7. If we add 1, we have 301, which is divisible by 7, but not by the other numbers. The old lady had 301 eggs.

As our hens' eggs will average more than one pound to the dozen, you might add to your question, "How many eggs had she in the basket?" and what kind of eggs were they? Your old ladies in Kansas must be powerful to carry over 300 pounds of eggs in one basket. So you have given us many puzzles in one.

LIGHT BRAHMA.

I have tried Salvation Oil in my family, on a broken and dislocated foot, and can recommend it to any one as a good liniment.—Mrs. Wm. Tolley, Joplin, Mo.

Mothers! Mothers!! Mothers!!!

MRS. WINSLOW'S SOOTHING SYRUP has been used for over FIFTY YEARS BY MILLIONS OF MOTHERS for their CHILDREN while TEETHING, with PERFECT SUCCESS. IT SOOTHES THE CHILD, SOFTENS THE GUMS, ALLAYS ALL PAIN; CURES WIND COLIC, and is the best remedy for DIARRHOEA. Sold by Druggists in every part of the world. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and take no other kind. Twenty-five cents a bottle.

The Young Folks.

HAVING COMPANY.

The letter read, "My dearest Sue, Next Thursday I will spend with you; I won't enjoy my visit, though, if any trouble I bestow."

"Oh, I'm so glad," cried Mrs. White, "For company is such delight!" But looking round her in dismay, "I must get ready right away."

Armed with a dust-pan and a broom, She went to work in every room, She oiled and polished, cleaned and rubbed, And mended, scoured, washed and scrubbed.

Then in the kitchen she began, While perspiration down her ran, At pies and puddings, cakes and bread, As if an army must be fed.

She tolled and fretted, cooked and baked, She hurried, worried, stewed and ached. When Thursday came, she, nearly dead, Just managed to crawl out of bed.

And Mrs. Company came, too; They kissed and hugged like women do, And then began tired Mrs. White To make excuses, never right.

"Oh, dear, my house (then waxen clean) Is 'most too dirty to be seen— So shut your eyes—you're looking stout— Take off your things—I'm just worn out."

"You must excuse my cooking, too, It isn't fit to offer you, ('Twas fit for kings.) Too bad you come Just when I'm upside down at home."

And thus she welcomed and distressed And spoiled the visit of her guest, Who wished she hadn't come to be A tired woman's "company."

Written for Kansas Farmer.

RANCH LIFE IN COLORADO.

Having passed a summer and autumn on some of the most thrifty ranches of El Paso county, in Colorado, up in that high altitude of the vicinity of Pike's Peak, where the natural production of the soil is buffalo grass, sage brush, scrub oak and cactus, I am prepared to say that ranch life in Colorado is rocky and the Rocky mountains are rightly named.

There is no need for macadamizing streets and roads, for the natural ground, composed of sand and gravel, is a solid pavement.

One might dig a hundred feet deep, and not strike water, except in a few places there is alkali water. Pure water is a luxury, known only to those who live near to mountain streams, or have pipe lines to mountain springs, as many have. While rain falls almost every day along the mountain sides, keeping green the forests of pine, spruce, fir and cedar, and making the air fragrant with rich perfume of many varieties of wild flowers, the ranches adjacent are seldom sprinkled with rain, and nothing can be grown from the soil without irrigation. Land is irrigated with water from mountain streams, following artificial canals and ditches far out on the plains below into large reservoirs, from which fields of corn, oats and alfalfa, as well as orchards and gardens are irrigated and made to produce well.

Go with me, young man, to a ranch near the mountains. All farms here are called ranches. We must hire a team or saddle horses, for it would be unsafe to travel on foot where wild Colorado cattle graze. Here is the Cheyenne Mountain ranch, comprising 1,200 acres, which is one of the best regulated ranches in the State. It is fenced with five strands of barb wire on cedar posts, in several apartments, and belongs to a millionaire whose summer residence we see far up among the evergreens on a mesa at the base of yonder mountain.

That man we see by the gate, wearing a sombrero hat with snakeskin band, calfskin coat, red leather leggings and Mexican spurs, riding a \$20 broncho with a \$40 saddle, is the foreman of the Cheyenne Mountain ranch. If you want a job on the ranch, do not tell him that you are from Kansas, for the laborers here have been imposed on by some of the Kansas exodusters, who have from time to time offered to work cheap, and to a certain extent have made the wages lower. Do not offer to work very cheap, or he will think you are not much of a ranch hand.

We will stop at the gate, and you may do the talking. You must speak first to him.

"Good morning, sir."

"Hello."

"Rather rough weather."

"Yes, rocky."

"Want a hand on your ranch?"

"Whar ye from?"

"Missouri, sir."

"Good, pardner. Say, was ye ever down in Pike county—all the way from Pike? We'll call ye Bowers. Well, Bowers, wat ye want a month? Give ye \$25. Ye can nail up a bunk in the saddle shed, roll yer blankets in thar with a wad of hay, and sleep like a four-year-old. Have ye got a roll of blankets? If ye haven't, I can lend ye my wagon cover

till ye git a chance to send to town fer some, and we have lots of gunnie bags—good beddin'. You will like our grub, too, Bowers, I tell ye. We have a Mexican cook which can make coffee strong enough to bar up a sledge hammer, boil a pot of veal to a finish, and make red-hot biscuit and flapjacks. Half a dozen Kansas tenderfeet applied here for work one day last week. No go. I told 'em all the same thing—to pull their freight and hit the high places on the road. The air here is too light for them lads. They can't stand the scenery."

To a young man accustomed to social privileges, ranch life is too romantic to be enjoyable; isolated from society, with no holidays, where Sunday only means a day to do your washing, mend harness, break colts, and regulate the barn, never have visitors and never go visiting, for you have no neighbors. You are never allowed in the house except to meals, and then only in the dining-room, where the Mexican cook presides, serving boiled veal and potatoes with biscuit, canned tomatoes and black coffee. Furnish your own bed in some shanty, or sometimes without shelter; woodchucks, rats and sand lizards will haunt and share your humble lodging. Your orders for the day may be to saddle Timberline and ride fence. Do you understand? Timberline is a broncho, a treacherous-spirited horse, ride him and examine the fences; then, returning, you must report to the foreman, where fences need repairs.

You will see wonders new to you this morning; those mountains that appear but a few rods distant, are miles away, and banks of snow upon their rugged crests look fair among the evergreen. Streams of water, which appear to be running up hill, flow rapidly. Look far out in the opposite direction, across the rolling prairie, and be convinced that this is a big country. Your eyes will become weak by gazing at long distance. Learn to watch the ground, as your pony does. There are prairie dog holes, rocks and tangled sage brush.

Timberline will not be frightened at the chattering of prairie dogs, nor at the yelping of coyotes. He is accustomed to seeing pony rabbits with mule ears; kangaroo rats with bushy tails, ugly sand lizards and still more ugly horned toads, rattlesnakes and owls. Since I left Colorado, I am impressed with one thought, not a grand thought, nor even a great thought, but the simple thought that Colorado is rocky. JAY VEE. Wakarusa, Kas.

Homing Instinct of Birds.

Captain Renaud, the French specialist in charge of the military pigeon service, is a firm believer in a sixth sense in pigeons and other birds and animals possessed of the homing instinct, which he calls the sense of "orientation." He has defended his theory at length in a paper recently read before the French Academie des Sciences, claiming to have amply proved it by special trials of various kinds. He says if the five senses acting together account for short-distance "homing," a sixth sense is required for long distances in unknown places. He says this organ is situated in the semi-circular canals of the ear. M. Coyon and Dr. Bonnier have shown that any lesion which affects it troubles the orienting faculty of the patient, whether man or animal. A pigeon let fly at 400 miles from its cote takes the back track it has come by the railway. Having reached in this way the region known to it, the bird relies on its ordinary senses, or else continues to depend on its sixth sense.

The sixth sense only acts when the others are inactive, and not in conjunction with them. It guides the bird along the more or less sinuous way it has been taken. The other senses, especially sight, enable it to strike a short cut home. From his observations Captain Renaud deduces this law: The instinct of distant orientation is that faculty which animals possess of taking the back track or retracing a way already taken. The sixth sense is apparently independent of the external impressions which affect the other five senses.

Here is a new experiment that seems to confirm his theory. If a pigeon does not need local knowledge to find its way home, it is possible to have a traveling cote and accustom the birds to a wandering life. Suppose the cote transplanted bodily to a strange place, without in any way troubling the birds, these would still be able to find their way back to it by the sixth sense. Captain Renaud has realized this idea by mounting the cotes in wagons traveling all over France. The birds know no other home, and in localities quite strange to them find their way back to it. Evidently a local knowledge is out of the question, and they rely on a special sense.

Sometimes a homing bird passes over



THE THREE FAVORITE AND MOST POPULAR FLOWERS

ROYAL SHOW PANSIES, Over 100 colors, all the largest flowering and finest varieties that can be secured in Europe, without question the best strain of Pansy.

NASTURTIVMS, Over 20 varieties, embracing every known good sort, including Aurora, Empress of India, Lady Bird, King Theodore, Pearl White, Ruby King, New Brilliant, Yellow and Spotted. *Very Best.*

SWEET PEAS, Over 40 named varieties of Eckford's best European and American named sorts.

ONE PACKET OF EACH VARIETY FOR ONLY 6 CENTS
IN STAMPS and the address of two friends that grow flowers.

A GENUINE BARGAIN
made to introduce my Flower Seeds to new customers. INCLUDING FREE COPY of my Catalogue for 1898, the handsomest book published, devoted exclusively to Flower Seeds, and "FLORAL CULTURE" (revised edition) how to grow flowers from seed, by THE PIONEER SEEDSWOMAN OF AMERICA. **MISS C. H. LIPPINCOTT, 318-323 6th St. S., Minneapolis, Minn.**

the cote without seeing it, as though it were hypnotized, and continues till it reaches the station of the cote the evening before. One bird retraced the traveling cote from Baupame to Houdain, and then followed the railway by which it had come there to Evreux, where it was caught. Captain Renaud concludes that existing theories, which ascribe homing to local knowledge or local magnetic currents, do not account for his facts, especially the return to a traveling home. But, say the advocates of that theory, he does not seem to understand the magnetic theory of the faculty. The magnetic currents of the earth are not local, but universal, and wherever the cote is placed the bird can guide itself by them. His experiments, they say, so far from controverting the magnetic hypothesis, tend rather to confirm it, and had there been an electrician at the "seance" of the Academie when he read his paper this would have been pointed out.—New York Times.

Tricks of Sharp Smugglers.

On the line of the Grand Trunk railway, near the little town of Merrifton, Ont., and about ten miles from the Niagara river, is a short tunnel through which the railroad passes under the Welland canal. This little tunnel, though insignificant of itself, has been the means of baffling the detectives of the American customs more times than they would care to acknowledge, and yet it seems they have never got on to it. To illustrate how it is done I will describe the methods employed by the smuggling agents of two large jewelry firms. The same men—there are three of them—are employed by both firms, and probably by others.

It is a well-known fact, and to none better than the smugglers, that no considerable purchase of precious stones can be made in Europe without the purchaser and his bargain becoming immediately an object of interest to the agents of the American government, and thenceforward kept in sight. So that the agent who goes to Montreal to receive them does so fully expecting to be watched and tracked from the moment they come into his possession. As a general rule this expectation is fully realized, but still the advantage is on the side of the smuggler, for his plans are fully matured, and he has the confidence of experience, while the detective, no matter how shrewd, can only watch and await developments.

Having secured the precious package, Agent No. 1 as I shall call him, instead of starting for the nearest point on the line, buys a ticket for Toronto, managing to arrive in that city in the evening, and spending the night there. Next morning he buys a ticket for Buffalo, and takes the train for that place, a movement which no doubt meets the full approval of the patient watcher.

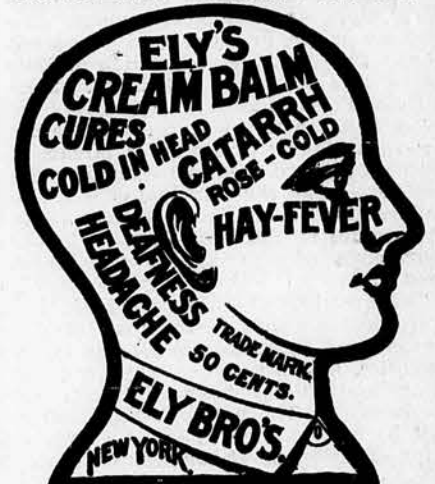
At the little city of St. Catharines, about four miles from the above mentioned tunnel, the train is boarded by a man who from his dress would be taken for a mechanic, who enters the smoker, taking care if possible to secure a seat near which there is at least one other vacant. As the train leaves St. Catharines, Agent No. 1 develops a desire for smoking, and entering the smoker secures a seat as near as possible to the roughly dressed man, who is Agent No. 2. After a short stop at Merrifton the train again moves on, and a few moments later plunges into the darkness of the tunnel, which is so intense as to ren-

der seeing impossible. Before the light once more appears there is a quick and silent movement, and the precious package has passed from the hand of No. 1 into those of No. 2, and when the train emerges from the tunnel, both are calmly smoking and apparently unaware of each other's existence.

When the train pulls into Niagara Falls, on the Canadian side, No. 2 drops off and disappears, while No. 1 remains on till the American side is reached, where, if he has been watched as expected, he is compelled to submit to a most rigorous search, which, of course, results in nothing, save the wear and tear on the feelings of the disgusted sleuth who has been following him. Meanwhile Agent No. 2 has telegraphed a few vague words to No. 3, who is quietly waiting in Buffalo, upon receipt of which No. 3 buys a ticket for Chicago via G. T. R., and taking an ordinary valise, catches the train which suits his purpose. Arrived at the Bridge, which is the entrance to Canada, the Canadian official, finding that he is going through to Chicago, places a little strip of paper on the valise, which virtually declares that having come from the United States and being bound for the same country without stopping, it is not worth examining. When the train leaves Niagara Falls, Ont., it carries Agent No. 2 and 3, and when the tunnel is reached the package changes hands once more, passing from No. 2 to No. 3, and into the bonded valise. At St. Catharines Agent No. 2 leaves the train, and No. 3 continues his journey. At Detroit the American official sees the bonding strip on the valise, perhaps adds, "Come right through?" but more likely says nothing and passes on, and thus the package is safely on American soil, the after part being too easy to be worth mentioning.—Chicago Inter-Ocean.

All affections of the scalp, such as sores, eczema, dandruff, baldness and falling hair can be cured or prevented by the timely use of Hall's Hair Renewer.

No deception practiced.
No \$100 Reward.
ASK YOUR DRUGGIST
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10 CENT TRIAL SIZE.



ELY'S CREAM BALM
contains no cocaine, mercury nor any other injurious drug. It opens and cleanses the Nasal Passages, Alleviates Pain and Inflammation, Heals and Protects the Membrane, Restores the Senses of Taste and Smell. Is quickly absorbed. Gives Relief at once. 50 cts. at Druggists or by mail; Trial Size 10 cts. at Druggists or by mail. ELY BROTHERS, 56 Warren Street, New York

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FOR
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pany are exclusive sale agents at Kansas City for the Red Jacket pumps; also for a large and complete line of galvanized pipes, valves and fittings. They also carry a full line of thresher supplies. In fact, there is no better house in the West in their line of merchandise, and those of our readers who contemplate putting in creamery plants or any other kind in which supplies of their line is required will find it decidedly to their advantage to write them for particulars and prices. This concern deserves special consideration from Kansas institutions from the fact of having their factory at Leavenworth. For reasonable prices, prompt service and right treatment of customers this house is unexcelled.

F. B. FARGO & COMPANY.

F. B. Fargo & Co., manufacturers and dealers, of Lake Mills, Wis., had a creditable and interesting exhibit with their famous Victor churns, which they claim are larger in size than any other churn in the market and have greater capacity, ranging from fifty to 1,000 pounds in the various sizes, several of which were shown at the convention. They also have a general line of supplies for creameries. Among those shown were the Lusted's Butter Printer, Fargo's New Steam Motor Babcock Milk Tester, with governor attachment, which they make in sizes from sixteen to forty-bottle tester. The other articles shown were their new Skim-milk Weighers, the Milk Sheet Cabinet for keeping milk clean and safe, and their steam milk pump, with a capacity large enough for four Alpha separators.

THE KANSAS SALT CO.

The exhibit of this company greeted the visitor immediately on entering the exposition hall. It was tastefully arranged and those in charge had an agreeable way of dispensing the generosity of the company in the way of samples and R. S. V. P. souvenirs. The pure crystals of rock salt were beautiful samples of the 350 feet of this mineral which underlies this company's property. The famous R. S. V. P. (Rock Salt, Very Pure) table salt meets all competitors on its claim that it is the best in the world. The Riverside Dairy Salt is purity itself. The methods of manufacturing are such that complete separation of the salt from everything else the rock may contain is secured. This was shown and fully explained to the butter-makers on the occasion of their visit to the Riverside works, at Hutchinson, during their excursion through Kansas. The excellence and the cheapness of this salt are bringing it into general use.

THE EHRSAM ECONOMIC WATER TUBE BOILER.

The center-piece in the exhibition building was the Ehrsam Water Tube Boiler, which furnished steam to run a lot of the machinery. Water tube boilers of large size are used in sugar refining and other great works, where the cost of operation is figured down to the last cent. The Ehrsam boiler makes this economy available for the small user of steam. It is compact and ready for operation as soon as set on its support and connected with the chimney. It is jacketed like a locomotive boiler, so that no walling in is necessary. It has a "down draft" furnace, so that the smoke is consumed, thereby insuring the most economical use of the fuel. The writer talked with some creamerymen, who are using the Ehrsam boiler, who estimated the saving over the upright form at 50 per cent. and the saving over the best horizontal tubular boiler at 25 per cent. This boiler is manufactured by J. B. Ehrsam & Sons, Enterprise, Kas. It is well adapted to creamery work, to the general purposes of the farm and factory or to house-warming.

SPRINGER SEPARATOR COMPANY.

Among the many new inventions in dairy machines exhibited at Topeka during the Buttermakers' convention, none attracted more attention than the Springer Separator. Following are some of the strong points claimed for it:

1. Does not require any more power than other machines
2. Will produce as fine quality of cream and as much butter of equal quality out of the same number of pounds of milk.
3. Will run as much milk through without clogging.
4. Will skim as much milk in the same amount of time.
5. Will run with as little expense per annum.

The above are a few necessary points to remember when buying a separator.

An up-to-date machine is the unmatched Springer Separator and they advise purchasers to look carefully into the merits of this machine as presented in the several particulars enumerated.

Do not buy a machine filled with small parts that are liable to be bent or lost.

Do not buy a machine that skims clean only when the separator expert runs it. Do not buy a separator that cannot run ten hours without clogging. Do not buy a separator that cannot be regulated while running, but buy a Springer Separator, that has no small parts, whose life is three times that of any other machine made, that will skim clean at the lowest temperature, that will turn out frothless and perfect cream at all times, that will run all day without clogging, that can be regulated at full speed. The Springer Separator has all these good qualities and is positively the only separator that can truthfully make such broad claims. Address Western Branch and Repair Shops, Waterloo, Iowa.

C. E. HILL & COMPANY.

C. E. Hill & Co., of Kansas City, Mo., had the largest and most attractive display of creamery supplies and dairy machinery on exhibition. In separators they showed a full line of Empire Cream Separators, for which they have the general agency. The hand separators show, with the Mikado, the capacity of 300 pounds per hour; the Empire "5" capacity of 500 pounds per hour. These two separators attracted considerable attention, as it was the first time they had been exhibited in the West, and it is evident from the comments of those who had been using them, as well as those who had the opportunity to carefully inspect them for the first time, they are sure to be popular. The advantages claimed for this class of separators for use in dairies are a great yield in butter, due to the most thorough creaming of the milk, ease of running, and simplicity in construction. It is claimed that in the average farm dairy the saving will amount to \$5 to \$10 per cow per year, while there will be increase in the value of product and greater convenience, saving time and labor. Any one interested in the matter of hand separators should write C. E. Hill & Co.

In addition to separators they had a fine line of engines, milk-testers, churns, scales, butter tubs and pails, milk pumps, etc. They are also general agents for the famous line of goods manufactured by Cornish, Curtis & Green Co., said to be the largest creamery outfitters and builders of creamery machinery and dairy supplies. In the line of goods which they exhibited of their make was the Wizard combined churn and butter-worker, cream ripener, Curtis automatic skim-milk weigher, American butter-printer, Curtis skim motor and Babcock tester, the calometer, Curtis milk-heater, Curtis channel-bottom vats, galvanized tempering vats, etc. They also showed the Jewell engine, manufactured for the C. H. Dutton Co., Kalamazoo, Mich., for which they are general agents.

This attractive exhibit was constantly thronged with butter-makers and dairy-men, who were intensely interested in the fine line of machinery and dairy supplies, such as are always handled by C. E. Hill & Co.

CREAMERY PACKAGE MANUFACTURING CO.

The leading attraction in the exhibit of creamery supplies was the working creamery in active operation, furnished by the Creamery Package Manufacturing Co., of Kansas City, Mo. It showed the practical working of a modern creamery in full working order, which afforded an interesting object lesson to every visitor and delegate to the convention. The machinery was operated by a Lamberts gasoline engine of eight horsepower. The other machinery used in this work was a Disbrow churn, made by the Owatonna Manufacturing Co., and milk vats of the Creamery Package Co.'s own make, the Ideal milk-weigher, butter-worker of its own make and one of its celebrated Pott's Pasteurizers. By use of this modern apparatus it is guaranteed to keep milk sweet one or two weeks in the hottest weather, and the milk and cream treated may be shipped long distances without the aid of ice and still be kept sweet. The separator used was the DeLaval Alpha No. 1. This company also showed a one-ton ice machine, which was a combination compressor condenser, with the oil trap for ammonia and the suction all in the same base-plate.

All the goods used in this creamery were of the most modern and up-to-date line of manufacture, such as is the case of all supplies handled by this house.

The butter-makers' contest, which took place in this department under the supervision of Major Alvord, Chief of the Dairy Department, at Washington, D. C., was one of the most attractive and interesting features of the exhibits. The contest was made by the butter-makers under charge of the Kansas Creamery Company, who used the apparatus exhibited here in practical work, each demonstrating his ability

- ARMSTRONG & McKELVY Pittsburgh.
- BEYMER-BAUMANN Pittsburgh.
- DAVIS-CHAMBERS Pittsburgh.
- FARNESTOCK Pittsburgh.
- ANCHOR Cincinnati.
- ROKSTEIN Cincinnati.
- ATLANTIC New York.
- BRADLEY New York.
- BROOKLYN New York.
- JEWETT New York.
- ULSTER New York.
- UNION Chicago.
- SOUTHERN Chicago.
- SHIPMAN Chicago.
- COLLIER St. Louis.
- MISSOURI St. Louis.
- RED SEAL St. Louis.
- SOUTHERN St. Louis.
- JOHN T. LEWIS & BROS CO Philadelphia.
- MORLEY Cleveland.
- SALEM Salem, Mass.
- CORNELL Buffalo.
- KENTUCKY Louisville.

A DEPARTMENT STORE advertises: "St. Louis Strictly Pure White Lead, 12 1/2, 25, 50 and 100-lb. kegs, guaranteed." Analysis of this mixture shows it to be:

Zinc, 26.03%
Barytes, 73.97%
White Lead, none.

Zinc is cheaper than White Lead, and barytes is sold at about 1/2 c. per lb.

Moral: Buy White Lead from reputable dealers, and make sure that the brand is right.

See list of genuine brands.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also folder showing pictures of house painted in different designs or various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 100 William St., New York.

to make high-grade butter with up-to-date machinery.

Mr. E. R. Kimball, manager of the Kansas City house, was in charge of the exhibit, and perhaps has done more in construction and supplying the creameries of the West than any other manager in the country. The main headquarters of the Creamery Package Manufacturing Co. is located in Chicago, which, with the Kansas City house, is the largest dealer and jobber in the country. This company also has branch houses at Mankato, Minn., Omaha, Neb., Salt Lake and San Francisco. It also installs ice and refrigerator plants complete of the Stillwell-Pierce and Smith-Vaile Company machinery, in sizes from one to twenty-five tons capacity. There is no item in the way of supplies of machinery for a private dairy, creamery or cheese factory that it is not able to supply.

This company is bringing out the largest catalogue of creamery information ever published, and prospective buyers are not only requested but urged to write to any one of the houses named and obtain a copy. It is believed that this catalogue contains every item used or needed in the business, listed, illustrated and explained in detail.

The character of this company, influenced as it is by the management and co-operation of the best men to be secured in every department, makes it worthy of the esteem and confidence of the entire creamery trade throughout the United States.

The exhibit at the national convention in this city was put in place and operated by C. A. Burton, manager of the machinery department of the Kansas City branch. Mr. Burton is an artist in his line, and was always surrounded by a crowd of enthusiasts, to whom he took pleasure in explaining all the details and advantages of the modern machinery.

GEM BUTTER PACKAGES.

The Gem Fiber Package Co., of Detroit, Mich., made quite an attractive exhibit of Gem butter boxes and tubs, also of their rapid packer. These boxes are made in sizes running from one pound to ten pounds. This package is the result of several years study and experiment. It is made of water-proof jute board and lined with the best quality of parchment. It is constructed so that it is practically seamless and makes a very neat and light



package and yet sufficiently strong for shipping purposes. It can also be sealed for a long distance and warm weather shipment. Wherever the Gem boxes and tubs have been used they are in great favor, and are destined to become one of the most popular made because of the durability, lightness and cheapness, and will be especially desirable for parties who are making butter for the retail trade. Any of our readers who are interested in butter-making will be well repaid by investigating the merits of the Gem butter boxes. The exhibit at the convention attracted universal attention, and Mr. Thomson was constantly surrounded by a questioning throng of au-

ditors. Detailed information may be secured by addressing Gem Fiber Package Co., 46 Porter St., Detroit, Mich.

THE SHARPLES COMPANY.

The Sharples Company, of Omaha, Neb., had on exhibition a variety of machines used in modern creameries and dairies, consisting of creamery separators, Babcock milk-testers, milk can washers, etc. Also a miniature combined churn and butter-worker. They were unable to make a complete exhibit, owing to lack of space, but were at all times surrounded by customers and others anxious to acquaint themselves with everything new in the line of dairy appliances. Special interest was manifested in the farm cream separators, one being a steam turbine machine, known as the "Little Giant," and operated by direct steam pressure from a small boiler or feed-cooker. Another farm separator, known as the "Safety Hand," was kept almost continuously in motion by the curious crowds who seemed to enjoy turning by hand a machine in which the small cylinder or bowl makes 9,000 revolutions a minute, running so smoothly that it appeared to be stationary when making this high rate of speed. This machine, while something of a curiosity to the town folks, is evidently becoming very well known among dairymen of this and surrounding States, as every now and then some one from out of town who owned a similar machine would step inside the exhibition booth and become more enthusiastic in explaining the operation and results to be obtained by the use of this separator than even the agents themselves who offer them for sale. It is evident that hand separators are rapidly coming into common use, and the representatives of the Sharples Company were more than pleased to demonstrate to the inquiring public wherein their machines were far more durable and efficient than those manufactured by their competitors. Their arguments appeared to be very convincing, and the agents expressed themselves as being confident that the meeting of the Dairymen's Association in Topeka will bring them ample returns during the present year.

FOR BRONCHIAL AND ASTHMATIC COMPLAINTS, "Brown's Bronchial Troches" have remarkable curative properties. Sold only in boxes.

Beauty Is Blood Deep.

Clean blood means a clean skin. No beauty without it. Cascarets, Candy Cathartic clean your blood and keep it clean, by stirring up the lazy liver and driving all impurities from the body. Begin to-day to banish pimples, boils, blotches, blackheads, and that sickly bilious complexion by taking Cascarets,—beauty for ten cents. All druggists, satisfaction guaranteed, 10c, 25c, 50c.

BLOCKS OF THREE.

Every present subscriber for Kansas Farmer who will send in two new subscribers and \$2, may have his own subscription extended one year without additional cost. We mean it; blocks of three—one old and two new subscribers for \$2. This offer is made for the purpose of greatly enlarging the Kansas Farmer's subscription list, and is confined strictly to the proposition as stated. It will be an easy matter for any old subscriber to get two new ones, and it is almost certain that after reading the "Old Reliable" for a whole year they, too, will become permanent members of the Kansas Farmer family. This is to the publishers the business end of this extraordinary proposition. Blocks of three—one old with two new subscribers—all for \$2.

Horticulture.

THE SPRING CANKER WORM.
(*Paleacrita vernata*.)

Editor Kansas Farmer:—The severe ravages made upon Kansas orchards last season by the "spring canker worm," together with its rapid spread over increased areas, embracing a large percentage of the counties of the State, should be soundings of alarm to fruit-growers of the danger of renewed depredations in 1898. In many instances trees in bearing orchards last year were entirely stripped of their foliage. Young trees not in bearing likewise sustained great injury by a loss in the proper wood growth and development.

In many cases the loss of foliage appears to be slight, owing to the putting out of later foliage, yet the tree has received a severe shock at a time when perfect conditions are most needed. If entire defoliation takes place during three successive seasons the tree is virtually ruined.

This insect in the orchard is most injurious to the foliage of the apple, peach,

place is in the cavity formed by fruit spurs. This undoubtedly is the objective point of the female, endeavoring to so deposit the eggs as to bring the young larvae upon hatching into as close proximity to the tender expanding leaves as possible. The time required for eggs to

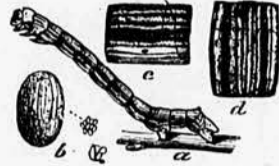


FIG. 1.
a, larva of *Paleacrita vernata*; b, an egg, greatly enlarged; c, d, segments of larva.

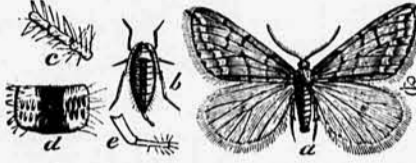


FIG. 2.—*PALEACRITA VERNATA*.
a, male; b, female.

hatch is dependent largely upon the temperature. The larva or caterpillar is

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Cascarets

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REGULATE THE LIVER

10c
25c 50c

ALL
DRUGGISTS

til the next spring, with an occasional emerging during a warm day in late fall or winter. This is an indication of coming trouble. The male moth or adult is brownish-gray in color, having a spread of wings of about an inch. At this time of the year on warm nights they may be observed flitting about the lamplight in the house or attracted to bonfires in the garden.

The female moth (see Fig. II) is wing-

proving very successful on the station grounds and infested orchards near by. The second method is by using the arsenical poisons. This is done by spraying. The mixture commonly used in spraying for the canker worm is Paris green and water, at the rate of one pound of Paris green to from 150 to 200 gallons of water. Since Paris green does not go into solution in water, the mixture must be kept thoroughly stirred while the spray is being applied, so as to avoid burning the foliage. A spray should be given the tree as soon as the larvae are discovered, and continued as the case demands. London purple may be used as a substitute for Paris green. Other arsenical poisons are being used which are treated of more fully in the bulletin from this department on "Some Insects Injurious to Orchards," which will be issued this week. E. E. FAVILLE.

Horticultural and Entomological Department, State Experiment Station.

[In spraying the Wellhouse orchards for canker worm last year it was found that the usually recommended strength of one pound of poison to 150 gallons of water was not effective. The strength was increased until a mixture of one pound to about fifty gallons of water was used, and it killed the worms. By using as much lime as London purple, serious burning of the foliage was prevented.—Editor.]

Scab in Potatoes.

Editor Kansas Farmer:—In your issue of February 3, Mr. C. J. Norton asserts that scab damages potatoes only while they are growing. T. B. Terry, in his "Potato Culture," says: "I do not know whether scab can continue to increase after the crop ripens." I hear from a market gardener, who digs his Early Ohio potatoes as soon as ripe, "as, if left in the ground till fall, they would be a mass of scab."

Those who plant only a few potatoes for their own use will probably pay little attention to the scab question; but where large areas are planted for market purposes it is best to destroy the germs on the seed, if it is affected. Corrosive sublimate will do the work effectually, but on account of its poisonous nature many will hesitate before using it.

My experience with scab is in accordance with the testimony of above-mentioned market gardener. I plant Early Ohio mainly, unmulched; begin digging as soon as they are of marketable size. Years ago, when I learned my first lesson on scab, I put out some stock that was badly affected. When they were large enough for market I began digging and kept the home market supplied. When the price fell to 40 cents a bushel I quit selling. This was about August 1, at which time the effects of scab could hardly have been noticed to the uninitiated. When I dug the last 200 bushels of the crop, about October 1, I found plants now and then from which not a single tuber was marketable, being a literal mass of scab. A similar experience came to me once since, when, owing to the condition of the ground, it was found impossible to dig before the 20th of September. Even this second lesson was necessary to convince me fully of the destructiveness of scab if let run riot. A close observer will readily notice that it does most damage in low, moist and heavy spots and where humus is most abundant; and that in real sandy soil, which is comparatively airy and dry, only little damage may be done. Mr. Norton claims that scab ceases its work when the tuber has ripened, adducing as proof the fact that potatoes in the cellar show no further spread of the trouble. That scab no longer works on a crop that has been taken out of the ground and dried, is true, but I do not think that the completion of the ripening process is responsible for the cessation. I can only think, in the light of my experience, that it is the drying of the potato previous to storing which withdraws from the scab germ its medium of existence and development. This medium is moisture. As germs and spores are generally



AN APPLE TREE PARTIALLY DEFOLIATED.

plum, cherry, apricot and quince, while in this State it has been of great injury to forest and shade trees, preying upon the foliage of the oak, elm, ash and catalpa. The leaves when first attacked become perforated with small holes which increase in size as the larvae or caterpillars develop, until finally the pulpy parts disappear, leaving only a skeleton of the

of dark olive green color with black, shining head when young, changing slightly during different molts, attaining a length of a little more than an inch. (See Fig I.) The larvae may be seen on a bright sunny morning suspended by fine silken threads attached to the foliage. They feed voraciously until nearly full-grown. When this stage is reached they

less and is more robust than the male. In Kansas the moths emerge in early spring, usually in small numbers during the last days of February and in large numbers during the first two weeks in March. As soon as the female appears it begins to climb a tree and deposit its eggs.

There is another species of canker worm known as the "fall canker worm" (*Anisopteryx pomataria*), not observed to any extent in Kansas. Its habits are similar, differing chiefly in that it deposits its eggs in the fall instead of in the spring.

REMEDIES.

Two measures should be employed in combating the canker worm, the first to prevent the ascent of the wingless moth, the second, to destroy the larvae when feeding on the foliage. The first may be carried out by placing a sticky band about the trunk, which will entangle the feet of the female. A number of substances are used for this purpose, comprising printer's ink, pine tar, "dendrolene," "raupenleim," "rosin and castor oil," etc., which are smeared on bands of heavy paper or canvas and tightly bound around the trunk of the tree, making the bark as smooth as possible to prevent crevices between the band and tree. These bands should be put on during the last two weeks of February, and should be renewed by adding fresh material from time to time. Collars of wire netting, tin, paper, etc., may be used, so fastened as to prevent passage-ways at the collar and having a flange which stops the ascent of the female, which dies after numerous unsuccessful attempts to get above the point. A device invented by George E. Pratt, of Ridgeway, N. Y., is being tested at the Experiment Station. It consists of a band of wire netting four inches wide, slit in such a way as to permit of a perfect flange. By painting the bands they will last for a number of years. The cost per tree is about 3 cents. The device thus far is



AN APPLE TREE COMPLETELY DEFOLIATED.

leaf, so that trees or orchards when badly affected take on the appearance of having been scorched by fire.

The oval-shaped eggs of the canker worm moth are yellowish in color, having a pearly lustre. They are deposited in irregular clusters or masses on twigs, at base of large branches, and often in the brown leaf masses formed by the so-called "leaf crumpler." A very common

pass to the ground (sometimes into rubbish heaps or under leaves). They either crawl down the trunk of the tree in a looping fashion or lower themselves with their silken threads. As a rule, in this climate, by the last of May the insects have all passed to their resting or pupal state. This, however, varies slightly with early and late springs. In the pupal or chrysalid state the insect remains un-

assumed to multiply only in liquid or soft bodies, drying would effectually check the ravages of the pest.

I would earnestly caution those who grow unmulched Early Ohios from scabby seed against leaving them in the ground during the summer. I would say, dig them early, as soon as they have their full growth, even if the skin slips somewhat. They will keep much better, even in an average cellar, than in the ground during July and August of an average central Kansas summer.

Halstead, Kas. G. B. RUTH.

San Jose Scale Scare.

Editor Kansas Farmer:—Inquiries go far in showing that at least some of the San Jose scale alarmists keep putting themselves in print with the view of securing a fat job as inspector or commissioner, and the question is now frequently asked, "Will these fellows scare away other foreign markets besides Germany?"

Inquiries made of authorities in California inform the writer that in that State it is easier and less expensive to combat the scale than codlin moth or fungous diseases, and that one thorough spraying destroys this pest, that they do not have to burn trees infested with San Jose scale, and further, that it is receiving less attention than some of the pests we have east of the Rockies.

The idea has been advanced that the scale in colder climates proves harder to combat, that nature in such a climate will, or does, thicken the scale. But if it is a native of Tasmania, Japan and Hawaii, will it thrive long in our more severe climates? Its decrease in some sections and disappearance in other sections where it first appeared may be taken as a promise that we are not going to be visited, after all, with the eighth "plague."

It is better to take Hood's Sarsaparilla than to experiment with unknown and untried preparations. We know Hood's Sarsaparilla actually and permanently cures.

Hood's Pills act easily and promptly on the liver and bowels. Cure sick headache.

No-To-Bac for Fifty Cents. Guaranteed tobacco habit cure, makes weak men strong, blood pure. 50c, \$1. All druggists.

We PAY CASH each WEEK the year round, if you sell Stark Trees. Outfit free. STARK NURSERY, LOUISIANA, Mo., Stark, Mo., Rockport, Ill., Dansville, N. Y.

SEEDS 5 Pkts. Flower Seeds, Giant Cyclamen, Mammoth Gladiolus, French Peas, etc. STARK NURSERY, LOUISIANA, Mo., Stark, Mo., Rockport, Ill., Dansville, N. Y.

Apple, Pear, Peach, Plum and Cherry Trees, Raspberries, Blackberries and Strawberries, Ornamental Trees and Shrubs. Write me for prices. C. L. YATES, Rochester, N. Y.

Mammoth White Artichoke Seed for Sale. Cheapest and healthiest hog feed one can raise. Specially adapted to Kansas and Nebraska soil and climate. For further particulars and prices address Geo. A. Arnold, Haydon, Phelps Co., Neb.

1,000 Peach Trees one year, from bud, 2 to 3 ft., mostly branched, with fruit prepaid to any station in Mo., Kas. and Ia., for \$21; or 500 for \$12. Sample prepaid, 25c. Other sized trees proportional prices. R. S. JOHNSTON, Box No. 17, Stockport, Del.

1000 Box Elder & Ash \$1.25. Rus. Mulberry and Osage Hedge at about same price. 100 APPLE, 3 to 4 ft. \$6. Cherry, 3 to 4 ft., \$10. Concord Grape, \$1.75. We pay the freight. Complete price list free. Jansen Nursery, Jansen, Nebr.

ALL THIS FOR \$1.00 ACTUAL VALUE \$3.95

Think of it! You receive for one year, three of the most interesting, instructive, up-to-date papers published, and Four Poultry Keeper Illustrators, each containing the most accurate illustrations and information of the utmost value about profitable poultry raising.

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(E-pit-0-mist) is just what its name implies. A brief and compact treatise on Agriculture, Live Stock and Dairy, Horticulture, Poultry, and Floriculture. Besides these several departments it has its Household, Children's and Miscellaneous Departments and Letter Box.

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is recognized as the best, brightest and most inspiring periodical published in the interest of American Youth, will interest the old as well as young. It has twelve pages, 7 1/2 inches, every week, and is beautifully illustrated in color. The best stories produced by the best authors. Not a dull line in it. Not an objectionable feature about it.

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as described and illustrated in this offer, all of which are grown and put up for us by one of the most reliable and best known seedsmen and seed growers in the United States, and every collection sent out has his and our guarantee to be fresh tested seeds, and each packet is regular full size. Following is a brief description of the different varieties: One packet each of BUIST'S PRIZE MEDAL YELLOW GLOBE DANVERS ONION, producing largest and finest bulbs, hardy and keeps better perfect themselves in the Northern, Western and Eastern States first year from seed.

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HAMMOND'S FREE SEED DISTRIBUTION Government Free Seeds are simply "not in it." To introduce the Best Michigan Northern Crown New Land Seed Potatoes, Farm, Garden and Flower Seeds everywhere, I will give away, ABSOLUTELY FREE, 500,000 packets of choicest Vegetable and Flower Seeds. Your name on a postal card gets my Free Seed Book from which you may select FREE your supply of seeds for an entire garden. Write to-day. Get your order on file; we're very busy. HARRY N. HAMMOND, Seedsman, Bx. 18, Decatur, Mich.

\$300. for Six Potatoes! We shall introduce this year for the first time the wonderful new MORTGAGE LIFTER POTATO and shall pay the above sum in prizes for the best six potatoes grown from it. It is white, of excellent quality and A MAMMOTH YIELDER. Be the first in your neighborhood to try it; next year you can sell it to others. Price this year, 50 cents for Single potato. First in the Market Cabbage is the earliest to head; beat your neighbors by weeks. Sure Head Cabbage, all head and sure to head, large size, good quality and good keeper. Single heads have weighed up to 60 lbs. Climbing Cucumber, entirely new—a perfect wonder. Climbs any trellis or support 6 to 8 feet high; prolific early fruiter. Six Week's Turnip; earliest grower, easy grown, good size and white as snow. EARLIEST TOMATO IN THE WORLD—greatest success for earliness, smoothness and quality. Has fruited in 50 days. Big Prizes Awarded for ripe tomatoes grown in least number of days. Instructions with seed. For one whole potato by mail (packed from frost) instructions for prizes and a packet each of the five early vegetables and catalog of "SEEDS THAT GROW" for 25c. Fairview Seed Farm, Box 89, Ross Hill, N. Y.

BIG CROPS OF CORN OUR Iowa Silver Mine Corn is the greatest producer in the world. Yielded 215 bu. per acre in Iowa, 211 bu. in Indiana, 201 bu. in Arkansas, 178 bu. in Illinois, 145 bu. in Nebraska, 144 bu. in Ohio, 137 bu. in Texas, etc. Is the purest, handsomest, and largest eared 100-day corn in existence. Most profitable, best drought resister. These are big claims but we can prove them. This cut shows shape of grain and the grower of the 215 bushel crop. FREE TO readers of this paper a small sample of this corn and a copy of our large illustrated catalogue, giving full particulars and much valuable information for every wide awake intelligent farmer. Hundreds of illustrations. If you will send 10 cents to pay actual postage, and the names of three farmers we will mail you a pound of the above corn and enclose a certificate worth 25 cents. IOWA SEED CO., Established 1871, DES MOINES, IOWA. PLEASE MENTION KANSAS FARMER WHEN WRITING ANY OF OUR ADVERTISERS.

BEST CORN FOR KANSAS. I get a big trade from Kansas because my corn greatly outstrips your native corn in yield and is much surer crop. Twenty-six best kinds. Two samples, catalogue and proof free. Address, J. C. SUFFERN, Seed Grower, Voorhies, Ill.

WE CAN SAVE YOU MONEY On small fruit plants—100 varieties of Strawberry plants; 75,000 Kansas Raspberries, best raspberry ever introduced. Write for our new 1898 catalogue, now ready. Address, F. W. DIXON, Holton, Kas.

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EVERGREEN NURSERY COMPANY, (Box 109) EVERGREEN, WISCONSIN. Growers of hardy, first-class evergreen and deciduous trees for shade, ornament or timber. Largest stock, lowest prices. Write for free catalogue, and let us know your wants.

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STRAWBERRIES \$2.00 a 1000 for standard kinds. Only you ever saw. Raspberries, \$5. a 1000 Other fruits at like rates, Lists SENT FREE. JOHN F. DAYTON, WAUKON, Allamakee Co., IOWA.

EVERGREENS! 1000 6 to 8 in., \$1.00; choice of 32 packages, 100 choice transplanted, 2 feet, \$10.00 prepaid. Millions to offer: hardy varieties, all sizes. ORNAMENTAL & FRUIT TREES. Shrubs, vines, etc. Catalogue prices and 40 great bargains sent FREE. D. HILL, Evergreen Specialist. Local Agents Wanted. DUNDEE, ILL.

2,000,000 Strawberry Plants at \$1.50 per 1,000 and up; 12,000 Peach trees 1/2c. and up; Osage Orange Hedge \$1 per 1,000; Ash Seedlings 75c. per 1,000. A large supply of all kinds of exceedingly well-rooted, true to name and strictly first-class nursery stock. Write for price list to BOHEMIAN NURSERIES, Reynolds, Neb.

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WESTERN FRUIT-GROWER ST. JOSEPH, MO. Monthly at 50 cents a year and devoted to Western interests. Not connected with any nursery, seed or commission house. Send your name and get a two month trial subscription ABSOLUTELY FREE.

TESTED SEED CORN. Send five 1-cent stamps for three sample packages of the best varieties of corn grown in book: "Hints on Corn Growing and How the Up-to-date Farmer Grows the Big Crops." The Iowa Agricultural College grew 94 bushels per acre of this corn, which gave 62 pounds of shelled corn from 70 pounds of ears. PLEASANT VALLEY SEED CORN FARM, J. B. ARMSTRONG, Proprietor, SHENANDOAH, IOWA.

SEED POTATOES, The Three Great Earliest, Pure, Smooth and Vigorous. Sacked and delivered at depot, Topeka. EARLY OHIO.....85c per bushel EARLY ACME.....85c per bushel EARLY SIX WEEKS.....85c per bushel Ten bushels of any variety above, 80c per bushel. B. H. PUGH, Box A, Topeka, Kas.

FOR 14 CENTS We wish to gain 150,000 new customers, and hence offer 1 Pkg. 13 Day Radish, 10c 1 Pkg. Early Spring Turnip, 10c 1 " Earliest Red Beet, 10c 1 " Bismarck Cucumber, 10c 1 " Queen Victoria Lettuce, 10c 1 " Klondyke Melon, 10c 1 " Jumbo Giant Onion, 10c 3 " Brilliant Flower Seeds, 10c Worth \$1.00, for 14 cents. Above 10 pkgs. worth \$1.00, we will mail you free, together with our great Plant and Seed Catalogue upon receipt of this notice and 1c postage. We invite your trade and know when you once try Salzer's seeds you will never get along without them. Potatoes at \$1.50 a Bu! Catalogue 5c. No. 70. JOHN A. SALZER SEED CO., LA CROSSE, WIS.

In the Dairy.

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

TYPE OF THE DAIRY COW.

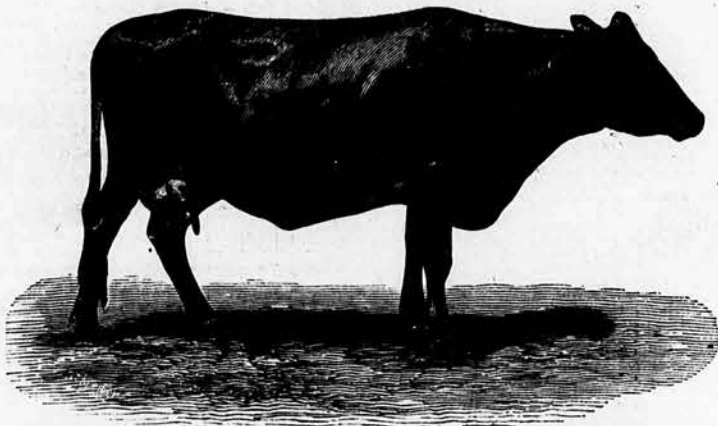
Notes on the Address of Prof. T. L. Haecker, Before the Creamery Buttermakers.

One of the addresses of special interest to farmers, as well as to dairymen, was by T. L. Haecker, Professor of Dairy

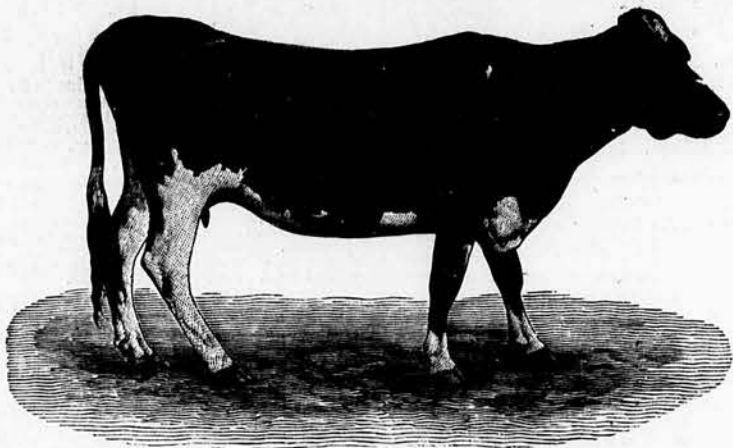
dairy cow must be one that has large capacity to digest food; that puts the results of the food eaten in the milk pail rather than on her own carcass. The capacity for food is indicated by the depth of the middle part of the body. The pot-bellied form is exactly right. If she has ample food receptacle there need be no uneasiness about there being an ample passage into it. The hind quarters should be light and thin. The hams should curve inward. The cow with straight hams or blocky, beefy hams gets them by putting too much of her



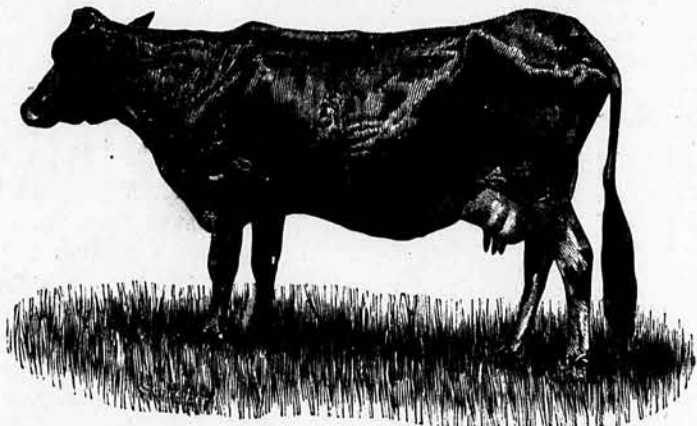
DIDO—579 pound butter fat per day, at a cost of 18.2 cents per pound for feed consumed.



BECKLEY—.944 pound butter fat per day, at cost of 14.3 cents per pound for feed consumed.



BETTIE—.756 pound butter fat per day, at cost of 13.8 cents per pound for feed consumed.



DORA—1.058 pounds butter fat per day, at cost of 11.1 cents per pound for feed consumed.

Husbandry in the Minnesota University Experiment Station. This lecture was delivered in a large livery barn, to enable the speaker to illustrate it with living cows. These were brought in from neighboring dairy farms. The Kansas Farmer did not secure pictures of these particular cows and heifers, but is able to present illustrations, from a bulletin published by Prof. Haecker in 1894, representing cows with which his experiments were made.

It was impossible in the cold barn to take adequate notes of Prof. Haecker's address. The main points were that a

food on them. The more the hams curve away from the tail as you view the side of a cow the more has she the ideal conformation in those quarters. Her backbone should be prominent; if large and sharp, so much the better. It indicates the highly nervous organization which characterizes the dairy cow. The shoulders should be lean—bare. The length of body should be largely in the part between the shoulders and the hips. The size and shape of the udder are matters on which tastes and preferences differ. If the cow eats and digests large amounts of food suitable for the production of

FOR 30 DAYS MORE YOU CAN TRY IT FOR 25 CENTS. RHEUMATISM, NEURALGIA, LA GRIPPE

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"5 DROPS" is the most concentrated and powerful specific known Free from opiates and perfectly harmless. Relief is usually felt the very first night. We have letters of grateful praise from thousands who have been cured by "5 DROPS," and who recommend it to sufferers.

HAD RHEUMATISM FOR 40 YEARS.

Swanson Rheumatic Cure Co., Chicago.—Gentlemen: I write this to inform you all how much good your "5 DROPS" is doing my husband. He is taking the second bottle now and is improving every day. When he began to take it he was suffering a great deal with Rheumatism and Heart Trouble, and weakness in his limbs, and also had stomach trouble, had no appetite, and could not walk half a mile without his legs being so stiff that when he sat down he could hardly get up again. Now, I am happy to tell you he is like a new man, and can walk without any pain. If your medicine cures him it will cure any one, for he has had Rheumatism for forty years and will be 70 years old the 10th of this month. He has gained ten pounds since he began taking your "5 DROPS." I cannot thank you enough for what your "5 DROPS" has done for him, for I don't think he would have been alive to-day if it had not been for "5 DROPS." I advise all suffering beings to be treated with your "5 DROPS," for it is a boon to mankind. (Mr. Jordan will send testimonial later on.) Yours gratefully, MARY F. JORDON, Bridgeport, Ala., January 5, 1898.

HAD RHEUMATISM OF THE HEART.

Swanson Rheumatic Cure Co., Chicago.—Dear Sirs: Enclosed please find money order, for which please send me order of "5 DROPS." We can recommend your "5 DROPS" very highly. My husband had Rheumatism of the Heart so bad he could not lie down in bed to sleep, and was bloated so bad he could not button any of his clothes, and before a 25-cent trial bottle was gone he could lie down and sleep as well as a person in perfect health, and could button his clothes as good as ever. I could tell you of different cases of headache and numbness and sleeplessness, but it speaks for itself.

Respectfully, MRS. O. S. FLOWER, Ruleton, Kansas, January 8, 1898.

"5 DROPS" cures Rheumatism, Sciatica, Neuralgia, Dyspepsia, Backache, Asthma, Hay Fever, Catarrh, Sleeplessness, Nervousness, Nervous and Neuralgic Headaches, Earache, Toothache, Heart Weakness, Croup, Swelling, La Grippe, Malaria, Creeping Numbness.

FOR THIRTY DAYS LONGER to enable sufferers to give "5 DROPS" at least a trial, we will send a sample bottle, prepaid by mail, for 25 cents. A sample bottle will convince you. Also, large bottles (300 doses), \$1.00; 3 bottles for \$2.50. Not sold by druggists, only by us and our agents. Agents wanted in new territory. Write us to-day.

SWANSON RHEUMATIC CURE CO., 167-169 Dearborn St., CHICAGO, ILL.

milk, she must put it somewhere. If she does not put it on her body she must put it into the pail. The cow with very large udder probably puts much water with the other constituents of the milk. The cow with small udder may give richer milk. In speaking of the development of dairy characteristics in the heifer, Prof. Haecker favored bringing them up on skim-milk rations balanced with suitable grains, and insisted that they should be protected from cold and storms. Exposure causes the circulation to tend towards the surface and nature attempts to fortify the heifer against the weather by laying on flesh under the skin. This tendency once developed is

J. W. Walker, H. M. Brandt, W. B. Jansen.

Much enthusiasm prevailed and about \$600 was pledged by the Kansas creameries, to be placed at the disposal of this committee.

Pleasant Home Employment.

Any person who wants work to do at home can get steady employment by making artificial flowers. The work can be learned in two or three days, can be done by anybody and workers receive from eight to sixteen dollars weekly for services in their own home. It is a pleasant and profitable employment. Instruc-



HOUSTON—1.276 pounds butter fat per day, at cost of 10.8 cents per pound for feed consumed.

a disadvantage to the dairy cow. She should put her feed into the pail.

Summing up essential characteristics of the dairy cow, the Professor described her as pot-bellied, ewe-necked, cat-hammed, sharp-hipped, bare of flesh and having prominent backbone and sharp hips.

Officers Elected.

The Kansas State Dairy Association held a short session at Topeka, on February 23, and elected the following officers: President, C. F. Armstrong; Secretary, F. S. Hurd; Assistant Secretary, T. M. Erb. Legislative committee—C. H. Pattison, J. E. Nissley, Geo. W. Hanna,

and materials will be given you free and materials will be supplied you regularly, if you promise to send completed work back to us, and not sell to storekeepers in your town. For full information write, inclosing stamps, to Fairfield Floral Co., Fairfield, Maine.

All lovers of out-door sports and athletics are sure of the latest and best news of base and foot-ball, bicycling, yachting, bowling, shooting, the race track, etc., in the Chicago Times-Herald. This department is given a great deal of space and like everything else about the paper it is up to date. Most of the matter is exclusive, obtained from authoritative sources and consequently reliable.

OSBORNE FARM IMPLEMENTS SUCCEEDED WHERE OTHERS FAIL.

OSBORNE FARM IMPLEMENTS

The largest complete line of farm machinery manufactured by any single concern in the world; embraces:

- Osborne Combination Harrows, Spring-Tooth Harrows,
- Adjustable Peg-Tooth Harrows, Sulky Spring-Tooth Harrows,
- Columbia Flexible & Reversible Disc Harrows, Rival Disc Harrows,
- Columbia Inclined Corn Harvester & Binder, All-Steel Toppers,
- Columbia Mower, (1 & 2-horse) All-Steel Self Dump Rakes,
- Columbia Grain Harvester and Binder, All-Steel Hand Dump Rakes,
- Columbia Reaper, No. 8 Reaper, Horse Hoe Cultivators, etc.

Every machine is fully warranted and is the best of its class that can be produced with good material, complete equipment, superior skill and long experience.

The Cut here Shown is that of our OSBORNE COMBINATION HARROW.

Before you read a word about it, examine the cut closely. Do you see the advantages of this harrow? Adjustable Spring-Teeth to tear up the ground to any desired depth and a powerful Steel Rake behind to level and smooth it. Each section has 8 teeth set so they cannot trail each other... **Don't Buy until you have seen our local Agent.**

Broad shoes in front make it ride the ground smoothly. **Positively without an equal** because of the wide range of work it will do.

LOOK for our ad next week.

Handy Book on Farm and Home Free.

D. M. OSBORNE & CO., St. Louis, Mo.

MARKET REPORTS.

Kansas City Live Stock. KANSAS CITY, Feb. 28.—Cattle—Receipts since Saturday, 4,817; calves, 182; shipped Saturday, 573 cattle, 2 calves. The market was active and strong to 10c higher. The following are representative sales:

Shipping and dressed beef steers table with columns for No., Ave. Price, No., Ave. Price. Western steers table with columns for No., Ave. Price. Native heifers table with columns for No., Ave. Price. Native cows table with columns for No., Ave. Price. Native feeders table with columns for No., Ave. Price. Native stockers table with columns for No., Ave. Price.

Hogs—Receipts since Saturday, 11,448; shipped Saturday, 1,111. The market was steady to lower. The following are representative sales:

Hog sales table with columns for No., Ave. Price, No., Ave. Price. Sheep—Receipts since Saturday, 4,725; shipped Saturday, 1,217. The market was strong on sheep and 10c lower on lambs. The following are representative sales:

Sheep sales table with columns for No., Ave. Price, No., Ave. Price. Horses and mules—At the Grand avenue yards there were over 15 cars of horses on the market. There were a large number of buyers present. The competition was keen and the good grades were steady.

St. Louis Live Stock. ST. LOUIS, Feb. 28.—Cattle—Receipts, 3,500; market steady to strong; fair to fancy native shipping and export steers, \$4.25@5.35; light and dressed beef and butcher steers, \$4.00@5.00; steers under 1,000 lbs., \$3.75@4.40; stockers and feeders, \$3.00@4.50; cows and heifers, \$2.00@4.75; Texas and Indian steers, \$3.50@4.25; cows and heifers, \$2.30@3.50.

Chicago Live Stock. CHICAGO, Feb. 28.—Cattle—Receipts, 14,500; market steady to 10c higher; beefs, \$3.85@5.45; cows and heifers, \$2.10@4.40; Texas steers, \$3.50@4.50; stockers and feeders, \$3.40@4.40. Hogs—Receipts, 30,000; market slow, averaging a shade lower; light, \$3.80@4.00; mixed, \$3.90@4.05; heavy, \$3.85@4.07 1/2; rough, \$3.85@3.90.

Chicago Grain and Provisions.

Chicago grain and provisions table with columns for Item, Opened, High'st, Low'st, Closing.

Kansas City Grain. KANSAS CITY, Feb. 28.—Receipts of wheat here to-day were 324 cars; a week ago, 263 cars; a year ago, 67 cars. Sales by sample on track: Hard, No. 1, nominally \$3.00; No. 2 hard, 3 cars @ 1-b. 90c, 1 car 61-lb. 89 1/4c, 1 car 60-lb. 88 1/4c, 2 cars 60-lb. 88c, 2 cars 59 1/2-lb. 88c, 3 cars 59-lb. 88c, 2 cars 59 1/2-lb. 87 1/4c, 26 cars 59-lb. 87 1/4c, 4 cars 58 1/2-lb. 87 1/4c, 8 cars 58 1/2-lb. 87c, 16 cars 58-lb. 86 1/4c, 7 cars 58-lb. 86c, 1 car 59-lb. mixed 87c, 1 car 58 1/2-lb. mixed 87c; No. 3 hard, 4 cars 58 1/4-lb. 87c, 2 cars 57 1/2-lb. 86c, 9 cars 57 1/4-lb. 86c, 6 cars 57-lb. 85 1/4c, 4 cars 56-lb. 85c, 16 cars 56-lb. 84 1/4c, 2 cars 56-lb. 83c; No. 4, 1 car 57-lb. 83c, 1 car 54-lb. 83c, 1 car 55 1/2-lb. 82 1/4c, 1 car 54 1/2-lb. 82 1/4c, 1 car 55-lb. 82c, 1 car 55 1/2-lb. 80c; rejected, 1 car 57-lb. 80c, 1 car 57-lb. 78c. Soft, No. 1, nominally 93c; No. 2 red, 4 cars 59-lb. 92c, 4,000 bushels out of store 92c; No. 3 red, nominally 86@89c, 1 car 56-lb. poor 86c; No. 4 hard 1 car 55-lb. 86c. Spring, No. 2, nominally 84@85; No. 3, nominally 81@83c; rejected, nominally 79@80c. Receipts of corn here to-day were 240 cars; a week ago, 167 cars; a year ago, 211 cars. Sales by sample on track: Mixed, No. 2

20 cars 26c, 16 cars 25 1/2c, 25 cars 25 1/4c, 5 car 25 1/4c, 3 cars special 26c; No. 3 mixed, 5 cars 25 1/4c, 1 car 25 1/2c, 6 cars 25c, 1 car special 25 1/4c; No. 4 mixed, nominally 25c; no grade, nominally 24c. White, No. 2, 20 cars 26c, 25 cars 26 1/2c, 2 cars 25 1/2c, 3 cars 25 1/4c, 1 car special 26 1/4c, 1 car special 26c; No. 3, 4 cars 25 1/4c; No. 4, 2 cars poor 24 1/4c.

Receipts of oats here to-day were 21 cars; a week ago, 19 cars; a year ago, 27 cars. Sales by sample on track: Mixed, No. 2, 2 cars 25c, 7 cars 24 1/4c; No. 3 mixed, 7 cars 24c; No. 4, nominally 23 1/4c. White, No. 2, 1 car 26 1/4c, 1 car 26c, 3 cars 25 1/4c; No. 3 white, nominally 25@25 1/4c; No. 4 white, nominally 24 1/4c. Rye—No. 2, nominally 46c; No. 3, nominally 44c; No. 4, 42c.

Receipts of hay here to-day were 61 cars; a week ago, 57 cars; a year ago, 59 cars. Quotations are: Choice prairie, \$6.75@7.00; No. 1, \$6.25@6.50; No. 2, \$5.75@6.00; No. 3, \$5.00@5.50; choice timothy, \$8.50@9.00; No. 1, \$7.50@8.00; No. 2, \$6.75@7.25; choice clover, mixed, \$6.75@7.00; No. 1, \$6.25@6.75; No. 2, \$5.50@6.00; pure clover, \$5.50@6.50; packing, \$4.50.

Kansas City Produce. KANSAS CITY, Feb. 28.—Butter—Extra fancy separator, 18 1/4c; firsts, 16c; dairy, 12@14c; country roll, 10@12c; store packed, 10@10 1/4c; fresh packing stock, 9@10c. Eggs—Strictly fresh, 10 1/4c per doz. Poultry—Hens, 6c; broilers, 9c; roosters, 12 1/4@15c each; ducks, 6c; geese, 4 1/4c; hen turkeys, 8c; young toms, 7c; old toms, 6c; pigeons, 7 1/2c per dozen. Apples—Jonathan, \$5.00@6.00 in a small way; Bellefleur, in car lots, \$4.50@5.00 per bbl.; fancy Missouri Pippin, \$3.75@4.00; fancy Ben Davis, \$3.00@3.50; Winesaps, \$3.75@4.25; Willow Twigs, \$3.75@4.00; Huntsman's Favorite, \$4.00. In a small way varieties are selling at 40@50c per half bu. Vegetables—Cabbage, 75c@81.25 per 100-lb. Beets, 25@40c per bu. Green and wax beans, \$2.50@3.00 per crate. Navy beans, hand picked, \$1.12 1/2@1.15 per bu. Onions, \$1.00@1.25. Potatoes—Northern stock, fancy, bulk, 65@70c; sacked, 70@75c; choice to fancy, 50@50c bulk; Colorado stock, 65@70c; home grown, 50@55c. Sweet potatoes, 6c. Seed potatoes, northern grown Early Ohio and Early Rose, 65@70c per bu.

McINTOSH & PETERS, Live Stock Commis'n Merchants

252-253-254 Live Stock Exchange, KANSAS CITY, MO.

Correspondence and consignments solicited. Market reports furnished free on application.

SMOKING MEAT advertisement featuring Lee's Hickory Extract and a description of the product's benefits for curing meat.

1000 GIVEN AWAY advertisement for watches, offering a reward for information regarding stolen timepieces.

THE STRAY LIST advertisement listing various lost livestock (cows, horses, sheep) with their descriptions and locations.

FOR WEEK ENDING FEBRUARY 17, 1898. Labette County—E. H. Hughes, Clerk. COW—Taken up by Mrs. Johanna Tucker, in Elm Grove tp., January 29, 1898, one brown cow, slope in left ear, no brands. COW—By same, one yellow cow, tip off both ears, brand thus) on right hip, brand - on left hip. FOR WEEK ENDING FEBRUARY 24, 1898. Greenwood County—Perry Clemans, Clerk. STEER—Taken up by J. R. Holman, in Janesville tp., January 20, 1898, one red steer, 2 years old, four feet high, indistinguishable brand on right side and hip; valued at \$20. HEIFER—Taken up by G. P. Teegarden, in Bachelot tp., November 21, 1897, one white heifer with roan neck, 2 years old, no brands; valued at \$15. Pottawatomie County—A. P. Scritchfield, Clerk. STEER—Taken up by Philip Thorne, in Sherman tp., February 10, 1898, one red steer, some white in flanks, little white in forehead, no marks or brands; valued at \$20. Labette County—E. H. Hughes, Clerk. HORSE—Taken up by James Wilmoth, in Elm Grove tp., February 7, 1898, one dun horse, H on left jaw; valued at \$12. MARE—By same, one black mare, H on left shoulder; valued at \$15. COLT—By same, one black colt, no brands; valued at \$7.50. Cowley County—S. S. Neer, Clerk. HORSE—Taken up by C. M. Willmot, in Grant tp. (P. O. Otto), January 23, 1898, one dun horse, 5 years old, 14 1/2 hands high, hind feet white, star in forehead, half circle on right arm, wire out on right foot; valued at \$15. FOR WEEK ENDING MARCH 3, 1898. Pratt County—John Mawdsley, Clerk. HEIFER—Taken up by L. D. Hess, in Logan tp., October 7, 1897, one large white yearling heifer, no marks or brands; valued at \$15. Miami County—L. Flanagan, Clerk. COW—Taken up by G. K. Turner, in Marysville tp. (P. O. Spring Hill), one white and roan cow, 2 years old, small feet, both ears under-sloped, over-bit in left ear; valued at \$15. CALF—By same, one last spring's bull calf, small, dark color; valued at \$10.

CALVIN HOOD, President. L. A. ALLEN, Vice President. H. S. BOIOE. T. J. EAMAN, Sec'y and Treas.

Kansas City Live Stock Commission Co.

Rooms 277 A, B, C, D Stock Exchange, KANSAS CITY STOCK YARDS.

L. A. ALLEN, CHAS. W. CAMPBELL, PEYTON MONTGOMERY, Cattle Salesmen. W. T. MOUNTIRE, Sheep Salesman. J. T. MEGREDDY, Hog Salesman.

Correspondence and consignments solicited. Good sales, prompt returns. Ample capital. Twenty years actual experience. Market reports free on application.

BLACK LEG advertisement for Pasteur Vaccine, highlighting its effectiveness in treating cattle diseases.

Pasteur Vaccine Co., 52 Fifth Avenue, Chicago.

HARNESS ALMOST GIVEN AWAY

We are Overstocked and Must Sell Them.

LOOK! LOOK! A First-class Double Farm Harness for \$16.50 advertisement featuring an illustration of a horse and harness.

Kansas City Stock Yards

are the most complete and commodious in the West

and second largest in the world. The entire railroad systems of the West and Southwest centering at Kansas City have direct rail connection with these yards, with ample facilities for receiving and reshipping stock.

Official Receipts for 1897 table with columns for Cattle and Calves, Hogs, Sheep, and Cars.

CHARGES: YARDAGE—Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head. HAY, 80c per 100 pounds. CORN, 60c per bushel. OATS, 60c per bushel. NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED.

C. F. MORSE, E. E. RICHARDSON, H. P. CHILD, EUGENE RUST, Vice Pres. and Gen. Mgr. Secy. and Treas. Asst. Gen. Mgr. Traffic Manager.

25c 35c 50c INDIANOLA LEATHER SUSPENDERS advertisement with an illustration of a man wearing suspenders.

Second Hand Material advertisement listing various items for sale such as barbed wire, iron roofing, and pipe.

HERE YOU ARE!

COMBINATION OUTFIT.

Detailed list of contents for the combination outfit, including tools like irons, awls, hammers, and sewing machines, along with their prices.

WHEN WRITING ANY OF OUR ADVERTISERS PLEASE MENTION KANSAS FARMER.

AT LAST!

THE DREADED CONSUMPTION CAN BE CURED

Medical Council and Laboratory Department.

T. A. Slocum, M.D.

No. 98 Pine St., New York.

February 24, 1898.

To the Editor Kansas Farmer:

In reply to your late advice, am pleased to state that I have discovered a reliable and absolute cure for the dreaded consumption; also for throat, bronchial and lung troubles, winter coughs and catarrh, scrofula, rheumatism, general decline or weakness, loss of flesh and all wasting-away conditions.

By its timely use thousands of apparently hopeless cases have been permanently cured.

I know that there are many of your readers who would be benefited or cured, if they would allow me to advise them in the use of my new discoveries.

So proof-positive am I of its power to cure, based upon actual experience, and to better demonstrate their wonderful merits, I will send Three Free Bottles (the Slocum New System of Medicine) to any of your readers who will write me at my Laboratory, 98 Pine Street, New York, giving their postoffice and express address.

Always sincerely yours,

T. A. Slocum, M.D.

Editor's Note:— We publish the Doctor's fac-simile letter for the benefit of our readers. Every sufferer should take advantage of the liberal offer. He makes no charge for medicine or correspondence-advice. When writing Dr. Slocum, kindly mention Farmer.

The Poultry Yard

Things That Don't Pay.

Keeping too many fowls in too small quarters.

Keeping two or more breeds when you are only posted on one.

To send out inferior stock. Better use the hatchet freely and not kill your reputation.

To dose or doctor fowls in health to keep them healthy. "What fools these mortals be."

To fail to advertise. The man who keeps his name before the public year in and year out gets there.

To visit the shows and tell the people you had better ones at home and that you can beat the prize-winners, etc. If you really think so, just trot them out and let the judges settle the matter.

To breed from pullets where healthy, strong chicks are wanted, or from old cocks with old hens—one just as bad as the other. Better mate a strong yearling cock on two-year-old hens. This mating pays best.

Poultry Notes.

Feed a variety.

Give breakfast at 6.

Exercise is an egg tonic.

Hens won't lay if too fat.

Milk is a complete egg food.

The starved hen is worthless.

Feed the mash warm—not hot.

Underfed hens are poor layers.

The morning mash is imperative.

Let breakfast be only half a meal.

Overcrowded flocks give few eggs.

Cold quarters check egg production.

Feed night meal an hour before dusk.

Boiled wheat is a food much relished.

Proper feeding means health and profit.

Good stock almost always finds quick sale.

Be very careful to keep the feed troughs clean.

Ten hens in a house 10x10 feet are enough. The yard should be at least

ten times as large as the floor of the house.

Beans are a good feed because they are nitrogenous.

Nellie Hawks says boiled rye produces bowel trouble.

Eggs sell better when sent to market in regular cases.

The early pullets are the profitable winter egg-producers.

The laying hen consumes more feed than one not laying.

Ten weeks from shell to market is the time allotted a chick.

Ten hens with one male make about the proper proportion.

Ten flocks, each consisting of ten hens, are enough for an acre.

Keep cabbages hanging in the house within reach of the fowls.

Scatter the grain at noon among litter, so the fowls must exercise.

Egg shells ground to a powder make a good addition to the mash.

Steeped clover, mixed with the morning mash, is a great egg-producer.

Green bone is a valuable food for growing chicks and matured fowls.

Ground oats, corn meal and bran constitute proper foods for poultry.

Filthy quarters produce sickness, and sick hens will not produce eggs.

Cull out the poor layers and give the prolific hens more room to work.

After the second year the hen's value as a winter egg-producer lessens.

Green rye is the best form for feeding; as a grain it is a poor poultry food.

Make the hens work. Exercise helps digestion. Feed all they will eat up clean.

Keep the fowls indoors while there is snow on the ground or the air cold and raw.

When the weather is cold, scald the morning mash and feed while in a warm state.

Hens and pullets may lay as well without the attention of a male bird as with it.

Corn must not be fed exclusively. It should be only a night feed in very cold weather.

Ten months in the year is usually the highest limit of time during which a hen will lay.

Ten cents a pound is about the average price for hens in market for the whole year.

Boiled buckwheat fed once or twice a week to the hens makes a good alternate food for egg-production.

Ten cents should feed a chick, and it should then weigh ten pounds, if highly fed; ten cents covering the greatest abundance of food.—Exchange.

Keys which unlock the gates to success in poultry-raising are good sense, good stock, good care, good houses, and last, but not least, good poultry papers.

The man or woman who plants reliable fruit trees in or about the poultry yard is doing something that will draw gold out of the ground in the near future.

Poultry writers are continually talking about cleanliness in the hen house. This means a good deal; so much that very few carry it out. And as half-way work in this case is worse than nothing, here is where many fail. Cleaning means that all the excrement should be removed daily, the nests renewed often and the roosts dosed with some vermin-destroyer and all the cracks and corners treated with the same.

It costs no more to build a well-regulated poultry house than a poorly-regulated one. Crawling and twisting through little doors, working at a disadvantage with nests and feed-boxes, opening stubborn windows, and other unpleasant things to grapple with, is enough to try the patience and almost lead one to say "there is a time when patience ceases to be a virtue." With the best arrangement there is always enough to try the attendant without unnecessary hindrances. Small, well-built fowl houses, large enough to accommodate a dozen or two fowls, are very desirable; but be sure and not overcrowd these small houses any more than you would the larger ones. It is bad planning to do this under any circumstances. Remember this, that fowls want plenty of room when housed.

Use no male birds where eggs alone are wanted. One of the greatest mistakes farmers make is to let a lot of male birds run with the hens. Those who have tried this are convinced that hens will lay better if there are no male birds about. In the spring the best layers should be selected for breeding purposes and mated to a strong, vigorous, pure-bred male bird of a good laying strain. This will improve the strain very much, and pullets from the strain will make the finest of layers. Bear in mind, a cock in a pen of layers is a nuisance. He not only monopolizes the most of the food, but teaches the hens to break and

THE BEST ELECTRIC BELT ON EARTH. THOUSANDS OF PERSONS CURED ANNUALLY BY OUR BELTS. MORE DR. HORNE ELECTRIC BELTS SOLD THAN ALL OTHERS COMBINED. Your First and LAST OPPORTUNITY to get the World-Renowned DR. HORNE'S \$20 Electric Belt for only \$6.66. THIS OFFER IS GOOD FOR 30 DAYS ONLY. DR. HORNE ELECTRIC BELT & TRUSS CO. 112-114 DEARBORN ST., CHICAGO, ILL., U.S.A.

eat the eggs. The food fed the pullets is too fattening for him and will ruin him as a breeder. If you expect to get fertile eggs and vigorous chicks you must keep the sex separated in the winter and mate them in the proper season. An old book quaintly says that "when the whole system is pervaded by well-oxygenated blood, vigorously propelled, life and activity are copiously communicated." Which means that when the blood is purified by the use of Ayer's Sarsaparilla, perfect health is the result.

THE CROWN Bone Cutter for cutting green bones. For the poultryman. Best in the world. Lowest in price. Send for circular and testimonials. Wilson Bros., EASTON, PA.

INCUBATORS OF WOOD FIBER. ECLIPSE. BROODERS. SEND FOR CATALOGUE. ECLIPSE MFG. CO. ILLINOIS.

THE IMPROVED VICTOR Incubator. Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable, and cheapest first-class Hatcher in the market. Circulars FREE. GEO. ETEL CO., QUINCY, ILL.

HATCH Chickens BY STEAM. With the MODEL EXCELSIOR Incubator. Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class Hatcher made. GEO. H. STALL, 3114 to 133 S. 6th St., Quincy, Ill.

A small Poultry Farm is Better than a Gold Mine. If you know how to run the business. There's \$ Millions \$ in it, but nine out of ten fail in it because they do not know the secret of Success with Poultry or how to get it? Our New Poultry Book will tell you how. It tells you all about poultry and explains why some (a few) succeed and others (the many) fail. This invaluable Book given Free as premium with our Farm and Poultry paper. WAYSIDE GLEANINGS, 3 months for 10 cents. Address F. H. WAYSIDE PUBLISHING CO., Clintonville Conn.

DISSTON'S. It will pay you to buy a new saw with "DISSTON" on it. It will hold the set longer, and do more work without filing than other saws, thereby saving in labor and cost of files. They are made of the best quality crucible cast steel, and are FULLY WARRANTED. For sale by all dealers. Send for PAMPHLET OR SAW BOOK, mailed free. HENRY DISSTON & SONS, Philadelphia, Pa.

BOWEN CABLE STAY FENCE CO. \$10 For a machine to build the cheapest strongest and best fence made of wire. No royalties, no farm rights, machine easily and quickly operated by any farmer. Send for large circulars.

CABLED FIELD AND HOG FENCE. With or without lower cable barbed. Cabled Poultry, Garden and Rabbit Fence, Steel Web Picket Fence for lawns and cemeteries, Steel Gates and Posts. DE KALB FENCE CO., 23 High St., DE KALB, ILL.

Most Useful Inventions within five years even, have been "improved" until the inventor himself would scarcely recognize them. PAGE FENCE began so near right that after twelve years its competitors are content to imitate as closely as they dare. PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

CABLED FIELD AND HOG FENCE. With or without lower cable barbed. Cabled Poultry, Garden and Rabbit Fence, Steel Web Picket Fence for lawns and cemeteries, Steel Gates and Posts. DE KALB FENCE CO., 23 High St., DE KALB, ILL.

FACTORY TO FARM. THE ADVANCE WOVEN WIRE FENCE is sold only direct to the farmer—freight paid. That saves him the dealer's commission and we give him a fence that is cheap and better than the use of any hand fence machine made. THERE CAN'T BE A BETTER FENCE made for the money than this one. Prices way down. One small order will satisfy you on this point. Don't buy until you get our extra special discount to farmers. ADVANCE FENCE CO., 18 Old St., Peoria, Ill.

BUGGIES, Carriage, Buggies, Phaetons, Spring Wagons, Harness and Saddles shipped C. O. D. anywhere to anyone with privilege to examine at lowest wholesale prices. Guaranteed as represented or money refunded. Send for illustrated catalog and testimonials Free. Addr. (in full) CASH BUYERS' UNION, 158 W. Van Buren St., B 64 CHICAGO



We make Steel Windmills, Steel Towers and Feed Grinders and are selling them cheaper than the cheapest. Our productions are standards; are first-class in every respect and are sold on trial. Send us a postal and we will tell you all about them.

CURRIE WINDMILL CO.,
Manhattan, Kas.
AGENTS WANTED.



THE IMPROVED

SCALE

Manufactured by **KIMBALL BROS.,**
1004 Ninth St., Council Bluffs, Iowa.



WELL MACHINERY

Send for catalogue illustrating the old Reliable Peck Well Auger, Rock Drills, Hydraulic Machinery, etc. FREE. Have been in use over 13 years and are no experiment.

W. M. THOMPSON CO.,
Successors to Sioux City Engine & Iron Works
SIOUX CITY, IOWA.




LIGHTNING WELL MACH'Y

PUMPS, AIR LIFTS, GASOLINE ENGINES.

CIRCULARS FREE

THE AMERICAN WELL WORKS.
AURORA, ILL. - CHICAGO - DALLAS, TEX.



PEERLESS FEED GRINDERS

Grind all grains single or mixed just as fine or as coarse as you wish it. Make the nicest kind of "grits," hominy, &c. JUST EATS UP CORN—"COB AND ALL."

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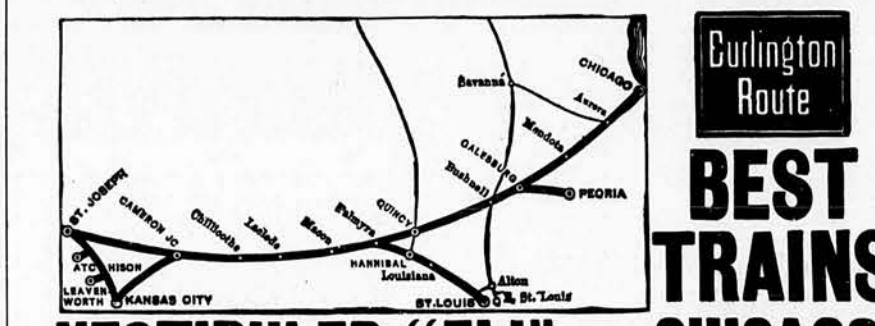
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Answer.—Applying a seton in the dewlap as a cure for an infectious disease is contrary to all modern principles of therapeutics and surgery.

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Answer.—The trouble with your heifer is in the spinal cord, so-called spinal paralysis. The exact cause cannot be detected until a post-mortem examination is made.

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Answer.—(1) Such conditions can usually be remedied when the teat itself is obstructed. A surgical operation, consisting of a simple incision with a slender knife through the obstructed part, is the proper mode of procedure.

near future please report them. They may help make the diagnosis, a thing greatly to be desired in such cases.

KIDNEY ABSCESS.—I have lost a six-year-old horse from kidney trouble. In January I started to Summerfield with a load. When half way, I found that my horse was sick and thought that he was bladder-bound only.

Answer.—Your horse had a kidney abscess, or purulent nephritis, a very interesting disease; undoubtedly more interesting to the pathologist than to the owner of the animal.

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Answer.—The symptoms you describe are those of articular rheumatism, an affection not uncommon in cattle. It is considered infectious in nature and produced by the absorption into the system of the infectious material in question from the uterus (or womb) after calving.

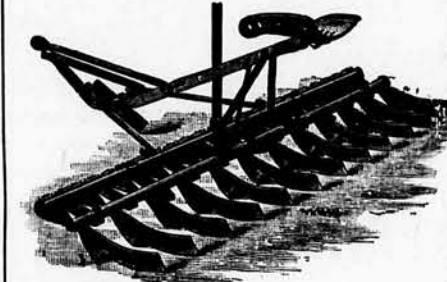
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Test the seeds that you have any doubt about germinating; especially the seed corn. Some good soil, a box and a warm room are all the facilities required.

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Largest Seed POTATO growers in America. The "Rural New Yorker" gives Salzer's Early Wisconsin a yield of 786 bushels per acre. Prices dirt cheap. Our great Seed Book, 11 Farm Seed Samples, worth \$1.00 to get a start, for 10c. postage. JOHN A. SALZER SEED CO., LaCrosse, Wis.

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Send for special price and sample of CLOVER SEED, which is so cheap that you cannot afford not to sow lots of it this year. Send for catalogue, which is free by mentioning Kansas Farmer. Address

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Are the kinds that Germinate, Grow and Produce Results. Seeds are bought on faith. You cannot tell whether they are good until you have planted them. If they fail to grow you have lost the happy prospects of a good vegetable or flower garden.

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An honest, legitimate plan for work in your home—can be done by either sex. We give full instructions free, keep you steadily employed, and pay you promptly every week.

Dear Reader, We have work for you to do at home, at which we will keep you steadily employed and for which we make no charge for instructions. Our work can be done in any part of the U. S. or Canada by any person who has two hands. Now read further and we will convince you. First let us explain that we are the Fairfield Floral Co., a strong reliable corporation, established at \$100,000 capital, under the laws of the State of Maine. Our business is making artificial flowers for wholesale and retail trade. Our flowers are such as women wear on hats or bonnets, and such as are used for general decorative purposes. This business has been marvelously increased for three reasons. 1st, the Dingley Tariff Bill protects American industry so that flowers are now made in the U. S. instead of being made in France and Germany. 2d, the great reign of general prosperity has boomed our trade enormously; and 3d, in several states laws have been enacted that women shall not be allowed to wear stuffed birds on their hats, thereby causing them to use artificial flowers. The work of making artificial flowers is such that we guarantee you can learn by our instructions in less than a week, many learn in a day. The work can be done in any room in your home. Our workers include men and women, often whole families. Artificial flowers are easily made, and a worker is indeed slothful who doesn't earn \$15.00 a week. Those who can only spend a few hours each evening can earn \$5.00 to \$8.00 a week. We give you a full \$25.00 Course of Instructions absolutely free, then when you have learned, we supply you with materials and pay liberally for all the flowers you send us. We don't want you to sell any goods, we do that ourselves through the wholesale stores and by advertisements, all



we want you to do is take our materials, make them into artificial flowers and send to us once a week by express, upon receipt of which we will promptly pay you by bank check, money order or cash in registered letter. The flowers that we want made are such as milliners and decorators use, representing Roses, Tulips, Lilacs, Pansies, Violets, Lilies, etc. All are easy to make, what we want is your time in producing them. Read this from Annie B. Courtney, 113 Monroe Street, Lynn, Mass.: "FAIRFIELD FLORAL CO.—You are at

perfect liberty to publish my name as I am only too glad to let people know how well you have done by me. I had been defrauded by bogus outfits and promised work that never came, and was sceptical when I wrote you, but I am happy to say that you are an honest and reliable company that furnishes the work and pays promptly."

A woman in Ottumwa, Ia., writes: "FAIRFIELD FLORAL CO.—Your money-order for \$17.00 just received for last week's work. This makes over \$200 you have paid me in 3 months and I am delighted. The work is easy and pleasant."

In a Southern City a clerk in a store makes flowers for us evenings. Read what he says in a recent letter: "Gentlemen:—When I first answered your advertisement I was afraid it was a humbug to sell me an outfit, but I have found you to be strictly honest with me. Your check for \$11.30 came to hand to-day for two week's work, which suits me exactly."

Another worker, Mrs. Harriet Lee, Box 1634, Phila., Pa., writes: "I see that Wannamaker's store has a big sale of artificial flowers, which are just like the kind I have been making for you, so I suppose you supply them. I am glad to see you so successful because you have fairly rescued me from poverty. Your weekly payment of \$9.00 to \$14.00 is a great help I assure you."

Harry Rice, Smithville, N. Y., writes: "I am amazed at my good luck. You have kept me supplied with work for which you have paid me promptly. I have saved over \$400 from the earnings which you paid me in the last twelve months."

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Our Establishment is located in Fairfield, Maine, and not in a big city, because it enables us to operate at less expense. We send our work to you, no matter how far away you live. Flowers are light and an immense quantity can be sent for slight express charges. We easily save the difference over city prices. We sell all the flowers we can get made; our business is rapidly increasing; we want hundreds more workers. We shall give our regular \$25.00 instructions FREE if you start now. Anybody can learn in less than a week. We supply all materials to make flowers from. You must promise to send your finished work back to us and not to sell to storekeepers in your locality. Remember we are perfectly reliable in every respect, always doing exactly as we agree. We take the risks; we depend upon your honesty in doing the work for us after we give you the \$25.00 instructions absolutely FREE. Don't delay, if you want to start at once, write to us a letter plainly stating how much of your time you can devote to our business; whether you are Miss, Mr. or Mrs.; what is your nearest express office, and you must promise not to sell flowers to storekeepers after you have made them from instructions and materials that we furnish. Enclose 2 stamps in your letter and address plainly.

FAIRFIELD FLORAL CO., 203 Floral Bldg., Fairfield, Maine.

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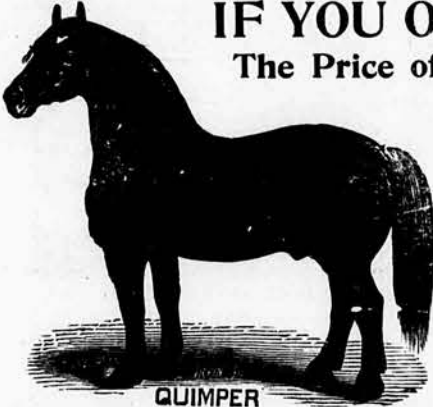
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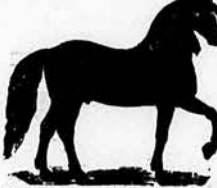


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Fancy Saddlers, Speed Horses, with and without records, Road Horses, Coachers, Pairs, Knee Actors and Cobs.
TWENTY-THIRD AND GRAND AVENUE HORSE AND MULE MARKET, KANSAS CITY, MO., APRIL 6, 7 and 8, 1898.
 This will be the grandest sale ever held in the West. It will be the best time and place to sell your high-class business, road and speed horses of all kinds. Entries close March 15, 1898. Send for entry blanks, fill out and return at once to Col. Jas. W. Sparks, Auctioneer. **J. W. ROBERTSON & CO., Marshall, Mo.**
 We will also hold sale at same place, May 25-26-27, 1898, of first-class Business, Pleasure and Speed Horses.



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 Seven head of choicest breeding and individuality. Twenty to thirty-six months old. In fine condition. Weights 1,200 to 1,500 pounds. Prices reasonable.
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 Scotch and coteh-topped, with the richly-bred Champion's Best 114671 in service. Also high-class **DUROC-JERSEY SWINE.** Can ship on Santa Fe, Frisco and Missouri Pacific railroads.
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 ALWAYS BRIGHT, CANT COME OUT, JACKSONS ST. FRANCIS, ARK.
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 Geo. M. Jackson:—Send me some more ear markers. They are the best of all kinds I ever tried, and I am sure I have used all ever gotten up. I have the first one to lose out of ear yet, and they are so handy to put in.
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DISPERSION SALE OF HIGH-CLASS ABERDEEN-ANGUS CATTLE
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I will sell my entire Highland herd, consisting of eight bulls and thirty-four cows and heifers, including the wonderful young stock bull AXTELL land champion, and his dam is full sister to the celebrated Abbeys of Turlington, champion cow at the Columbian Exposition. All females old enough will be in Queen Mother 8825 bull, Gay Lad, champion of 1895 and 1896; twenty Alices, which family has been brought to a high state of perfection at Highland; one Trojan Erica cow and bull calf, the cow a granddaughter of Bone, that Balingloch's owner received \$2,500 for.
 Rarely, if ever, was there such an opportunity presented to purchase breeding animals where you can see their calves, their dams and granddams. Five generations will be seen and sold, and it is with pride that I invite all interested in the production of a superior beef animal to attend the sale and see what I have accomplished. Catalogue ready and sent on application to
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whose offspring fade in comeliness as their veal turns to beef. T. L. Miller said: "The fattest calf is the best." But that was a gross error, for though fat hides a multitude of faults, it cannot create, cover up, nor add to refinement and character.
 I invite a comparison of the get of **CORRECTOR 48976**, of all ages, from one day to maturity, with those of similar stages of development, the get of other sires. Judged by his get, developing and matured, and the latter's ability to "breed on," **Corrector** marks a new era in Hereford breeding. Thirty of his get in my annual sale, **APRIL 13.**
T. F. B. SOTHAM,
 Weavergrace Breeding Establishment, Chillicothe, Mo.
 N. B.—I shall be in attendance at each of the grand lot of public sales provided by other Hereford breeders. Bids entrusted to me will be executed on my fixed terms. Blank contracts mailed on application.

110 HEREFORD CATTLE AT AUCTION 110
50 A GRAND DISPERSION SALE--FIFTY HEREFORD CATTLE 50
60 PUBLIC SALE OF HEREFORD CATTLE 60

The very choice collection known as the Sycamore Springs Herd.
At Kansas City, Mo., Tuesday, March 15, 1898.
 This offering includes herd bulls, foundation cows, young bulls and heifers, and contains the foundation draft purchased of T. F. B. Sotham at his public sale in 1894, which draft of fourteen head included five members of his very successful young show herd, very favorably known to visitors at the State fair circuits, also the draft from Makin Bros.' famous World's Fair herd. This foundation with produce contains animals of proven usefulness, whose breeding and individual merit cannot now be found for sale at any price except at an actual dispersion sale.
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At KANSAS CITY, MO., WEDNESDAY, MARCH 16, 1898.
THIRTY BULLS, THIRTY HEIFERS. No better lot of cattle has ever been offered for sale in America. For catalogues and other information respecting this sale, address
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