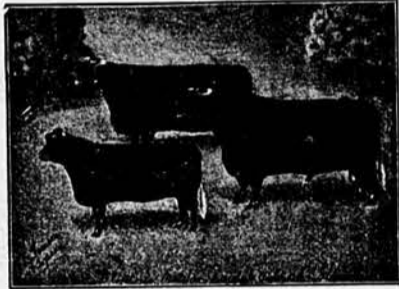


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This offering will be drafts from the herds of A. D. Sears & Bros., Leon, Ia., Geo. W. Wadsworth, Leon, Ia., and W. H. Colter, Decatur, Ia., consisting of

50 HEAD-15 BULLS, AND 35 COWS AND HEIFERS

.....Young Marys, Pomonas, Amelias, Western Ladys, and other useful families—Bates, and Scotch tops.....
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AT
Kansas City Stock Yards Sale Pavilion, Monday and Tuesday, April 22 and 23, 1901.

When 110 HEAD, 50 of which will be BULLS, and 60 COWS AND HEIFERS, consisting of both SCOTCH and BATES breeding, a MIXTURE of this blood and a strong infusion of BOOTH blood. Each consignor—June K. King, Gentry Bros., John Morris & Son, W. P. Harned, N. H. Gentry, Arthur Wallace, Fred Cowley, C. E. Leonard, W. R. Nelson and Col. W. A. Harris are all established and reputable breeders which is a sufficient guarantee that the offering will be the equal of any known to the breed. It will be the last opportunity, at least so far announced to take place at Kansas City this spring, to secure one or more high class Shorthorns. The farmer and ranchman will find in the bull offering his one chance to get bulls at his own price. For catalogues address,

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FEMALES are the best CRUIKSHANK families topped from the leading importations and American herds. These added to the long established herd of the "Casey Mixture," of my own breeding, and distinguished for individual merit, constitute a breeding herd to which we are pleased to invite the attention of the public. Inspection and correspondence solicited. Address all correspondence to manager.

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290 HEAD FOR SALE

Consisting of 200 bulls from 8 months to 4 years old, and 90 yearling heifers. I will make very low prices on bulls, as I desire to sell all of them before May 1. Write me or come at once if you want a bargain.

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THE SCOTCH BRED BULLS

Lord Mayor 112727, and
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Head of the Herd.

Lord Mayor was by the Baron Vektor bull, Baron Lavender 2d, out of Imp. Lady of the Meadow and is one of the greatest breeding bulls of the age. Laird of Linwood was by Gallahad out of 11th Linwood Golden Drop. Lord Mayor heifers bred to Laird of Linwood for sale. Also bred Shetland ponies. Inspection invited. Correspondence solicited. A few young bulls sired by Lord Mayor for sale.

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Young Stock For Sale. Inspection or Correspondence Invited.

Agricultural Matters.

Pasture in the Eastern Part of Kansas.

EDITOR KANSAS FARMER:—Pasture in this part of Kansas is getting very scarce; prairie has been pastured to death, and tame grass can not be depended upon for pasturing profitably. Clover grows well here, but it is short-lived on account of weeds. Alfalfa is all right, but in this climate with our heavy dews and occasional showers, I have not succeeded in getting much good from it. I think the stock-raisers will have to resort to the silo. I want to hear through the KANSAS FARMER the experience of those who have tried the silo—nothing but experience in Kansas. I want to know, also, what to fill with for different kinds of stock, what kind of material to be used, also foundation for same.

Kincaid, Kans. A. P. CALDWELL.

Siberian Millet.

EDITOR KANSAS FARMER:—Siberian millet will do well on any kind of soil that will grow wheat or oats. I grow it for seed and feed. Last year I got 30 bushels of seed and two tons threshed hay per acre, year before last 37 bushels of seed and two tons hay. The hay pays for raising and the seed is gain. It is three to four weeks earlier than German millet. It will make more seed, hence there is more certainty of a crop for our latitude. You ask if it is a good feed for milch cows? It is good for cows if you have some cane hay, straw, or fodder to mix with it. Cattle like it but it acts on the kidneys too strongly if you feed no other roughness. If you have one feed of millet and one feed of some other roughness it is extra good. Cows need a variety. We milk fifteen cows and stable them nights; give alfalfa and clover at night, and millet and cane hay or oat straw in the daytime. The Siberian millet starts out like wheat, hence 15 pounds per acre is plenty. Sow it broadcast on plowed ground that has been harrowed over and give it another harrowing to cover seed. It should be covered about one

I have lived on this farm (but 280 acres) for seventeen years and if it had not been for making butter we would have had to look around for some better financier than I. But if you feed your cow she will stay by you. Through our experience we find that we can grow millet cheaper than any other forage crop. We always bind and thresh it and feed the millet straw to horses and cattle, but always aim to have some other roughness to mix with it.

Waymore, Neb. H. BAUGHMAN.

Alfalfa Experience.

EDITOR KANSAS FARMER:—I am a reader of your valuable paper, and have been reading it with more than common interest the last three months. Have noticed the papers read by different members of the state board of agriculture, and also the discussions on various subjects, all of which seemed to me very interesting, and I hope to profit by them. In fact, I can hardly see how a Kansas farmer can get along without the KANSAS FARMER in his house. I notice with a good deal of interest your article in the issue of March 14 on "Sowing Alfalfa." The article shows you have been there so to speak, and have had some experience, but I think you, like many others, came to at least one erroneous conclusion. I allude to the tenderness of the plant to frost. You speak of sowing 14 acres the 15th of September which came up very nicely and made a growth of several inches that fall, but there was only one plant left in the spring, the balance having forzen out. Now, we had experience along that line and as it has led me to a different conclusion, with your permission I will relate some of my experiences and some of my observations.

On September 23, 1890, I was irrigating a plat of alfalfa (the first I had ever tried) and there were some low places in which the sediment had covered up the alfalfa, when I was irrigating previously with very muddy water, and had killed it out. I had heard that young alfalfa would not stand the winter but there was just enough Yankee in my make-up to want to know that fact myself, so I got some seed and sowed it on the water in those places. It came up nicely and grew that fall to the height of probably four or five inches. I don't remember whether I irrigated that plat again that fall or not, but certainly that alfalfa was there in the spring to begin growing with the other stand, and when I cut it on the 29th of

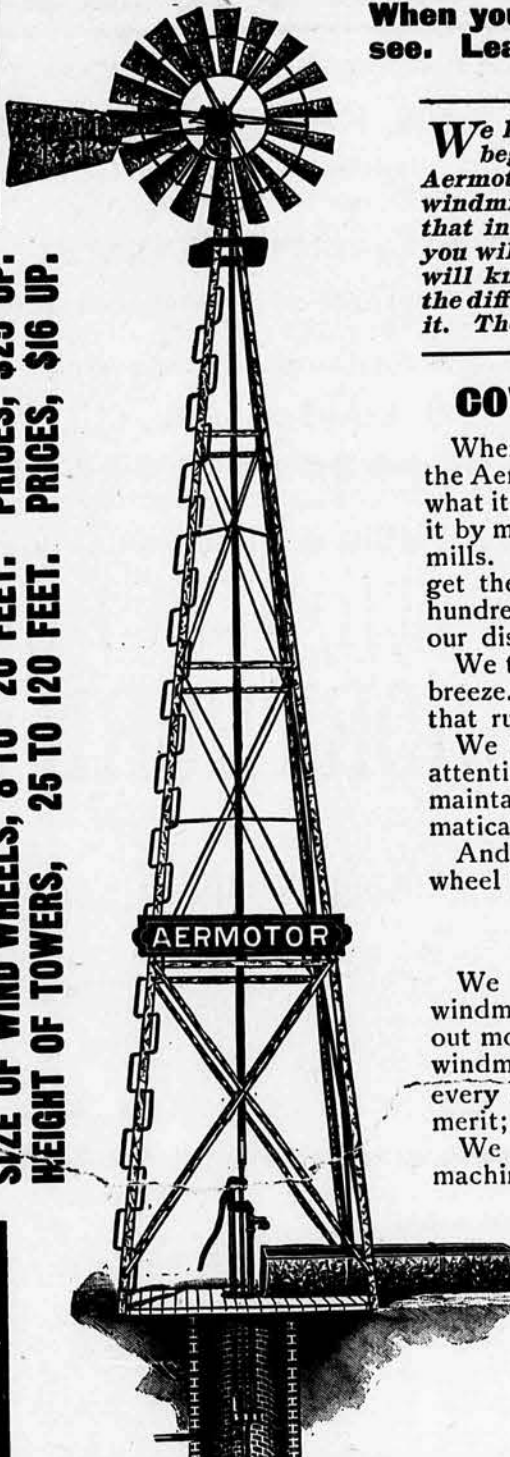
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May it was a foot or more high, and by the first week in July, when I cut again, it was just about as good as that sown in the previous spring. A year or two later my neighbor sowed some in September and irrigated it, and it grew in the fall about as mine had. He had several acres of it then, but in the following spring he had none. Now, some soils dry out more quickly than others. His was a light, ashy soil while mine was a rather heavy soil. His dried out and his alfalfa perished from the drying out. Mine did not dry out, and my alfalfa lived and came through asmilng. May be yours dried out rather than froze out. Again, I had heard it claimed that when alfalfa was very young—only two or three leaves—that even a light freeze would kill it. I think that, also, is erroneous, and I'll tell you why. In the spring of '92, the latter part of February and March up to about the 20th the weather was very fine in this part of western Kansas. A neighbor prepared some ground for alfalfa in February and sowed it on the 5th. That alfalfa came up and grew nicely until about the 20th of March, when we had a big snow-storm, covering the earth six and eight inches deep, but about the time it quit snowing the wind arose and blew and drifted the snow all into piles, many of them five or six feet deep. For a day or two it thawed, and melted the snow all off except where it was drifted, after which

the weather got very cold—away below the zero point. That young alfalfa was naked and every one that had not tried it supposed it would be killed, but it was not. It came on as fresh as a daisy and made three crops that season. It couldn't have had more than three or four leaves at the time of the freeze and much of it, I am satisfied, only had two. This shows that conditions as to moisture may have a good deal to do with it.

One other thing I want to say, if it is not taxing your space too much, as it is about the season it should be said. That is about the weeds. I notice my old friend, T. T. Perry, of Girard, has had an experience, and he has told a part of it in a recent issue of the FARMER. He says he got his seed of me but he did not tell how I warned him about those weeds that grow so luxuriantly in eastern Kansas. I've a notion to tell the rest. When I sent him the seed I told him to watch out for the weeds and cut them. I may have used the term "clip" instead of "cut," and you know there is about the same difference between clipping and cutting that there is between the terms "a little" and "a leetle." Bro. Perry's alfalfa came up nicely and so did the weeds. They

both grew luxuriantly and being a tenderfoot he did hate to cut the alfalfa down with the weeds, so he just "clipped" the weeds, trying to leave the alfalfa, when if he had cut all together and just shaved the ground with his mower it would have been death to the weeds, and the salvation of his alfalfa. V. S. JONES. Syracuse, Kans.

Summer Forage Crops.

The question of suitable crops for pasturage during that part of the summer when the usual pasture grasses are insufficient is an important one to the stockman and the dairyman. The Nebraska experiment station has just published a bulletin giving the details and results of two years' experiments with forage plants for summer feed.

The crops tested were rye, oats, and peas, Indian corn, millet, sorghum, Kafir-corn, and cow-peas, as representing the annuals, also alfalfa and awnless brome-grass. One-fifth acre was planted to each of these crops and the experiments extended through two seasons. The several results are summarized as follows:

RYE.

The one-fifth acre planted to the crop gave for an average of the two years (1897 and 1900) twenty-seven and one-half days' pasturage. At this rate one acre would keep five cows for that length of time. It furnished the earliest

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Take Laxative Bromo Quinine Tablet. All druggists refund the money if it fails to cure. E. W. Grove's signature is on every box. 25 cents.

pasturage of any of the annual forage crops, and could have been pastured in the fall. It did not induce as large a flow of milk or production of butter fat as did the mixed grasses pastured at the same time. It furnished, however, excellent pasturage for milch cows.

OATS AND CANADA WHITE FIELD PEAS.

The one-fifth acre planted to this crop gave for an average of the two years, twenty-one and one-half days' pasturage. The pasturage is not available so early as rye, but lasts a little later, and may be turned onto a little before Indian corn is fit to pasture. It did not affect so favorably the milk or butter fat production as did the mixed grasses, although the difference in 1900 was very slight. These results were about equal to those from rye. It did not furnish so much pasturage as rye, and is a more expensive crop to seed. There is also considerable loss to the crop from trampling. It is probable that this locality is too far south for the best results from the Canada pea.

INDIAN CORN.

The one-fifth acre planted to this crop gave eighteen and one-half days' pasturage as an average for the two years. It was available a little before the oats and peas were entirely pastured off, and was finished about the time millet, sorghum, Kaffir-corn and cow-peas were ready. It did not affect so favorably the milk or butter fat production as did the mixed grasses, but nearly as much as the oats and peas. It could be pastured much later in the summer than was done in this experiment, but is not the equal of sorghum at that season. It may be of value to furnish feed between the periods of rye and sorghum pasturage, but it is not equal to either of these.

GERMAN MILLET.

The one-fifth acre planted to this crop gave eighteen and one-half days' pasturage as an average for the two years. It was available at the same time as sorghum, Kaffir-corn, and cow-peas, and in 1900 as early as Indian corn. It did not have as favorable an effect upon the milk flow or butter fat production as did any of these crops or as did the mixed grasses.

SORGHUM.

The one-fifth acre planted to this

crop gave twenty-five days' pasturage as an average for the two years. It was available at the same time as millet, Kaffir-corn, and cow-peas. It furnished more feed than any of these, and had a very little less favorable effect on the milk flow and butter fat production than the Kaffir-corn, somewhat less than the mixed grasses, and very much less than the cow-peas. The greater amount of feed produced would doubtless make it outrank Kaffir-corn as a pasture crop. It makes a very rapid regrowth after being eaten down. Under some conditions it is fatally injurious to stock, and its use for pasturage when injured by drought or frost can not be said to be safe.

WHITE KAFFIR-CORN.

The one-fifth acre planted to this crop gave twenty-days' pasturage as an average for the two years. It did not furnish as much feed as sorghum, but more than millet, both of which admit of pasturage at the same time. It had a slightly better influence on the production of milk and butter fat than did sorghum. It is not free from the injurious effects sometimes displayed by the sorghum.

COW-PEAS.

The one-fifth acre planted to the crop furnished twenty days' pasturage during 1900. No test was made in 1898 of the amount of feed produced, but the effect upon the milk flow and amount of butter fat produced was noted. In this respect the forage far surpassed all of the other crops except alfalfa, and was even slightly superior to that very valuable forage plant. Calculating from the average results for the two years, a cow would have produced more milk in twenty days on the cow-peas than she would in twenty-five on the sorghum. In other words, the affhcl5rth r taoinn

ALFALFA.

(One year test, 1899.)

The amount of pasturage furnished was less than by any of the annual forage crops, although the effect upon the milk flow and production of butter fat was more favorable than that of any of these crops except cow-peas, and better than the mixed grasses. Alfalfa has two great disadvantages as a pasture plant. It is very likely to produce bloat in cattle and sheep, and it is easily killed by overpasturing. For these rea-

sons the use of alfalfa alone for pasturage is not to be recommended, in spite of its highly nutritious qualities.

BROMUS INERMIS.

(One year test, 1899.)

The amount of pasturage furnished was a little more than half as much as that obtained from the alfalfa during the same part of the summer. It produced very little less milk and butter fat than did the mixed grasses. It may be considered an excellent pasture grass for dairy stock.

MILLO MAIZE, SOY-BEANS, HAIRY VETCH.

(One year test, 1898.)

Millo maize, soy-beans, and sand or hairy vetch were also tested during one year, but were not considered of sufficient present value to entitle them to participation in the second year's test which on account of the number of animals and amount of labor required was restricted to certain more or less typical plants.

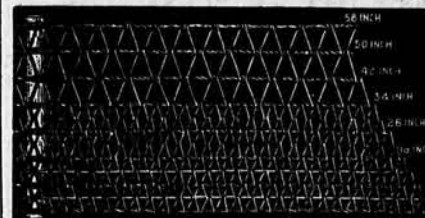
The one year's test indicated that millo maize possessed no marked advantage over Kaffir-corn; that soy-beans produced feed of about the same quality as cow-peas, but a much smaller quantity; that sand or hairy vetch was inferior to cow-peas both as to quality and quantity of feed produced, besides which the price of seed is such as to make its use impracticable at present.

SOILING VS. PASTURING.

A comparison of the relative amounts of feed produced by several forage crops when pastured and when soiled indicated that the latter practice secures two to three times as much feed from the same area of land.

Alfalfa in Kentucky.

I have grown it for thirty years. At first I paid 35 cents per pound. It was then imported from Europe. Three years ago I bought it for 8 cents per pound in Cincinnati; 60 pounds to the bushel. I sow 15 to 16 pounds per acre. It will prosper on heavy, well-drained land only. It is just the thing for some limestone hillside. Plow your land well and remove all stones that you can get hold of, as the alfalfa root will grow 6 feet deep. I always sow in oats, using about 1 bushel per acre. Harrow in your oats, then sow



Ellwood Steel Wire Fences

Six styles—18 to 58 inches—best steel wires, heavily galvanized. Expansion and contraction provided for. Every rod guaranteed. Sold by local agents. If no agent in your town write to the makers. American Steel & Wire Co., Chicago or New York.

your alfalfa seed, use either a brush or drag and level down firm. Do this about the middle of April. I always cut oats when ripe, and six weeks later, in a favorable season, I cut a small crop of hay, and after that I cut no more, for what grows up will serve to protect for winter; it will not do to cut bare for winter, nor will it do to cut more than three times in one season. I have cut four crops before now, but will not do so again. I always cut first time the first week in June, which is generally the heaviest.

The second cutting always comes in the fourth of July week, and the third about the middle of August. The third cutting furnishes the seed. As to quality of hay, if horses or cattle get accustomed to it they will eat it in preference to any other hay that grows, and in a fair season it will average 3 tons per acre. As to seed, as this clover is not so popular as it should be, there is much old seed offered. Fresh seed is a bright yellow color, while old seed turns to red.

If alfalfa is properly handled, you will have a stand for twenty years, and for pasturing I would not advise it at all, for continuous grazing will kill it, and if you should put stock on in fall, what gain you get there you lose the next spring, and more too.—Peter Bender, Kenton Co., Ky., in Ohio Farmer.

Free Homes in Oklahoma and how to get them. For particulars, write to J. E. Reninger, Burlingame, Kansas.

COMBINATION SALE OF 126 ABERDEEN-ANGUS CATTLE

AT THE

FINE STOCK PAVILION, STOCK YARDS, KANSAS CITY, MO., MONDAY AND TUESDAY, APRIL 29-30

HALEY BROS., of Harris, Mo., in order to close a partnership, disperse their entire herd of 50 head, including the noted stock and show bull, Nabob of Lakeside A Novice, son of the celebrated Gay Blackbird; the show cow, Abbess of Estill 4th; Golden Flora, an International Exposition winner; Jennet's Favorite, a state fair winner; Lakeside Ardestie, a sister to Gay Lad, and 15 sons and daughters of the famous Blackbird Hero. This consignment affords an opportunity to secure a state fair show herd and grandly bred Coquettes, Ericas, Prides, Drumin Lucys, Easter Tulloch, Duchesses, and other good sorts.



W. S. KARNAGHAN, of Clarinda, Ia., contributes brothers and sisters in blood to the great prize-winner, Golden Flora, and her dam, and the best bred and most individually superior lot of Drumin Lucys offered since the Estill dispersion.

A. P. GROUT, of Winchester, Ill., sells herd headers from the illustrious Jilt, Blackbird, Pride, Erica, Queen Mother, and Heather Bloom Strains. They are "corkers."

S. MELVIN, of Greenfield, Ill., consigns the get of McHenry Blackbird 6th, and McHenry Pride 5th.

W. J. TURPIN, of Carrollton, Mo., sells chiefly from his noted Nosegay family.

JOHN HARVEY, of Bloomfield, Ia., sells the get of his stock bull, Gay Lad 2d, a brother to Gay Lad.

TYSON & CO., of Redwood Falls, Minn., consign two grandly bred Pride bulls.

J. M. DUFF, of Chestnut, Ill., sells Ericas, Prides, Westertown Roses, and daughters of the splendid stock bull, Zaire 7th, and Leoneer.

There is not a cull in the entire offering and the average individual excellence is believed to be higher than that of any Angus auction held this season.

COL. F. M. WOODS,
COL. J. W. SPARKS,
COL. CAREY M. JONES,

Auctioneers.

For Catalogue,
address.....

W. C. McGAVOCK, Mgr., Mt. Pulaski, Ill.

The Stock Interest.

THOROUGH-BRED STOCK SALES.

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

October 8-10, 1901—American Berkshire Association Sale at Kansas City.
December 10, 11, and 12, 1901—Armour-Funkhouser, Herefords, Kansas City.
December 13, 1901—H. O. Duncan, Shorthorns, Kansas City.

The Discussion On Tuberculosis.—Part II.—The Value of the Tuberculin Test.

PROF. THOMAS SHAW, UNIVERSITY OF MINNESOTA.

It was stated in the previous paper that, in the judgment of the writer, the attacks that are thus being made on the tuberculin test by the press and by the live stock association are likely to do much harm. They will tend to shake the confidence of people generally in the reliability of the test and also in the accuracy of the same. This I regard as an ill-advised, illogical, and reckless attack on the tuberculin test, and it will tend to stay the progress of this beneficent work more than can well be imagined. There is no saying how many degrees it has already turned backward the sun of live stock progress in the tuberculous sky that hovers over the greatest agricultural live stock industry in all the United States, and that threatens it with more or less of disaster. And can it be that the Gazette, the wise, the prudent, and the judicious in nearly everything that appertains to live stock progress, is the leader in this backward movement? Can it be that the Gazette, of whom we are all so proud, is doing its very best to derail the engine of tuberculin progress, and to derail the train of bovine healing which it brings? Can it be that the Gazette, with its magnificent record in upbuilding the live stock industries of the United States, is for once playing the part of a destructionist when it ought rather to be acting the part of a constructionist? I am quite sure that even now a devoted constituency will forgive the mistake, if the Gazette quits trying to draw a train of bad logic up a hill too steep even for the powerful engine which is trying to pull it up, and instead aims to formulate some system of using tuberculin that will result in the greatest good to the greatest number.

And what is all this opposition about?

Cures Rheumatism

A New and Simple Remedy That You May Try Without Spending a Cent—Cured many cases of 30 and 40 Years' Standing.

TRIAL PACKAGE FREE TO ALL.



82 Years Old, Cured of Rheumatism After Suffering 42 Years.

If any reader suffering from rheumatism will write to me I will send them free of cost, a trial package of a simple and harmless remedy which cured me and thousands of others, among them cases of over forty years' standing. This is a grand remedy, and want every afflicted reader to learn by actual test, what marvelous power it has, and therefore will gladly send a sample free, even though thousands of invalids should apply. Distressing cases of rheumatism, among them bed-ridden and crippled persons, were completely cured, of which I mention a few: A lady in Denham, Ind., writes that this remedy cured her, and she then cured fifteen of her neighbors. In Lyon, Mo., it cured an old gentleman at the age of 82, who had been a sufferer for forty years. In Seguin, Tex., it cured a case of forty-one years' standing. Hon. Jacob Sexauer of Fountain City, Wis., was cured after suffering for thirty-three years and after having employed seven physicians. Mr. Jas. C. Atchinson, Justice of the Peace of Cape Island, N. S., states that this remedy cured his son who was to be taken to the hospital for an operation. Thousands of similar instances could be mentioned showing that here is a remedy that can be relied upon. Write at once for a trial package, for it is an honest remedy which you can test without costing one penny. Address JOHN A. SMITH, 1345 Germania Bldg., Milwaukee, Wis.

Simmering it down to its proper consistency, is it not to enable a few men who are importers and exporters of pure-bred stock to ply their trade with greater convenience? The fact is noteworthy, that the men who have been leaders in this cry against the tuberculin test and the enforcement of the same with animals that are imported are importers or exporters themselves. This fact is very significant. True, the live stock associations have in many instances followed the lead of the men, but have they not followed it on the principle of sheep following a leader to their own undoing? Those agitators have put in the forefront an argument that is scarcely true, that is to say, they have claimed that the tuberculin test is not reliable; and good men that they are, they have unwittingly on their part joined in the propagation of a lie; that is to say, that the tuberculin test is frequently injurious to the cattle to which it is administered. In this agitation they have arrayed themselves against the judgment of the highest veterinary authorities in the land. They have said things against them that were neither kind nor true. Witness the reference of the Gazette to Dr. D. V. Salmon as a theorist. The man under whose able administration pleuro-pneumonia has been stamped out in the United States is a theorist. The man whose practical hand put the muzzle on Texas fever is a theorist. Go, think of it, ye fair-minded live stock breeders in all the United States, go think of it in silence and alone. The man who gave the death blow to pleuro-pneumonia and thus laid it in the grave beside newborn dairy steer calves that have been knocked in the head, is thus repaid for the magnificent work that he has done.

I said it was scarcely true that the tuberculin test is not reliable. It is reliable in at least 85 to 95 per cent of the instances in which it is applied. This at least is the contention of the best veterinary authorities in the land, and this contention has not been disproved. It is doubtless frequently applied by men who do not understand their business, but when applied understandingly, it is reliable to the limit named, and usually it will be found reliable in a still larger proportion of instances. Dr. M. H. Reynolds of the Minnesota Experiment Station found but one instance of mere liability in 71 cases which came under his immediate notice. I admit that it is unfortunate that there are any instances whatever in which animals react when the test is applied and are not found tuberculous, but since there is very small percentage of such instances, is that a sufficient reason for crying out so lustily against the enforcement of the test in the case of imported animals? I admit that it is an argument against the hasty slaughter of valuable animals that have reacted in a herd and whose external appearance betrays no indications that would arouse suspicions as to the presence of the disease.

Because cattle may react once and not again, should not tend to throw any discredit on the accuracy of a test unless it is absolutely certain that the test in both instances has been properly made. The Gazette, in the issue of February 20, cites an instance in which 32 Shorthorns were purchased and tested. Two months later they were tested again by a different veterinarian, who reported that all of them were healthy. What does that prove? Does it establish anything as to the unreliability of the test in the face of such an experience as that cited above, in which the test was reliable in 70 cases out of 71? Such a result should rather shake our faith in the reliability of frail humanity than in the reliability of the tuberculin test. It would be conceivable that, in a considerable number of animals tested, there might be a rare instance in which a second reaction would not follow where a suspicion had been aroused of the presence of the disease by the first test, but it is scarcely conceivable that many animals which reacted in one instance would fail to do so in the next, and within so short a time.

That the tuberculin test, when properly applied, is injurious to the health of live stock, to use the phraseology of a certain Scotch verdict, has not been proven. Those who claim that it is so injurious, have not proved their contention. They are now asked to bring their evidence. Heretofore they have not done so. When they furnish evidence in support of this untenable contention, it will be time enough to bring the counter evidence. True, it has been claimed that certain cows in calf were tested and aborted, but it is equally true that untested cows frequently abort. If it were true that the tuberculin test, properly administered, does even in some instances injure the health of animals, I would be foremost in opposing

it. I believe that it does not so injure cattle. The large experience in testing animals at our station is entirely opposed to the idea that the tuberculin test injures cattle. The time was when the opponents of vaccination cried out against the innovation. But these men did so in their ignorance. That happened many years ago. We do not wonder that men arrayed themselves against progress in those darker days. They were far more excusable than those who, even unwittingly, arrayed themselves against progress in the midst of the blaze of light that characterizes the dawn of the new century.

Raising and Feeding the Colt.

W. W. FRASER, EMERSON, MAN., IN NORTH WEST FARMER.

Since the demand for horses of a superior quality has been demonstrated, as it has been for the past few years, we naturally ask ourselves, what is the best method of producing such a horse? While the feed is an absolute necessity, yet we must have the quality of animal in our "youngster" if we would succeed in placing on the market the animal which will command the best price. To procure this, great care must be exercised in selecting our colt, and we must give strict attention to his ancestry in order to be at all assured of success. If the colt is not well born or well bred, it is the owner's fault and loss. Our experience has brought us to the unquestionable conclusion that it is worse than time and money thrown away unless we have a good animal as a foundation on which to build. Just here let me say that this is where many make their greatest mistake in their endeavor to produce horses either for their own use or for the market, i. e., in not going to the necessary expenditure in procuring the proper foundation upon which to build. I trust I shall not be misunderstood when I say that I regret very much to find that a large percentage of our farmers are prepared to breed to anything in the form of a "horse," rather than pay a reasonable fee for the use of a good "horse." Now, why this? Every one will admit the inferior colt, from his first demands on his owner till the time he is fit for the market, requires just as much care as the best; and if it is possible to dispose of him at all, he is worth only about one-third as much as the latter. Yet we find that a large percentage of the horses raised to-day, with all our boasted importations and outlay, go on the market as inferior, or, to say the least of it, only fair stuff, and are thus forced to compete with the production of the "rangé," where they are raised by the score. It would be much better never to produce such horses on the farm, because they can be purchased off the ranges cheaper than a farmer can possibly raise them. Unless we can produce a superior animal to that of the range (and this we certainly can do), we might better go out of the business.

TREATMENT.

Having once produced a good "foal," we can imagine the enthusiasm one feels in giving him the best of treatment, and especially so when others of his kind already commanded good figures at early maturity. With this encouragement his owner enjoys the development which is apparent in the animal and bends his every effort to make the best of his subject. After the foal is on his feet care should be taken to keep his bowels in proper condition. This being done, and his dam fed on good wholesome rations, he will thrive. If found necessary to work the dam, the foal should be left in a box stall where he can not get out or injure himself. When the mother is brought in, let her stand twenty minutes rather than let him partake of the milk while she is in an over-heated condition.

OATS, THE KING FEED FOR THE HORSE.

As soon as possible teach him to partake of oats, or oatmeal, with a slight mixture of bran. If the dam is on luxuriant pasture oats alone are preferable. He will soon learn to enjoy this in the dam's absence, and become more contented on this account, because his youthful hunger is at least somewhat appeased during the absence of his dam. Having learned to enjoy his feed in this way prepares him for the ordeal of weaning. When that time comes we increase the percentage of bran, supplementing it with carrots, or green succulent food such as green corn in the stalk, or new mown hay.

THE HOT SUN.

Right here let me refer to the danger of allowing young foals to be exposed to the hot sun while in the field with their dams. This frequently affects the foal seriously and often fatally. We make it a practice to take them in dur-

Heart Pains

are Nature's warning notes of approaching danger from a diseased heart. If you would avoid debilitating diseases, or even sudden death from this hidden trouble pay heed to the early warnings. Strengthen the heart's muscles, quiet its nervous irritation and regulate its action with that greatest of all heart remedies, Dr. Miles' Heart Cure.

"My heart beat so hard that it shook the bed, and the pain was so sharp and severe that I could hardly breathe. I used four bottles of Dr. Miles' Heart Cure and the palpitation and pain were gone." MRS. C. BLACK, Charleston, S. C.

Dr. Miles' Heart Cure

controls the heart action, accelerates the circulation and builds up the entire system. Sold by druggists on a guarantee.

Miles Medical Co., Elkhart, Ind.

ing the day, turning them out again after the sun begins to wane.

VARY THE FEED.

Along with the above ration we find that an occasional meal of boiled feed, such as barley, with sufficient bran stirred in to make it absorb all moisture, is a good night ration. We always seek to have the hay we feed our colts free from must or dust. If this can be done and abundance of exercise given the colt, he will develop the best of lung power, and without this you have not a first-class horse.

THE BOX STALL.

In no case should colts be kept standing tied on a stable floor. A box stall is always preferable. From one to four may be kept profitably in one stall, if large enough, but they never should be overcrowded or forced to lie in their own filth. A good litter of straw for bedding is very essential to the health of any animal, and especially so with a young growing one. They grow a great deal while reclining, and I think the colt is exceptionally given to this, consequently great care should be given to his bed. His outdoor exercise during the winter months should not be stinted, the more the better, in my opinion, as long as the weather is at all suitable. He will stand lots of cold as long as it is dry overhead. To let him get to a grass plot where he can engage himself in pawing away the snow, is an excellent thing, and will do him good during the day time.

Instead of feeding the oats whole, we prefer to run them through a roller crusher and feed them this way. We consider it preferable for either colts or calves. A piece of rock salt should always be kept in the grain box. Should the colt show signs of becoming dry in the hair, which is frequently caused by what is commonly known as "pin worms," we simply give a tablespoonful of spirits of turpentine a few times in grain and bran rations. An occasional feed of boiled flax mixed with bran is almost indispensable. This any farmer can have at his hand at any time and at comparatively little expense. Oil cake is all right, but adds to the cost materially, when flax can be grown by any farmer.

What we should seek to resort to is the foods within our reach, and we have abundant facility for growing everything required for the production and the development of a superior horse. It is not at all necessary to resort to any of the patent preparations which are on the market. The first summer and winter lay the foundation of the frame and determine largely the future of the horse. One of the main

things in feeding is, give plenty of good food judiciously. The proper development of the colt and the plans of the feeder can not otherwise be secured.

Up-to-Date Stable.

EDITOR KANSAS FARMER:—The proper housing of domestic animals as receiving careful, systematic consideration as never before. Investigations are being backed up with careful, practical experiments in stable construction by men who are thoroughly conversant with the subject. Especial pains are being taken by Mr. F. A. Converse to demonstrate at the Pan-American Exposition this important feature of modern dairying. A well constructed up-to-date stable is a valuable and indispensable acquisition to dairymen who wish to conduct a profitable business. Mr. Converse will illustrate by a practical, working stable on the grounds, how it can be built at a reasonable cost.

The location should be airy and sunny but not exposed to the cold winds of winter. Thorough drainage should be the first consideration in building. A location that can not be easily drained should never be selected for a stable. The floor should in all cases be made of cement and the better and more thorough the foundation is constructed, the cheaper it will be in the end. Under no consideration can a stable be built properly with storage room overhead. It may be connected with the barn and silo at one end, but to be right it is important that the construction be entirely separate.

The foundation wall should not extend above the floor. From the floor level, the stable walls should be built with a dead air space, as this is the most satisfactory non-conductor of heat and cold. Starting from the top of the foundation wall, a sill is embedded in fresh cement mortar. This should be 6 inches square, halved and pinned at the corners in the usual manner. Studding 2 by 6 inches by 8 feet, 3 feet apart, are toenailed into the sill, upon the upper ends of which is spiked a 2 by 6 inch plate.

Building paper should be used both inside and outside of the studding, thus making a 6-inch dead air space. This paper may be protected with cheap or expensive boarding at the option of the builder. If the paper is carefully put on, it will provide the necessary air space without respect to the quality of lumber used. The roof should be steep, as anything less than 1-inch pitch is too sort-lived if covered with shingles. The size of rafters will depend on the size of the building, though, generally speaking, 2 by 4 inches, placed 2 feet apart, for a rafter up to 12 feet in length, is strong enough for one-third pitch or steeper.

Make ample provision for large windows, especially on the south side. Admit sunshine if possible into every corner of the stable. To secure proper warmth and ventilation, a ceiling must be provided 8 1/4 feet above the floor. As a stable should, in no case, provide for storage overhead, this ceiling may also be very light. Two by 6-inch joists will be heavy enough for almost any stable, no matter what the size may be, because it can be supported from the stall and manger partitions at different places.

It should be remembered that dust is one of our worst enemies, as when moistened with the breath of animals, it constitutes an ideal breeding element for microbes. For this reason, all walls, partitions, manger and stall rails should be smooth. Leave no ledges and have no beading on the lumber used for ceiling or otherwise about the stable. The ceiling should be covered with paper on top, as the boarding will prevent the paper from sagging between the joists. Care must be taken to make good joints where the ceiling paper joins the wall paper.

The loft should be provided with opposite openings for ventilation and a trap door that is well fitted. This is for the purpose of rendering the stable cool in summer and warm in winter. With fly screens, dark blinds, and double doors and windows properly fitted, we now have a room which may be shut up practically air tight, and would be a very unhealthy place for animals unless provided with a good system of ventilation.

The Kink system is advocated by Mr. Converse and will be illustrated by him at the exposition with a thorough, full-sized working model in operation, assisted by drawings and explanations carefully given to all interested visitors. This system works on scientific principles that are well known, almost automatic in practice, and when rightly proportioned to the size of the stable, give good satisfaction.

The value of fresh air has never been brought forcefully to the attention of

small dairymen because the ordinary, loose-jointed frame building admits plenty of it. In building warmer stables an attempt was made to furnish sufficient air by allowing a liberal amount of cubic feet per head of stock. Ideas were so liberal in this respect that many stables were built so large and with such high ceilings that in practice they were found to be cold, damp, and unhealthy. Warmer buildings have shut out fresh air and opened the way to disease. As the most expensive animals were naturally housed in expensive stables, the impression got abroad that thoroughbred stock contracted disease more readily than common hardy scrubs. An intelligent, systematic effort is now being made to demonstrate the reason why it is not only possible but profitable to construct a comparatively cheap stable that is warm in winter, cool in summer, and sanitary at all seasons. The Pan-American Exposition stables will show the principles that have been applied.

HERBERT SHEARER.

Pan-American Exposition, Buffalo, N. Y.

A Tribute to the Cow.

At the opening of the great Wornall-Robbins' Shorthorn sale held at Kansas City on March 5, 1901, Col. Woods, the auctioneer, paid the following beautiful tribute to the cow:

"Grand and noble brute; of all God's animal gifts to man, she is the greatest. To her we owe the most. Examine into all the different ramifications and channels of our commerce into which she enters, and note the result should she be blotted out. A Sunday stillness would then pervade the great stock yard industries of our large cities and grass would grow in the streets. Seventy-five per cent of the great freight trains that plow the continent from ocean to ocean would side track, for there would be nothing for them to do. Fully 50 per cent of the laborers of America would draw no pay on Saturday night and our tables would be bare of the greatest luxuries with which they are loaded. The great western plains that she has made to blossom, financially, like the rose, would revert to the Indian, from whence they came, and millions of prosperous homes would be destroyed.

"None other like the cow; there is not a thing from nose to tail but what is utilized for the use of man. We use her horns to comb our hair; her hair keeps the plaster on our walls; her skin is on all our feet and our horses' backs; her hoofs are made into glue; her tail makes soup; she gives our milk, our cream, our cheese and our butter, and her flesh is the great meat of all nations. Her blood is used to make our sugar white, and her bones when ground make the greatest fertilizer, and even her paunch, she herself has put through the first chemical process for the manufacture of the best white board paper and it has been discovered that that paper is the most lasting material for the manufacture of false teeth. No other animal works for man both day and night; by day she gathers the food and when we are asleep at night, she brings it back to re-chew and manufacture into all the things of which I speak. She has gone with the man from Plymouth Rock to the setting sun; it was her sons that broke the first sod in the settler's clearing; it was her sons that drew the prairie chopper for the sturdy pioneers, as inch by inch they fought to prove that 'westward the star of empire takes its way,' and the old cow grazed along behind, and when the day's march was done she came and gave the milk to fill the mother's breast to feed the suckling babe that was, perchance, to become the future ruler of his country.

"Who says that what we are we do not owe to man's best friend, the cow? Treat her kindly, gently, for without her words fall me to describe."

The Young Colt.

EDITOR KANSAS FARMER:—Horse breeders, and especially farmers who have a few mares bred, have more or less trouble with their young colts, and many fine colts are lost by constipation that with a little care could be saved.

Colts are foaled and, to all appearances, are all right—and are so in many cases—but in two or three days they begin to act sleepy, and will lie around and not nurse, or will gradually stop nursing. Many will have all indications of colic and some die with every indication of colic. Others appear to gradually waste away and soon die; others will, on the second or fourth day, be taken with the scours, and if treated soon enough will, perhaps, get well. Now all this can be saved if as soon as the colt is foaled the owner will see that it is given a good injection of soap and water until the colt is thoroughly

Feeding Compound For Live Stock



It is essential for the well-being of all animals that they receive a suitable addition to the ration, not only to restore them if out of condition, but to keep them in the most profitable state of health. This is obtained by **Lincoln Feeding Compound** which is a great improvement upon and desirable substitute for so-called "Stock Foods." Write for literature regarding this cheap and economical preparation.

PASTEUR VACCINE CO., 56 Fifth Ave., Chicago.

Branch Office: 622 Whitney Building, Kansas City, Mo.

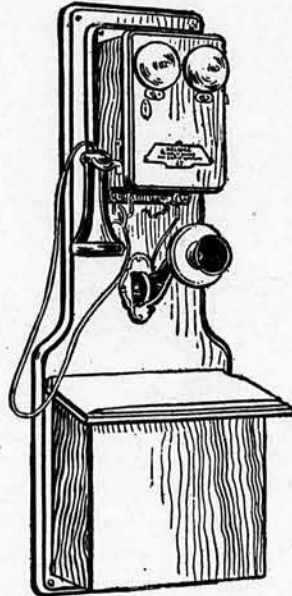
cleaned out, and will thus save many colts and a greta deal of suffering. Having had twenty-five years' experience in handling young colts, I have seen many die, when a little care would have saved them. T. H. TERRY. Bavaria, Kans.

An occasional dose of Prickly Ash Bitters keeps the system healthy, wards off disease and maintains strength and energy.

Farm Telephones.

In times past, the farmer has often been deprived of many of those "finishing touches" which go to make life easy for the city dweller. Reference is particularly made to those modern conveniences like electric lights, water pressure telephones, etc. The rural mail delivery is a step in the right direction, and the most important one; a step further comes the telephone. The Kansas Farmer, in common with most of its readers perhaps, has regarded the telephone as one of those "trust controlled" devices held from the majority of people by the iron grip of a monopoly bent upon the extortion of what it deemed proper tribute, before it relinquished any part of its control. It is, therefore, a matter of considerable congratulation to learn that the right of the telephone trust is being vigorously and successfully contended by a number of independent concerns. When it is understood that only a few years ago, with some 2,500 patents already issued, covering the telephone area, (the better ones owned by the American Bell Telephone Company) the independent manufacturers commenced their fight for better conditions, the fact that there are to-day nearly 2,000,000 independent telephones in actual use, shows that the progress of the independent telephone movement is a shining example of what true American grit, perseverance, and ingenuity can accomplish. The equipment built by the independent makers has proven every whit as good as, and in some cases better than, the "trust controlled" product. There are doubtless many readers of the Kansas Farmer who have availed themselves of the opportunity thus afforded to enjoy the many advantages of a telephone service.

The only wonder is that there are any farmers to-day who do not own a telephone and thus bring within their reach the markets, the comforts and the pleasures which now lie just outside their circle. There are several manufacturers who make and sell a first-class, thoroughly reliable telephone for \$15—sell it outright—no lease, no rent, no "string" to it—and supply the farmer with all necessary poles and wire at very low prices. The trouble has been that so many people regard the telephone as something mysterious, complicated and hard to manage. It is truly wonderful, one of the most wonderful things that the mind of man has ever conceived, yet its true "wonderfulness" is its great simplicity. There is not an eighteen-year-old farmer lad who could not install a telephone, set what poles might be needed and string the necessary wire himself; and to think of what it means after the farmer once has it. Suppose, for instance, the farmer lives five or six miles from the doctor and some one is taken suddenly sick. If at night (and it mostly is) the head of the house is



roused from his slumbers and rushes frantically around, getting into his clothes, hitching up and catching the hurried words of instruction called after him as he dashes off on a long and tedious ride for the much-needed help; but how different it one has a telephone—a ring and a "hello" and one is talking to the doctor. It is easy to tell him the trouble and he tells what to do until he can get there and in half the time he is at hand to aid the stricken one.

Or perhaps some busy harvest day there is a break-down, some part of the machine breaks, ordinarily it means a whole day lost. If the farmer has a telephone, it only means the time it takes to call up the store and have the repairs started post haste by some obliging neighbor who happens to be in town. How many farmers there are who drive to town and find it is ripe time to sell their stock, the market is at the top and if it were only possible to have the stock there then, it would mean a clear profit of several hundred dollars. To go back home and get the stock into town again is a physical impossibility for that day, and to-morrow's market may mean a drop and a consequent loss, but with a telephone, how easy—just a call and there are the prices hot from the great market centers. The farmer can act at once and reap the benefit of his own enterprise and good judgment. With a telephone in the house, the long winter evenings lose much of their dullness and the social life of the neighborhood is brought closer. Really the wonder of it is that any farmer can find an excuse for not owning his own telephone.

Save Your Pigs! I WILL INSURE HOGS WHEN FED MY REMEDY. WRITE FOR TERMS. REFERENCE ON FILE. DR. JOS. HAAS' HOG REMEDY. Runts are Unprofitable; Dead Hogs a Total Loss. Is Guaranteed to prevent and arrest disease, stop cough, expel worms. Increase appetite and growth. Send \$1.25 for trial package, postage paid. Cans \$12.50 and \$6.50; packages \$2.50. State number, age, condition, food of hogs. Special advice free. 25 years experience. "Hogology" pamphlet and testimonials free. JOS. HAAS, V. S., Indianapolis, Ind.

DIP MOORE'S HOG REMEDY and cure Mange and Canker, kill Lice and Fever Germs, remove Worms and PREVENT CHOLERA, at a cost of **FEED Five Cents Per Hog Per Year.** A postal gets particulars and book on "CARE OF HOGS." Address **MOORE CHEMICAL CO.,** 1503 Genesee Street, - - Kansas City, Mo

PROTECTED PIGS PAY The verdict of thousands of stockmen who use Vesey's Star Anti-Cholera. It not only protects—it cures cholera hogs. It makes them grow and fatten; it causes early maturity. Sold under an absolute guaranty. You can deposit money in bank pending results. Call on or address **ANTI-CHOLERA CO.,** 263 F Exchange Bldg., Kansas City Stock Yards

FLEMING'S LUMP JAW CURE **LUMP JAW** Easily and thoroughly cured. New, common-sense method, not expensive. No cure, no pay. FREE. A practical, illustrated treatise on the absolute cure of Lump Jaw, free to readers of this paper. Fleming Bros., chemists, Union Stock Yards, Chicago, Ill. Trade Mark.

PIGS BORN... CHOLERA PROOF.

RIDGWAY'S New Scientific Discoveries **IMMUNIZE PIGS BEFORE BIRTH** through the mother's blood. **IMMUNIZE PIGS AFTER BIRTH** through the mother's milk. **IMMUNIZE OLDER HOGS** by a different process. **CURES SICK HOGS** by flushing and cleansing the bowels and entire system. **HAS BEEN TESTED** on over 20,000 hogs the past year. **HAVE AT MY OWN EXPENSE** shipped into various states and exposed in cholera hundreds of my own pigs for weeks and months without harm and will continue to ship and expose on same terms. **HAVE SOLD TO OVER 2,500** of the best farmers and breeders in the United States. **DISCOVERED** five years ago, was tested four years before offering to sell it. **LETTERS PATENT** pending on all the above processes. **ALL INFRINGERS** and their customers will be held responsible for damages. **BEWARE!** of Logansport or other infringing companies. **AGENTS WANTED,** WRITE the originator and rightful owner, **ROBERT RIDGWAY, Amboy, Indiana.**

ZENOLEUM Kills Lice, Ticks, Mites, Fleas, Etc., on all kinds of animals and poultry. Given internally it drives out worms. Cures all cuts, wounds, sores, etc. Non-poisonous. Endorsed by leading veterinarians. "Veterinary Advisor" free. Zenger Disinfectant Co., 61 Bates St., Detroit, Mich.

ported last year. Mr. Whiting is in the cattle business quite extensively, handling not only Shorthorn cattle, but Angus and Herefords as well. Mr. Whiting marketed 76 car-loads of cattle of his own feeding the past fall and winter.

The farm department of the Kansas Experiment Station has decided to utilize its fields for the next few years solely in tests of legumes and grasses, and work has already been begun to effect the necessary changes with that end in view. The action of the last session of Congress, and also of the state legislature, in placing the Fort Hayes reservation at the disposal of the agricultural college, the normal school, and the state university for educational and experimental purposes, will give the experiment station most excellent facilities for making these tests in the so-called arid regions of the western part of the state.

Attention is again called to the sale of Shorthorns at Leon, Iowa, on April 25, from the herds of A. D. Sears & Bros., Leon, Iowa; Geo. W. Wadsworth, Leon, Iowa, and W. H. Colter, Decatur, Iowa. In our issue of March 21 we gave a general description of the several consignments, and there is no need of much more being said, except to impress on the minds of our readers the desirability of attending this sale, or at least sending in bids on what is wanted. The catalogue is now ready, and tells the whole story. If you have not yet received one, it can be had by addressing A. D. Sears, Leon Iowa. See their ad on page 347 for further particulars.

S. A. Spriggs, of Westphalia, Anderson County, Kans., is the fortunate owner of some of the finest bred horses and jacks in eastern Kansas. He has just returned from Wayne, Ill., where he purchased of Durham, Fischer & Coleman of Oaklawn Farm, an imported black Percheron stallion. This animal is 5 years old, 16½ hands high, and weight an even ton. He is a typical drafter and one of the finest of his breed. Mr. Spriggs also has in his stables other fine stallions, one of which is a Shire horse and of same weight as the Percheron, and is a renowned breeder. Since his public sale in March, Mr. Spriggs has sold one of his thousand pound jacks for \$900, and has been offered \$1,200 for his King Giant 321, but refuses to sell this famous jack, as he is considered of more value in Mr. Spriggs' stables.

That true merit is not always unappreciated is evidenced by the following, in regard to Mr. W. C. McGavock, at Mt. Pulaski, Ill., in last week's Breeders' Gazette, and we feel sure that these words of commendation are both timely and well deserved. The Gazette says: "Mr. McGavock has grown into one of the most successful public sale managers that the trade has developed in this country. He has been a close student of Aberdeen-Angus history and breeding, and probably possesses a more extended personal knowledge of the famous animals produced in the breed the past few years than any other man. He is a hard and systematic worker, always exhausting every line that can be utilized to promote the success of the undertaking he has in hand, and is ever faithful to the interests of his principals. He is well equipped to prepare catalogues, and understands well the art of advertising. It has, therefore, come about that he has been entrusted with the management of most of the prominent sales of the breed in recent years, and has established an enviable record for the intelligent and successful conduct of such affairs. He has good material with which to work at the next Kansas City sale (April 29 and 30), and will make the most of it."

We learn from good authority that Mr. F. A. Nave, of Attica, Ind., the former owner of the champion Hereford bull, Dale, has just bought the famous 4-year-old Hereford bull, Protector 9660, for shipment to America, at the long price of twelve hundred pounds sterling, or \$6,000, American money. We are indebted to the Breeders' Gazette for the following description and history: "Protector was bred by Mr. Allan Hughes of Wintercote, and has been a great winner at the English shows. In 1898 he was first as a yearling at the Royal, besides winning several other honors at local shows. He was then sold to his late owner, Sir Joseph Pulley, of Lower Eaton, Herefordshire. As a 2-year-old he was not fitted, but as a 3-year-old he was again brought out, winning first at the Shropshire show at Shrewsbury, second at the Bath and West of England, first and champion at the Royal counties show at Winchester, first and champion at the Herefordshire and Worcestershire show at Leominster, besides first at the Royal at York. At the latter exhibition the bull was seen by the writer hereof, and there can be no question as to his right to the honors assigned him. He is a rich-fleshed, deep-bodied bull, compactly built, exceptionally broad-ribbed, and very low in the twist and flanks; in short, a capital stamp of the best feeding type of the breed. And he certainly has his excellence by that best of all titles, inheritance. He is a son of the famous Albion (15027) out of Newton Plum by the mighty Rudolph (6660). It will be remembered that Albion won several championships for Mr. Hughes, besides siring a large number of prize-winning bulls and heifers. Protector's own sister, Wintercote Plum, was first at the Royal and many other shows in 1896 and 1897. An own brother, Prosperous, calved in 1898, was first at the Royal at Maidstone, and another own brother, Wintercote, now heads the good herd of Henry Haywood, at Blackmere." We congratulate the Hereford breeding fraternity of America upon the acquisition of this bull, and trust that Mr. Nave will reap the reward he so richly deserves for this characteristic bit of enterprise.

The reader interested in high class registered Shorthorn cattle will find on consulting the public sale announcement found elsewhere in this issue, that ten representative breeders will make consignments to this sale to be held at Kansas City, April 22 and 23. Among them is June K. King, of Marshall, Mo., who has been engaged in breeding Shorthorn cattle since 1876. He has always paid top prices for herd bulls, ranging from \$500 to \$1,500, and has endeavored to retain the most desirable females in his herd. He will come into the sale with 30 head, 9

bulls and 21 females. The draft will include two herd bulls, Kirklevington Duke of Wood Dale 121760, and Duke of Lawndale 4th 137625. The first is a straight Bates whose sire, Ardrie Duke of Hazelhurst 117846, was bred by Bigler, of Iowa. Among the younger bulls averaging about 18 months, are 4 Scotch-topped and 3 straight Bates. Twelve of the females are daughters of Kirklevington Duke of Wood Dale, and all show uniformity of character, nice reds in color, and of the desirable kind. Two yearling heifers are by Scottish King 136249, also the sire of 4 of the bulls. Six of the females are daughters of the 10th Duke of Hillsdale 91664, a herd bull that cost \$1,500. The entire King offering is above the average usually found scattered over the country, and it will be a pleasant surprise to prospective buyers not acquainted with the Peabody herds as bred and owned by Mr. King. W. P. Harned, of Buncoeton, Mo., who with his father before him have had well-bred Shorthorns on the farm since 1865, and whose herd now numbers about 200 head, and among them the largest collection of straight Cruickshank cows of any herd in Missouri. Mr. Harned will consign 16 head, 11 bulls and 5 females. Among the bulls will be the long 2-year-old Scotch Duke of Goodness, sired by Scotch Minister, he a son of the Imp. Barbarossa. His dam was Duchess of Goodness 17th. This bull is in all probability, nearest the type of the old bull, Duke of Richmond, of any bull that has gone into a public sale ring in recent years. Another of the 11 bulls is the 1810-pound Combination, calved June 26, 1899, a son of Banker 110861, he by Russell's old Stanley. His dam, Anno Lancaster 2d, by Baron Sussex 101864, descended from the Booth tribe, Annie, by Pilot. Then comes March On, dropped February 16, 1899, sired by the noted herd Cruickshank bull, Godoy 115675, and out of Butterfly of Rose 5th, she by Baron Sussex. Individually, this young bull possesses wonderful scale and flesh-bearing character. Another one is Banker Boy, dropped in May 1899, a son of Banker, and out of Butterfly of Idlewild, she by Baron Sussex. He is an elegant red in color, great style and high carriage. He comes from a thick-fleshed family, and shows this inherited qualification, though not in high condition. Too many for special and individual mention, unless it be to state that the entire 11 bulls have been raised out on the grass, both summer and winter, hence are strong, of good size, and strictly hardy and sure serviceable. The 5 females are all desirable, 2 of which are in calf to the herd bull, Godoy. N. H. Gentry, of Sedalia, Mo., the well known Shorthorn and Berkshire breeder, comes in with 4 bulls and 8 females. The 4 bulls are sons of his premier herd bull, Victorious 121469, by Lora Mayor 112727; his dam, Linwood Victoria, was by Imp. Baron Victor. His more extended pedigree shows him to be one of the best bred Cruickshank bulls known to the Scotch Shorthorn. As a breeder, such has been the high and desirable quality of his get, both sons and daughters, that more animals have left the Wood Dale farm at a higher average in price than has been sold from any western herd. All 4 of these young bulls are reds, good heads and horns, thick, wide, deep and sure, thick-fleshed, strongly demonstrating their desirable quality as beef animals. The dams are Bates and Scotch on Booth foundation. Among the 8 females is the 3-year-old heifer, Red Queen 3d, with a heifer calf at foot, that is a double Victorious. The sire of the calf, a son of Victorious, went last year to the Kellogg Company, of Ohio, at \$300. Among the others of the female offering are 4 heifers averaging about 12 months that will be eagerly sought for on sale day as all are daughters of Victorious and very desirably typed, with plenty of finish and character. The 3 older females are Kirklevington Princess of Hazelhurst 7th, a straight Bates; the Bates-topped Queen of Pateville, now 6 years old, and Caroline A, the dam of the show heifer that was victorious in the Kansas City show last fall. All of these older females are in expectancy to the herd bull, Victorious. Other consignments will be mentioned next week.

Transfers of Pedigreed Stock.

POLAND-CHINA HOGS.

Sow, by Black Bess 55462, W. H. Rhodes, Tampa, Kans., to Will Stegeman, Tampa, Kans.

Sow, by Daisy Dean 55463, W. H. Rhodes to Will Stegeman.

DURCO-JERSEYS.

Miss Logan 18404, E. B. Watson, Newton, Iowa, to Ware & Pocko, Cherry Grove Farm, St. Joseph, Mo.

Two gilts, Ware & Pocko, St. Joseph, Mo., to William Kirkpatrick, St. Joseph, Mo.

HEREFORD CATTLE.

W. L. Bass, of El Dorado, Kans., sold the following stock to Robert Hancock, Canute, O. T.: Bulls, Sir Clinton 120815, Lot 120813, Josiah 120812, St. Jacob 120816, Jeff 120810, Butler 120809, Barry 120220, Jonas 120222, Joe Jefferson 120811.

SHORTHORN CATTLE.

Trinket, yearling heifer, by D. P. Norton, Dunlap, Kans., to J. K. Peterman, Lyon County, Kans.

British Prince, bull calf, D. P. Norton to J. K. Peterman.

Farmer, bull calf, D. P. Norton to Geo. Muller, Sedgewick County, Kans.

British Duke, bull calf, D. P. Norton to C. I. Hooker, Republic County, Kans.

Red Ruby and America, heifer calves, D. P. Norton to J. W. Short, Texas.

Granger, bull calf, D. P. Norton to J. F. Boyd, Texas.

British Matron, D. P. Norton to Dr. Collier, Texas.

Monitor, bull calf, D. P. Norton to J. W. Cottingham, Cowley County, Kans.

Enquirer, D. P. Norton to Frank Norton, Morris County, Kans.

RED POLLED CATTLE.

Dillon 4342, herd bull, by John G. Hase, Clyde, Kans., to J. B. Campbell, Concordia, Kans.

The Best of Twenty-Seven.

An extensive and exhaustive series of experiments were conducted by the Colorado Experiment Station at Fort Collins, the object being to ascertain beyond any question of doubt the most effecting preparation for the treatment of scab on sheep under practically all conditions. There were 27 different kinds of sheep dips used

CURED BY A MIGHTY POWER!

The Secret of the Soul, Combined With Magnetic Medicines, the Mightiest Power Known, Cures So-Called Incurable Diseases.

DIAGNOSIS, FULL INSTRUCTIONS AND A GRAND BOOK FREE

The phenomenal cures made by Dr. J. M. Peebles, the eminent scientist of Battle Creek, Mich., have astonished physicians and scientists throughout the world, for in a marvelous manner he DISPELS ALL DISEASES and gives permanent health, vigor, and strength to all who desire it. His work is indeed blessed and wonderful. His power comes from the fact that he has discovered the secret of the soul, which he terms PSYCHIC; this he combines with magnetic medicines prepared in his own laboratory, making the strongest healing combination known to the world. This wonderful man has so perfected his method that it now reaches all classes of people, for it ANNIHILATES SPACE and cures patients at a distance in the privacy of their own homes without the knowledge of anyone. If you are in any way sick and will write to Dr. J. M. Peebles, telling him your leading symptoms, he will through his psychic power diagnose your case and send you full instructions free of any charge; no matter what your disease or how despondent you may feel, there is hope for you. Hundreds of women who suffer the many irregularities common to their sex, have been cured through Dr. Peebles' method after they had been told their cases were incurable. The same can be said of men who were debilitated from early indiscretions. Indigestion, stomach troubles, catarrh, weaknesses of all kinds, and in fact all diseases succumb to this wonderful man's method of healing. Remember, it makes no difference how hopeless your case may seem, or how many have pronounced it incurable, Dr. Peebles can help you, and it COSTS YOU ABSOLUTELY NOTHING to receive his diagnosis and instructions. He also sends you FREE OF ANY CHARGE, his grand book which will be of invaluable service to you. You also receive a long list of testimonials proving beyond a doubt that his method is revolutionizing the art of healing the sick and despondent. Address Dr. J. M. Peebles, Dept. 156, Battle Creek, Mich. REMEMBER, it costs you nothing.



DR. J. M. PEEBLES.

DESPAIR NOT, THERE IS STILL HOPE FOR YOU!

Dr. J. M. PEEBLES WILL TEACH THE PSYCHIC SCIENCE by mail which you are taught Psychic and Magnetic Healing, also Occult Powers, which will give you success in life. Full information regarding lessons and literature on this Grand Science, will be sent FREE to all addressing DR. J. M. PEEBLES, Department 156, Battle Creek, Mich

in making this experiment. They were all accorded equal opportunities for showing their good qualities and curative agencies. It was found that Zenoleum, the well known and widely used disinfectant, germicide, insecticide, vermicide, and parasiticide, gave the best results in every particular. This matter was made the subject of a special report and was issued under the auspices of the general government, and is known as Bulletin No. 33. This will not create any wonder in the minds of those of our readers who have used Zenoleum on their own flocks and herds, but it may interest those who do not happen to know of its value by actual experience. It would be well for every owner of livestock among our readers to write the manufacturers of Zenoleum, the Zenner Disinfectant Co., No. 61 Bates Street, Detroit, Mich., for a free copy of their "Veterinary Adviser" and other matter and become better acquainted with the merits of this preparation and its many uses. In speaking of Zenoleum, as we have above, it must not be inferred that it is good for scab alone. It is equally efficient for dipping for ticks, etc., on sheep, and for lice, mites, fleas, etc., on all kinds of live stock, including poultry. Given internally, it is a splendid vermicide, driving out all stomach and intestinal worms. Some of the best hog breeders use it regularly for preventing the ravages of swine plague and hog cholera. We do know that most of those with something which is new to you, as this may be, is to buy a sample gallon and test it for yourself. Write the Zenner people for prices.

Blackleg Vaccine.

The cheapest and handiest form of single treatment vaccine is that furnished by the Pasteur Vaccine Company, and consists of a special cord or string impregnated with the vaccine. It is always ready for use and requires no outfit or set of instruments to apply it. There is no time or money lost in mixing, filtering, graduating the dose, and injecting. Each dose is separate and therefore there is no waste. Pasteur Blackleg Vaccine Cord is therefore by far the most popular form of vaccine, and its success is evidenced by the large and constantly increasing demand for it. The cord method dates from 1897; but it is rapidly displacing the old single treatment vaccine in the powder form with the troublesome mixing, filtering and injecting. However, the Pasteur "Double" Vaccine still holds its own as the best for pure-bred and valuable stock which should receive the double treatment in order to secure a higher degree of protection against blackleg. Stock-raisers are solely indebted to the Pasteur Vaccine Company for the introduction of blackleg vaccination into this country, and the popularity of live stock vaccination and the resulting benefits can be noted from the fact that, in addition to its head office in Chicago, the Pasteur Vaccine Company also has branch offices in New York, Omaha, Kansas City, Fort Worth, and San Francisco. The vaccines furnished by the Pasteur Company are the original and genuine articles, being prepared by the very man

who discovered blackleg vaccine in 1884, and who has been making it ever since. There is, therefore, no question of any experiment with Pasteur vaccine, either on the part of the manufacturers or the users. Write us for further information. Pasteur Vaccine Co., Chicago, Ill.

Build Your Own Fences.

The day of ordering ready made fences for farms is over. Many farmers, poultry raisers, and others who use large quantities of wire fence, are now building them with a Steel King Fence Machine. Many others will do the same when they find what a remarkably fine fence they can secure at a trifling cost with this wonderful machine. It is so simple that any big boy can build 60 to 75 rods a day with it. The machine pays for itself in less than two days of fence building. After that it is a big money maker, especially if the farmer cares to build fences for his neighbors. This method of fence making should be investigated by every one who has a fence or who needs a fence. The Kokomo Fence Machine Co., of 74 North St., Kokomo, Ind., will supply information to those interested.

MT. PLEASANT HERD OF SHORTHORNS.

Herd headed by Acomb Duke 18th 142177. Herd composed of Young Marys, Galateas, and Sanspareils. Young bulls for sale. R. D. No. 3. A. M. ASHCRAFT, Atchison, Kans. Inquire at Ashcraft & Sage Livery Barn, Main Street.

BLACK DIAMOND STOCK FARM

Has for sale a few choice Galloway bulls, sired by a World's Fair winner. Also, a few English Fox Terrier pups of finest quality. For Sale or Trade—A 15-acre, suburban property in Des Moines, Iowa. Information promptly furnished by the owner, J. R. Higgins, Reswick, Keokuk County, Iowa.

WHY BUY
an old-style, out-of-date Hay Carrier, when you can get the latest Improved Louden, worth twice the money? Let us send Catalogue of everything in Hay Tools, and circular of Door Hangers—Best on Earth—also, How to Build Hay Barns, etc.
GOLD MEDAL OMAHA 1893
LOUDEN MACHINERY CO. Div. D, Fairfield, Iowa.

The Home Circle.

THE PIPERS OF THE POOLS.

Pipers of the chilly pools
Pipe the April in,
Summon all the singing hosts,
All the wilding kin.

Through the cool and teeming damp
Of the twilight air
Call till all the April children
Answer everywhere.

From your cold and fluting throats
Pipe the world awake,
Pipe the mold to move again,
Pipe the sod to break.

Pipe the mating song of earth,
And the fecund fire—
Love and laughter, pang and dream,
Desire, desire, desire.

Then a wonder shall appear,
Miracle of time:
Up through root and germ and sapwood
Life shall climb and climb.

Then the hiding things shall hear you
And the sleeping stir,
And the far-off troops of exile
Gather to confer.

Then the rain shall kiss the bud
And the sun the bee—
Till they all, the painted children,
Wing by flower get free;

And amid the shining grass
Ephemera arise,
And the windflowers in the hollow
Open starry eyes;

And delight comes in to whisper—
"Soon, soon, soon,
Earth shall be but one wild blossom
Breathing to the moon."

Charles G. D. Roberts, in April "New"
Lippincott.

Written for Kansas Farmer.

Ways of Cooking Asparagus.

Asparagus is already to be found in the market, though a little high in price. It will soon be plentiful, however, and in the reach of all. When cooking asparagus the work to be done is to soften the cellular tissue by the action of hot water. It should be cooking at boiling temperature for twenty minutes, or until the pieces will mash readily when pressed with a fork. Not so much time is required if the asparagus is cut in short pieces as for soup.

ASPARAGUS SOUP.

Cut asparagus into half inch lengths and cook in boiling salted water until tender. Make a white sauce from 1 tablespoonful butter and 1 tablespoonful flour by adding 1 cup hot milk gradually while cooking. When the asparagus is tender stir in the white sauce. Cook for a few moments together adding desired seasoning. Serve hot with toasted bread or crisp crackers.

ASPARAGUS CREAM.

Cut tender asparagus stalks into short lengths and boil in salted water until very tender. Pour off water, add 1 teaspoonful butter, 1 teaspoonful salt, 1 cup cream and bring to the boiling point. Have beaten the yolk of one egg. Stir this in and set on a cooler part of the stove for three minutes. Serve while hot in side dishes.

ASPARAGUS ON TOAST.

Select even sized stalks of asparagus and tie together two dozen in a linen or muslin band so that they may be easily lifted from the kettle when done. Place in boiling salted water and cook fifteen to twenty minutes, depending on the size of the stalks. Make a sauce from 1 cup of the liquid in which the asparagus has been cooked, by adding it to 1 teaspoonful butter, 1 teaspoonful flour and a little salt. Lay the stalks of asparagus on nicely toasted bread, pour over the sauce and serve at once.

ASPARAGUS SALAD.

Cut asparagus into inch lengths and cook until tender in boiling salted water to cover. Drain and allow to get perfectly cold. Cover with mayonnaise or French dressing, or boiled dressing may be used if preferred. Asparagus salad makes a pleasant change in the diet and can be made with little trouble. When boiling asparagus for one of the other dishes a small amount may be saved out for salad.

MARY WAUGH SMITH.

Exposed.

There is a very bright little girl in Detroit whose mother is now trying to teach her that she can use her tongue with both truth and diplomacy. This is a difficult task, as the child does a great deal of reasoning for herself and has the straightforward logic of an unprejudiced mind. A certain incident led up to this training.

The father had a high-salaried position in a leading factory. The institution was absorbed by a trust and the father thrown out of employment. In the heat of his wrath he repeatedly declared that all trust and monopoly magnates were robbers and thieves, and



Bound hand and foot to household drudgery, scrubbing and rubbing day in and day out, doing your cleaning in the hard, old-fashioned way—woman, why do you do it? Break away and use

GOLD DUST Washing Powder

This famous cleanser has proven the emancipation of thousands of other women—why not yours? Let Gold Dust do more of the work, you do more of the play. For greatest economy buy our large package.

THE N. K. FAIRBANK COMPANY

Chicago St. Louis New York Boston Philadelphia Montreal

the little daughter implicitly believed him. He happens to be one of those rare men whom it is very difficult to replace, and he was offered his former position. But, being shrewd and knowing his own worth, he was not to be had except for some stock in addition to his salary.

So he became part of a trust, but did not understand why the little daughter looked at him so doubtfully and was more conservative in the bestowal of her caresses. One evening there was company at the house and the host became involved in a heated political debate with a peppery guest. The former made a statement which the latter flatly denied.

"Why, my dear man," laughed the host, "you don't mean to call me a liar?"

"No, he don't," declared the little one, as she sprang in front of the visitor and glared at him with flaming eyes, "and I won't have it. My papa is a robber and a thief, but he is no liar."

Explanation as above was soon secured from the child, and the hilarity following the expose was the joy of the evening.—Free Press.

Came Down to a Nickel.

A very small pile of coal lay on the sidewalk in front of a house on A street, southeast. A correspondingly small son of Ham was sauntering along and, seeing it, scented a job. He rang the doorbell.

"Am dat yo-all's coal?" he asked the lady who appeared at the door.

"Yes."
"Want it toted in?"
"Yes."

"Kain't I do de job?"
"Why, you're pretty small and then you might charge too much. You might ask more than I can pay."
"How much is yo got?" asked the small man of business. "Kin yo raise a dollah?"

"Oh, my goodness, no."
"Seventy-five cents?"
"No, run along and don't bother me," and she started to close the door.

"Mebbe yo'll gib 50 cents?"
"No, no; run along."
"I reckons yo'all ain't got er quah?"

"No."
"Ner a dime?"
"No, not even a dime," replied the woman, beginning to laugh.

"Well, how much is yo' got?" questioned Ham, showing his ivorys. "I sut-nly does wanter git de job."
"I've just got a nickel."
"Well, I'm jus' lookin' fer nickel jobs," and he straightway began.—Washington Star.

A kidney remedy that can be depended on will be found in Prickly Ash Bitters. It heals and strengthens.

Written for Kansas Farmer.

Notes.

A very convenient article in house-keeping, especially if there is a stairway to keep clean, is a "counter brush" made of fine bristles. These brushes vary in cost, depending on the size of the brush and the quality of the bristles. If one wishes to be economical it is better to buy a smaller brush rather than a larger one with poor bristles. It is convenient for dusting and especially so for cleaning out corners where a broom will not touch the dirt. A stairway can be kept much more neat for the same labor if such a brush is used.

We are fortunate to be able to get pictures at the low rate for which really excellent ones can be obtained in these days. Frames and matting and glass, unfortunately, are not so low in price and we are likely to go without pictures for this reason. The Perry Pictures, Brown's Pictures, and many other excellent series of reproductions of famous paintings are now to be had for a few cents each. When mounted neatly they are pretty enough for the bed rooms, if not for other parts of the house. Poster board can be purchased for .15 cents a sheet in any desired shade. One sheet will make mounts for six "Perry" or "Brown" pictures in the 6 by 9 size. Be very careful in mounting to have the edges of the picture parallel to the sides of the mat. The mat does not need to be the same depth all the way around, however. A very pretty effect is obtained when the picture is put close to the top of the card, allowing a wide strip of matting at the bottom.

It is a good time of the year to make some new covers for the sofa pillows. Warm weather will soon be here and light weight covers for the pillows, even if light color is not wished, will make them more comfortable to use. There are hundreds of ways of making pretty pillow covers and these are to be found described or illustrated in every magazine and paper. Nine out of every ten are made to look at, not to use. Have the summer pillows covered with washable covers, no matter if the callers do not gush the usual amount over them. The most homelike homes are those in which nothing is too good to be used.

MARY WAUGH SMITH.

What They Left Him.

Bloomer (to ragged urchin)—Your parents left you something when they died, did they not?

Urchin—Oh, yes, sir!

Bloomer—And what did they leave you, my little mna?

Urchin—An orphan, sir.—Tid-Bits.

A Question of Sense.

Bachelor—When a youth some one told me that no man had sense enough

to get married until he was 30. I waited.

Benedict—And what happened after you reached the age of 30?

Bachelor—Then I had too much sense to get married.—Chicago Daily News.

Another Hold-Up.

"Poor Bronson!"

"What's the matter with him?"

"He was the victim of a hold-up last night, so he tells me."

"You don't say so! How did it happen?"

"Oh, the baby had eaten something that didn't agree with it. He had to hold it up for three hours at a stretch."

—Chicago Times-Herald.

FARMERS

Can make money the year around by selling Estey Organs at such times as they are not busy with their regular work. For full particulars write to THE ESTEY COMPANY, 916 Olive St., St. Louis, Mo.



A Very Bad Combine

is that of

A Very Bad Sprain

and

A Very Black Bruise

It often happens, but just as often

St. Jacobs Oil

makes a clean, sure, prompt cure of both.

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.

APRIL WEATHER.

Soon, ah, soon the April weather
With the sunshine at the door,
And the mellow melting rainwind
Sweeping from the South once more;

Soon the rosy maples budding
And the willows putting forth
Misty crimson and soft yellow
In the valleys of the North;

Soon the hazy purple distance,
Where the cabined heart takes wing,
Eager for the old migration
In the magic of the spring;

Soon, ah, soon the budding windflowers
Through the forest white and frail
And the odorous wild cherry
Gleaming in her ghostly veil;

Soon about the waking uplands
The hepaticas in blue—
Children of the first warm sunlight
In the sober Quaker hue—

All our shining little sisters
Of the forest and the field,
Lifting up their quiet faces
With the secret half revealed;

Soon across the folding twilight
Of the round earth hushed to hear,
The first robin at his vespers
Calling far, serene and clear.

—Extract from Bliss Carman's poem in the
Saturday Evening Post.

Mexico's Real Rulers.

The farmer has more influence in Mexico than he has in any other large country in the world. Practically all the rich Mexicans are farmers. In the west of the United States the large farmers are called ranchmen. In Mexico they are called hacendados. The term *ranchero*, from which the American word *ranchman* is derived, is also used here; but, instead of being applied to a man who has a large tract of land under his control, it is used to designate a person who has but a moderate amount.

PARCELED OUT THE LAND.

When the Aztec empire fell, in 1520, the whole of Mexico was gradually parceled out among the followers of Cortez and among the Aztec chiefs who had made themselves zealous in the cause of the Spaniards. In those days when might was right, naturally the strong succeeded in wresting from the weak their property; and the ambition of men in those days was to have a great amount of land, just as the ambition in the United States to-day is to amass millions as the representative of power. So in the century following the conquest the followers of the first conqueror and their descendants succeeded in getting possession of very large estates, many of which have been handed down to their descendants of to-day almost unbroken. The farmers were the feudal lords of Mexico; and each had his following. It was no uncommon thing for one of these feudal lords to rise against the government, and the history of the country is marked with these uprisings. Under the Spaniards they generally came to nothing; but in the years following the revolution there were many uprisings, several of which were successful.

LIKE ENGLAND TWO HUNDRED YEARS AGO.

Although the feudal system has been done away with by law, and the slave has been freed, yet the lower classes in the country still look up to their masters with almost the same degree of respect which was shown by the lower to the upper classes in feudal England of two centuries or more ago. Therefore, the influence of the farmer is the most powerful of all influences in Mexico to-day. And the old idea still prevails among the upper classes in Mexico that every gentleman should be a landowner; and most of them are. Of the great and old families living in the capital practically all are heavy landowners. Until lately they have been willing to leave law, medicine, the pulpit, and the professions generally to the middle classes. The ruler who wished to have a strong hand on his power always made haste to get the rich landowners upon his side. Even to-day it is computed that about 700 families have four-fifths of the land of the republic in their hands. It can readily, therefore, be understood, that the statement that the farmers are the ruling power in Mexico is no idle boast.

THE TABLE-LANDS.

The central part of Mexico all the way from the United States border to the south of the country is a series of great table-lands ranging in height from a mile and a quarter to a mile and a half above sea-level. As at the time of the conquest this elevated part of the country was the most densely populated and most highly civilized, and as the tropical forests did not exist at that elevation to interfere with the ac-

tions of the Spanish armies, this part of the country was first conquered; and as the Spaniards could more easily live in the climate of the uplands, which very much resembles that of Spain, the largest estates were naturally laid out there. In the hot country and the dense tropical forests, the Indians were left for some time to themselves, and the tendency to make feudal estates there was never so strong. Even to-day there are to be found in the hot country hundreds of Indians living on little holdings which they claim they have inherited directly in line from their ancestors who lived before the conquest. Of course many of these titles are disputed; but the Indians are allowed to live on in undisputed possession, unless, perchance, a sale is made by the hacendado who claims to own the land.

THE LARGE HACIENDAS.

But on the table-lands there are many very large haciendas. There is one which stretches for about a hundred miles along the National railway, and the massive stone boundary fence can be seen for nearly three hours as the train speeds along the level valley lands. Sometimes it approaches closely to the track, at others it retreats until it is almost lost in the distance; again it climbs the high neighboring hills until it looks like a faint, white line against the black background. There is an old story that once a Mexican gentleman was in Spain during the eighteenth century, and a pompous Spanish noble was boasting of his possessions. The Mexican stood it for a while; then he said: "In our country people do not boast of a little garden patch. There it is understood that every gentleman has plenty of land, in fact, generally more than he knows well what to do with. Most of us would not be able to give an inventory of our possessions in that respect. Why, my farm is as long as Spain itself. On one end I grow pineapples and oranges, and on the other the snow rests all the year round."

This statement was no exaggeration. The hacienda in question ran straight up from the coast lands to the top of one of the great snow-capped mountains (Popocatepetl).

TEMPERATE CLIMATE.

As the uplands of Mexico are temperate in climate, the products grown upon them are distinctively different from those to be found in either the lower slopes of the mountains or the real tropical lands of the coast. And the habits of the people are also distinctively different. The Aztecs, the hardy races of the uplands, had conquered all the other tribes, before the coming of the Spaniards, and brought them under one government. They had their distinctive customs and habits even in those early days; and these are preserved to a great extent to-day.

THE NATIONAL INTOXICANT.

The national drink of the uplands was pulque. There are several legends and stories about the discovery of pulque, which show, in their construction, that they must be very old, and that the drink must have existed among the tribes long before the coming of the Spaniards. But the growth of the maguey plant has been wonderfully increased since the conquest and notably during the nineteenth century. Now nearly all the haciendas on the uplands grow more or less maguey; and in the vicinity of Mexico City, and especially to the south of it, which is the most favored district of this plant, there are great estates which devote their best energies to the growth of the maguey and the manufacture of pulque. There are at least half a dozen great pulque haciendas, which produce hundreds of barrels a day. Two or three of these have the latest fermenting machinery for the manufacture of pulque, and at least two have attained a national reputation for the excellency of their brands. In this issue of *Modern Mexico* are given views of the buildings of the Ometusco pulque hacienda, one of the two largest and most perfectly outfitted in the republic. This hacienda has all the latest and most modern machinery for the manufacture of the national drink of the uplands of Mexico.

It is an interesting sight to go out to any of the old gates of the City of Mexico in the morning and watch the burros laden with pulque coming into the metropolis. No matter how early you are there, you will find these little animals laden down with monster pigskins filled with pulque coming into the market; and if you stay there and watch you will find them coming in a continuous stream until midday. You will wonder who drinks all the pulque that comes through that one gate. But

Prickly Ash Bitters

CURES SALLOW COMPLEXION.

if you go to any one of the many other gates you will find just as much pulque coming in through it. Then you will begin to have some idea of the vast amount of pulque drunk in Mexico City alone. There is a pulque shop for every seventy families in the city. Men, women, and children, all drink pulque. The middle, or lower class Mexican, would think that his dinner decidedly lacked something if he did not have pulque. But as this drink is very cheap, a large glass costing about one cent gold, he can afford to have it, poor as he is.

Hundreds of legends, songs, and stories cluster around the maguey plant and its product; but of late several of the city dailies have cast poetry and sentiment to the winds and are making a bitter crusade against the sale of pulque to the lower classes. This crusade is directed more particularly against allowing the pulque to be drunk in the pulque shops. It has been claimed that at least seventy-five per cent of the crime among the lower classes in Mexico City is caused by pulque. Should the present agitation succeed in closing the pulque shops, it would undoubtedly lead to a great falling off in the pulque trade, in which there are millions of dollars bound up in the valley of Mexico alone, and a consequent reduction in the city tax receipts; for pulque contributes largely to the income of the city.—John Hubert Cornyn, in *Modern Mexico*.

Took Him by Storm.

There is one Detroit man who looks with awe upon his son-in-law and writes him for advice once or twice a week. This son-in-law came out of the West, a strapping six-footer, full of vim, business from head to foot and with the breezy confidence of a man who has fought his way to the front on the frontier. He fell in love with the girl who is now his wife, while she was traveling with friends, courted her on a gallop and won her.

"But, dear," she warned him, "papa is something terrible. When you call on him to ask for me he is liable to shout and pound the table, call you an adventurer and lots of worse things, and threaten to throw you out. He's the roughest-growing autocrat in his own house you ever saw."

But the big westerner only smiled and promised to gain the parental consent. He came and encountered much such a reception as predicted, but he was just as smiling, airy, and confident, for he had taken the old gentleman's measure.

"I'm going to be easy on you, father," he started in, and the title like to have given her father apoplexy. "For her sake, understand. You're a terror, all right enough, in your little domestic domain, but 90 per cent of it is bluff. I don't want your money, though it has been hinted to me that somebody should take care of it for you. Your daughter loves me and I love her, and we're going to marry in spite of the fact that your wife and children think you a fire-eater. If you don't have the decency to consent, I'll just naturally bundle her off, anyhow, and the more fits you throw the more people will laugh at you, for I'm all right and all my people out there know it."

He told the anxious girl it was happily settled and hurriedly kissed her. She found the pater in a collapse, and he sent for the young man early next morning to consult about some business.—Free Press.

England's Peasantry.

The agricultural laborers of to-day are certainly better clad, more luxuriously fed, have far more leisure, are better educated, and are rapidly becoming better housed than their forefathers a century ago. And if these are the main constituents of happiness, they are happier.

On the other hand, their grandfathers and great-grandfathers were much more gay and light-hearted than the modern; they enjoyed their lives much more than their descendants do; they had incomparably more laughter, more amusement, more real delight in the labor of their hands; there was more love among them and less hate. The agricultural laborer had a bad drunken time between twenty or thirty years ago, and he has been growing out of

that. A village sot is now a very rare bird, as rare as he was a hundred years ago. Then the laborer could not afford a drunken debauch—he had not the wherewithal. His master, the farmer, did drink, and sometimes deeply in the days when he was prospering. And for a few years after the rise of the laborer's wages, some twenty-five years ago, the laborer was the publican's friend. But hard drinking has been steadily declining, and the habitual drunkard is looked upon as a coarse brute to be avoided. As to other vices, things are pretty much as they were: I am afraid rather worse than better.

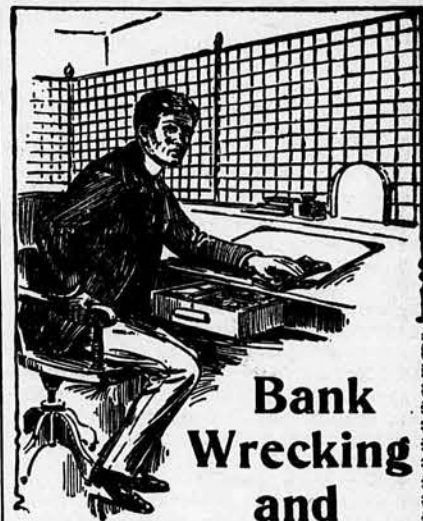
Perhaps the saddest characteristic of the men of the present, as compared with the men of the past, is that the men of the past were certainly more self-dependent—I do not mean independent, in the sense in which the word is used now—more resourceful, more kindly, courteous, and contented with their lot than their descendants are.

I think I know something about the English peasantry of a century or two gone by. I think I know just a little about the agricultural laborer nowadays. I bear him a genuine love, and feel with him a cordial sympathy, and there is no knowing any men or any class of men whom we do not love and sympathize with. But as to the agricultural laborer of the future, I am sometimes inclined to doubt seriously whether before another century has ended there will be any such thing as an agricultural laborer to know.—Nineteenth Century (London.)

\$100 Reward, \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

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Hall's Family Pills are the best.



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Ex-Comptroller of the Currency

A vivid paper on bank wrecking and bank wreckers—the history of some famous failures—practical business precautions—how to guard against stealing by trusted employees. One in a series of Tales of the Banker, to appear in

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Address all orders—
KANSAS FARMER CO.,
116 W. Sixth Ave., Topeka, Kans.

NOTICE EXTRAORDINARY. BLOCKS OF TWO.

The regular subscription price for the KANSAS FARMER is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to secure the paper at half price. While the subscription price will remain at one dollar a year and no single subscription will be entered for less than this price, every old subscriber is authorized to send his own renewal for one year and one new subscription for one year with one dollar to pay for both. In like manner two new subscribers will be entered, both for one year for one dollar. Address, Kansas Farmer Company, Topeka, Kans.

Alfalfa and timothy mixed in the proportion of two of alfalfa to one of timothy, according to the experience of a Colorado farmer, produce under irrigation the finest pasture and meadow that it is possible to have.

Under our "blocks of two" proposition, many persons become subscribers to the KANSAS FARMER through the courtesy of friends and relatives. By noticing the date on the address label, every one can see to what date his subscription is paid.

The president of the American Warehousemen's Association in a recent address stated that the products of the dairy and the hen in the United States for the year 1900 amounted to \$650,000,000, considerably more than double that of any two of the following industries: Pig iron, cotton, coal, wool, wheat.

Since the earliest settlement of Kansas no more favorable spring weather for the wheat has been experienced than that of this season thus far. Abundance of moisture, much of it in the form of snow, cool weather and no severe winds is a fair summary. The only fears now are for the Hessian fly and possible hail-storms. The Kansas wheat-raiser's prospects were never better for a full purse.

A Cleveland manufacturer of "shoddy" estimates that 125,000,000 pounds of this material is used annually in this country. The American Wool and Cotton Reporter says this is equivalent to 360,000,000 pounds of wool in the grease. The entire wool clip of the United States is estimated at 300,000,000 pounds. These figures indicate that the people of this country are wearing more "shoddy" than new wool.

The beet-sugar crop of the world for 1900 is estimated at 5,950,000 tons. The cane-sugar crop is estimated at 2,850,000 tons. Since the inception of the beet-sugar industry it has gained steadily upon the cane-sugar industry. In the ten years ending with 1840 only

4.35 per cent of the sugar of the world was supplied by the beet. For the ten years ending with 1850 it was 14.29 per cent; for 1860, 20.43; for 1870, 34.40; for 1880, 43.08; for 1890, 63.70; and for 1900, 67.71. What effect the civilizing of the tropics will have on this percentage can better be told ten years hence than now, but the sugar industry in Cuba and the Philippines is experiencing rejuvenation.

SENIORS IN DOMESTIC SCIENCE.

When the funny man of the funny paper wants to have fun with the cook, he pictures her as a slovenly individual wearing a dirty dark-colored apron over a torn and untidy dress, a black poker in her hand and a streak of mixed soot and grease adorning her features unattractive at the best. This caricature on womanhood is expected to bring forth from the dark and dingy mysteries of her domain the food which shall please the palate and nourish the physical structure of the images of God. The kitchen is pictured as a place whose processes must be concealed but whose results must be satisfactory.

Quite in contrast with these caricatured conditions the kitchen laboratory of the Kansas State Agricultural College was found to be when, last week, a couple of consumers of kitchen products dropped in upon the senior class in domestic science. A young lady of 17 was presenting a thesis on school lunches. In true scientific fashion the thesis, or lecture, was illustrated by preparing the lunch, before the class, from the raw materials. The young lecturer and her assistants looked very dainty in their white aprons and white sleeve-protectors, and with white bows on their heads. It was very evident to the gentlemen that the college-bred cooks suffered nothing in contrast to their 25 peers, who with note-books in hand took down the principal points of the address. These girls as they appeared at the work of creating a plentiful repast for the entire class, not omitting the two gentlemen visitors, need not have been ashamed to be called to meet the most honored or distinguished guest. When it came to sampling the luncheon there was nothing to criticize.

Of course, men, especially when they have reached the very practical age of silvery hairs, have learned to admire the woman who can prepare a substantial and attractive meal. Any man, whether young or old, admires the ability to produce such a meal and look pretty at the same time. But what shall be said of the young lady who can do all this and at the same time deliver an entertaining address setting forth the science of nutrition and the preparation of food suited both to the caprice and the well-being of people of various ages, habits of life, and conditions of health?

These young ladies are learned in the sciences; they are well read in literature and history; most of them are accomplished musicians, and they are as proud of their achievements in domestic science, and have as great occasion to be proud of these achievements, as has the graduate in electrical engineering to be proud of what he has mastered.

UNIFICATION OF THE RAILROADS.

A few days ago there was a sudden advance in the market prices of certain railroad shares. Fortunes were acquired by people who bought largely of these shares at the beginning of the rise and sold at the top price. Conjecture had it that the rise was purely speculative, since there had been no change in the earnings or other elements affecting the real value of the property. At this writing no information has been given to the public as to any changes in the business or the relations of the said railroad, so that the sudden advance seems to be an anomaly.

But the associated press dispatches tell of a new movement in railroad properties, whereby a few great financiers are acquiring the majority of the stocks of several of the greatest railroads in the country. The particular road whose stock experienced the sudden rise is not mentioned among those which have come under the control of the syndicate, but the suggestion that this syndicate will acquire controlling interests in all of the roads of the country may well be remembered in connection with the rise under consideration. When the syndicate shall have acquired 51 per cent of the shares of any road, the flurry in its stocks may be expected to cease.

This syndicate declares no intention of consolidating the several roads, but intimates that each will be operated

as a separate property, much as now, except that rate-cutting will be forbidden. It also stated that several high-priced officials will be dispensed with, and that economies in several directions will be instituted.

This is one of the practical steps in the unification of the transportation industry. These steps will doubtless be continued progressively until, instead of numerous companies working with more or less discord at the task of carrying people and commodities, there will be a single railroad company in all the land.

The method indicated for this is much like that by which some of the great railroad systems of to-day were brought together. In Kansas, for example, one of the greatest systems was brought together through the acquiring of majorities of the stocks of smaller lines. In some cases the components retained their separate chartered existences for several years. But eventually, through foreclosures and various other legal processes, all became one great corporation. In some cases the solidification was contested in the courts by some obstreperous stock holder or bond holder, but eventually the majority had its way.

The shrewd men of success who compose the syndicate which is now taking over to itself the carrying trade of the continent are wise enough to avoid litigation in most cases. They are able to make it apparent to any objector that his easiest and most profitable course is to fall into line. They may even permit him to gaze upon a vision of "opposition and bankruptcy." They move with deliberation, but the result seems sure.

The question is often raised whether there is any way by which society may prevent such monopoly of the carrying trade. Without stopping to consider whether such prevention is or is not desirable, the KANSAS FARMER has no hesitancy in saying that it is not preventable. The age has learned and now realizes the economy of consolidation. It is an old maxim of the common law, that commerce has a right to pursue the route of least resistance. This just maxim was at first applied to roads and water routes. Its wider application will give society the right to use the least expensive instrumentalities and organizations in effecting the necessary or desirable movements of people and products.

Possibly such reasoning may be denominated only a graceful way of submitting to the inevitable. But that the consolidations will be effected within the next few years and that the steps to consolidation will be sanctioned by the courts need not be doubted. The wise course will be pursued by those who represent the interests of the people if they devote their energies to preventing unjust use of the power which accompanies control of so great interests.

The latest treasury report covers a period of eight months, ending with February, 1901. It shows exports valued at \$1,015,193,489 and imports valued at \$523,534,877. It appears from these figures that the people of the United States are selling to foreigners almost twice as much as they are buying abroad. We ought to accumulate considerable money in this way. Of the exports nearly 66 per cent is classed as agricultural.

This issue of the KANSAS FARMER is sent to a considerable number of stockmen who are not regular subscribers. To such the publishers desire to say that they are preparing to issue a bulletin containing a discussion and tabulated statement of the money values of nearly all feeding stuffs. This bulletin will also contain a classified list of all improved stock-breeders in Kansas. It will be sent free to all who become subscribers to the KANSAS FARMER and request a copy of the bulletin.

The managers state that the Pan-American Exposition at Buffalo will positively open on May 1, notwithstanding some contrary reports. Every important exhibit building has been ready for weeks and some of them for months, and the installation of exhibits is proceeding with increasing rapidity. Exhibits from all parts of the western hemisphere continue to pour in by the car-load and train-load. One of the late arrivals is the great 12-inch rifle, which will be a part of the government's display of ordnance. The railroads are arranging low rates from different points to the Exposition and the proper accommodation of passengers and handling of baggage. The general baggage agents who met in Buffalo recently, have decided upon a plan which they

think will be as near to perfection as possible. Their system comprehends the checking, carrying and delivery of baggage to its proper addresses by each line direct. The people of Buffalo have prepared in the most ample way to entertain million of guests during the Pan-American Exposition this season. They point to their abundant facilities for the accommodation of great crowds with no little pride. The electric car service has been extended for the special purpose of accommodating visitors, many finely appointed hotels have been erected having large capacity, apartment houses have, for the time being, been transformed into hotels, restaurants are everywhere in abundance, and reasonable rates are advertised by nearly every one who has entered into the business of caring for the exposition traffic. In response to a call from Mayor Diehl, the householders throughout the city have prepared to receive into their homes the visitors from other states and cities.

One of the wise acts of the recent meeting of the board of regents of the agricultural college was to appoint a committee consisting of the president of the board, Captain J. S. McDowell, the vice-president, Hon. F. D. Coburn, Regent E. T. Fairchild, and Prof. H. M. Cottrell to proceed at the earliest practicable date, to visit and inspect not less than four of the recognized leading agricultural colleges or schools in nearby states, for the purpose of investigation of their facilities, systems, and methods, with a view to better qualifying themselves and their associates for the most judicious management and advancement of our own institution; also for the inspection and purchase of blooded live stock for the college as provided for in House Bill No. 235, passed by the recent legislature.

A new line for the shipment of grain from the northern wheat region to foreign countries was opened recently. The grain goes by way of the lakes to Parry Sound on Georgian Bay, where it is transferred through an elevator of 1,250,000 bushels capacity into cars on the Canadian Atlantic Railway and carried by way of Ottawa and Hawkesbury, over the Great Northern of Canada to Quebec, where it is loaded through an elevator into ocean steamers carrying 230,000 bushels each. The depth of water at Quebec is 40 feet so that the capabilities of this route are practically unlimited. The important point as to the new route is that it saves about 800 miles of the distance to the foreign markets as compared with the old route via Buffalo and New York.

To Investigate Forestry Conditions in Nebraska.

The Division of Forestry of the U. S. Department of Agriculture has decided to make a thorough examination, during the coming summer, of tree growth in the state of Nebraska. The object of this examination is to determine if forest production on a large scale is possible in this region. Throughout the greater part of Nebraska there is but a sparse timber growth, while portions of the state are practically treeless. From the results of the proposed investigations the Division of Forestry hopes to devise means for improving and extending the present forest growth, and, in the case of the treeless regions, to formulate a plan of tree-planting whereby the waste lands may be reclaimed. The best methods of tree culture will be considered and a careful study will be made of climate, soil, and the natural enemies of trees in this region.

For several years past the Division of Forestry, through its section of tree-planting, has been investigating the forest growth in several of the middle western states. The agents selected for the work to be done in Nebraska this summer are men who have a practical knowledge of the existing conditions, and are well fitted for the task of making an exhaustive study of the region. The results obtained from this tour of investigation will be of value to several of the neighboring states, for in Kansas, South Dakota, and portions of eastern Colorado and Wyoming, much the same conditions exist.

The valley of the Platte River, from Plattsmouth to Kearney, and the entire western half of the state, will constitute the field of investigation. About May 1, two representatives of the division will begin work at Plattsmouth and go up the river examining and classifying the growth of trees. Especial attention will be paid to the distribution of species, and to all efforts to cultivate considerable bodies of timber. In the investigation of tree-plant-

ing experiments the failures as well as the successes will be noted, for it is desirable to obtain all possible information on the subject.

It is expected that Kearney will be reached before July 1. At this point the party will be increased to six members and will be equipped with a complete camp outfit and saddle-horses. The following four months will be spent in work that will practically cover the western half of the state. The line of travel will be from Kearney to the western boundary of the state, along the Platte, thence northeast to Crawford, and then in a generally southeasterly direction through the sand-hills, and down the Middle Loup River to Loup City.

A wide strip of territory can be studied on each side of the route, as the party will be mounted, and particular attention is to be given to the distribution and reproduction of the Yellow Pine. Nebraska is the meeting-ground of the plains and mountain floras, and for this reason much valuable and interesting information is likely to be obtained. Cooperation by the people along the route to be taken by the government party will greatly facilitate the work.

The Division of Forestry has received sufficient encouragement from work already done in Nebraska to warrant the thorough examination that is to be made this summer. The fact that many tree-growers in the state are already realizing substantial profits from planted timber is noteworthy. A number of men who have had wide experience in dealing with the problem of forestry in Nebraska have written to the Division of Forestry stating that there is no doubt in their minds of the possibility of increasing the present scanty growth of trees, and agreeing that even the sand-hills can be forested. Among those who have expressed such an opinion are ex-Secretary of Agriculture J. Sterling Morton; Prof. Charles E. Bessey, of the University of Nebraska; C. S. Harrison, president of the Nebraska Park and Forest Association; and E. F. Stephens.

The rapid spread of interest in forestry will soon bring landowners to realize that timber may be considered as truly an agricultural crop as wheat or corn. With the Division of Forestry investigating the best methods of tree culture and offering its advice and assistance to landowners interested in tree planting, there is reason to believe that in the near future much headway will be made in bringing about a reasonable forest growth on lands now almost treeless.

The work outlined by the division, looking to the improvement of Nebraska forests, should attract general attention, considering that throughout this region forest products are in constant demand, commanding high prices and presenting a profitable field for the investment of capital.

Shawnee Horticulturists.

At the April meeting of the Shawnee County Horticultural Society, Mr. Walter Wellhouse discussed the subject of "Cold Storage," from the viewpoint of large experience. His conclusion is as follows:

"Cold storage can be applied to small fruits, berries, or juicy summer fruits for a few days or weeks to carry them over a glut in the market. Pears and apples may be kept for several months. We have carried Ben Davis to the middle of July without loss. Fruit should be underripe and perfectly sound. Home cold storage is practicable, in caves and underground buildings in the orchard. Temperature should be kept unvaryingly at a point best adapted to the structure of the fruit. A sudden change of temperature in taking the fruit from cold storage and placing in the market should not be permitted. Sudden changes cause quick chemical changes and hasten decay. The liquid-air system will no doubt be found serviceable on the cars in carrying fruit to market."

The resulting discussion brought out the statements that lemons and oranges will not bear a temperature within several degrees of the freezing point without destruction; also that certain temperatures arrest all forms of change in any fruit, and it is necessary to find out what temperature is best adapted to each kind of fruit, in order that it may be kept steadily at that.

Mr. Wm. H. Barnes, secretary of the state horticultural society, spoke on "Timely Topics for the Garden." He recommended every house-keeper to prepare a bed of asparagus. Once a bed is started the labor required to keep it up is very little. Lettuce should now be out. The leafy kinds are best at first; late head lettuce will

do well. Plant tomato seed early. A few weeks' difference in early spring makes a vast difference at market time. Plant onion seed at once if not already done. Plant early so as to avoid having the delicate seedlings hidden and choked by weeds. It is now time to plant smooth peas; wrinkled or sugar peas are more tender and should be planted later. In preparing cuttings of horseradish roots cut the upper end off square and the lower end slanting. Then when you come to set them out using a dibble, they can be placed in the ground right end up. They will grow if inverted, but they will not do well.

Reports from various members were made concerning fruit-trees. Mr. Lux reported his peaches in good condition; Mr. Peacock's trees on low ground and southern slope are injured; Japanese plums are also destroyed. Mr. Van Orsdal reported his Albertas killed, even on the high ground. Mr. Marple's are all right so far. J. B. Sims reported his trees all right as far as he had noticed.

An excellent paper on "The Flower Garden" by Mrs. Kittle J. McCracken will appear soon in full in the KANSAS FARMER.

The next meeting of the society will be at Oak Grange hall, Mission township, May 4. It will be a picnic meeting.

Some Experience in Western Kansas.

EDITOR KANSAS FARMER:—Western Kansas is experiencing a spell of winter, the like of which we haven't had for lo these many years, and consequently stock has suffered considerably and enough has been lost already to stock several good-sized ranges. Insufficient shelter and lack of feed were the main causes, as no one was looking for such a blizzard this time of the year. There was one farmer who, though his sheds were not of the best, yet got his stock through all right, simply by using the material on hand to enclose it more completely. This man and his boy worked the greater part of Sunday in the blizzard, building up a wall of snow on the south side of their shed, thereby giving the stock ample protection, whereas, otherwise he could not have helped losing some, as a good many others did in just such a shed. He no doubt made the biggest kind of wages, and the writer can't help thinking that some of your readers may be benefited some time, by having read how this man saved his stock.

The writer himself has been benefited considerably already by reading, this winter, how Colorado sheepmen furnish feed for their sheep after a good snow by dragging an A-shaped snow-plow over the prairie, thereby uncovering the grass enough for the sheep to graze on. Following up this idea, he practiced this, here in western Kansas, for cattle and with good success, at the first good snow we had, thereby saving a good deal of feed. This plan also came in awful good play for this last snow-storm. The blizzard did not leave much snow on the prairie, but the Wednesday following a level snow of ten inches fell and later on some more on top. This brought the snow-plow in use again and that for a whole week, but the writer wasn't alone any more. No; every one of his neighbors had followed suit, because they had seen how nicely Dick's cattle followed him after the snow-plow and came home full of an evening. But this time it was no picnic for the four horses to pull it. The old plow proved to be too weak, so a new one was made of 2 by 12 by 14 feet plank, well braced, with 12-inch boards for top siding, the plow weighted down with an old mower and another 10-foot iron. This made it stick to the ground, piling up the snow to each side sometimes as high as three feet where a drift was struck, but the cattle were fed and that was the aim. So you know now, how western Kansas farmers will winter their stock after this, using snow-shed and snow-plow, that is, when we run short of feed. But we hope to get a good crop this year after so much snow. Why, the ground is just soaked up in fine shape—we will have moisture to scatter to the four winds. No, the more thoughtful farmers will not allow this to occur again. They will try to stop these leakages, and preserve most of this moisture in the ground for the growing crops, for to him who has a moist soil shall be given moisture, as Mr. Hilton truly says. Uncle Dick has an implement sitting in his yard now, partly in a snow-drift, which on closer inspection will reveal two discs fastened together. An 8-horse evener is attached to the front disc, which throws the soil out, while the other one following throws it in, thereby double-discing the ground while going over only once.

This operation will preserve the moisture in the ground, kill all the small weeds, and bring it in fine shape for future tillage. While Uncle Dick has not many followers yet in his spring discing, he will get them by and by, just as they followed him with the snow-plow. But just as soon as they do that, he will show them how to cultivate growing small grain, such as barley and oats, because he has 18 acres of barley sowed now, which he intends to cultivate; and he expects to get over them once in one day, too. He sowed this barley with his 14-pound disc-drill, closing up spouts 1, 4, 5, 10, 11, 14, so that in cultivating each horse will have 24 inches to walk in, which space will be cultivated by two shovels. The discs from the disc-drill will all be dropped off, and only those which formerly were closed up in drilling, will be replaced by cultivator-shovels, the depth of which will be regulated by the same lever as the discs. The only trouble will be to drive just as has been driven in drilling, in which he also was very careful. You see, Uncle Dick is only an imitator of Campbell; he has no original ideas of his own, but he

spout eqi qm sziup esepi op oi sziup and implements on hand, just as he made an imitation subsurface packer out of an old disc by stringing the discs on the shaft so that between each two spools two discs with hollow side together were placed, and it did the work he promises you with the help of that big iron he spoke about above.

Uncle Dick surprised the assessor when he told him that he didn't intend to plant any corn this year, although he had just bought a new riding lister and cultivator last season. You know he doesn't believe in walking—he doesn't walk a step in all his farming operations. He just declares he won't feed the grasshoppers on corn any more, weeds and buffalo-grass are good enough for them after small grain is out of the way. But his main reason is that he wants to save the moisture in the ground for the coming year, for fear it might be a dry one, as he then would have to run the snow-plow so much again, and it sometimes is rather disagreeable. So he is going to work 100 acres for a starter without raising anything on it, and as he will hardly get around fast enough alone, he will rig up some kind of an implement for his boys, 7 and 8 years old, with which they can tickle mother earth so she will laugh with a bountiful harvest the coming season. He will spade down this fall and see how many feet down the moisture has gone. Now if his neighbors don't follow his method, it is not his fault, because he tells them about it, and even goes to the trouble of staying up till 12 o'clock to write this lengthy letter to tell his fellow-farmers about it, in the hopes that they may some time be benefited by it.

Colby, Kans. G. R. WERNER.

Land Plaster.

EDITOR KANSAS FARMER:—In April 4 publication of your valuable paper I see a few lines from Ed. A. Lord, Kingman, Kans., rather ridiculing gypsum or land plaster. Let me speak a word in favor of land plaster. Some years ago I was a resident of St. Joseph County, Indiana, and the majority of farmers in the locality I lived in all used land plaster. We had it shipped in by car-loads from Grand Rapids, Mich., and sowed it broadcast on clover fields and meadows in spring, from 40 to 60 pounds per acre.

It made a vast difference in the growth of clover. We used it sometimes in planting corn, dropping a handful in each hill.

Now I find that the manufacturers of land plaster at Grand Rapids have been making stucco or something else out of the land plaster and thereby changing it chemically, and sending out the residue, which proves valueless as a fertilizer, the result being that where they raised from two to three tons of clover per acre they now have no clover at all.

I shall certainly give our Kansas gypsum a thorough trial before I make fun of or condemn it. I have been watching the bulletins from our agricultural college at Manhattan, hoping they would try experimenting with gypsum in growing red clover and other crops, but have failed to learn of any experiments as yet. Let us all try it, and report through the KANSAS FARMER. Clyde, Kans. VOLLA CHRISTIAN.

Growth of German Cities.

Consul-General Mason's figures giving the population of German cities by the census of December 1, 1900, furnishes interesting figures for comparison with our own census taken in June last. There are thirty-three German

cities of over 100,000 inhabitants as against thirty-nine in this country. Berlin, with a population of 1,884,345, is considerably larger than Chicago and about the equal of that part of New York included in Manhattan borough, or old New York city without the Bronx additions. Berlin has doubled in population within thirty years and by annexing its populous suburbs could obtain a total of 2,500,000. In five years its percentage of gain has been 12.3, while in the last ten years the New York territory has increased 37.15 per cent and Chicago 54.44 per cent. The most rapidly growing cities of Germany at the present time are Nuremberg, Frankfort, Halle, Manneheim, and Posen, all of them manufacturing towns. Of the cities above 100,000 Crefeld alone shows a decrease, said to be largely due to the loss of the American market for its textile goods, now supplied by our own factories.

Hamburg, the great seaport of Germany, is the second city with 704,669 inhabitants, and a rate of gain almost the same as that of Berlin. We have no city of the same approximate size, for it is a curious fact that there is no American city between St. Louis, with 575,238, and Philadelphia, with 1,293,697. There is a great gulf, indeed. Munich, Leipsic, and Breslau are all between 400,000 and 500,000 in the order named, and of these only Munich shows a gain in the five years of more than 20 per cent. Munich approaches closely to Baltimore in size, having 498,503 to 508,954 in the Maryland metropolis, but falls short of both St. Louis and Boston, the latter being less than 15,000 behind St. Louis. Dresden and Cologne are near together in the list, with 395,349 and 370,685, respectively, which puts them in the class with Cleveland, and ahead of Buffalo, San Francisco, Cincinnati, and Pittsburg, there being eleven cities above 300,000 in this country and only seven in Germany.

Frankfort, with a population of 287,813 and a growth in five years of 25 per cent, is almost tied with our slow-going New Orleans. Nuremberg, with 260,743 people and the phenomenal increase of 60 per cent since 1895, is pushing closely after Detroit, Milwaukee, and Washington. These are all the cities in both countries of over 250,000 inhabitants. Evidently the German cities are prosperous as a rule, and the rate of growth of a few of them is certainly remarkable. In spite of temporary depressions, like that at present existing, it is reasonable to expect that the young German empire will take a rank very close to the top of the list of nations in wealth and material progress, as well as intellectual advancement, long before the end of the new century.—Buffalo Courier.

Powder.

It occurred to an alchemist one day that it would be a fine thing to take sulphur, saltpeter and dried toads, pound them all to a powder and "sublime" them together in an alembic, which he carefully luted and set on the furnace to heat. He poked up the fire and waited around, thinking what he would do with all his money if this should turn out to be the powder of reduction that would turn base metals into gold, when bang went the alembic and the windows blew out, and the door ripped off its hinges and fell down, blam! The alchemist scuffled out from under the ruins of the furnace, shook a red-hot coal or two out of his shoe and the ashes off himself, and wondered what had struck him. He tried it again and again, and each time with the same result; and then it dawned upon him that he had discovered a fair article of blasting powder. Since then about all that has been done to his recipe has been to put in a little better article of charcoal, say that of willow twigs, instead of toasted toads.

Little did the old alchemist dream what potency was in that "powder of reduction." For such it is. Although it never yet has turned lead into gold by its mere touch, yet when a small, round piece of lead is put with the powder into an iron tube of curious workmanship and fire laid thereto, it is possible to convert another man's gold into the possession of him that has the iron tube of peculiar workmanship, and not gold only, but all manner of goods and chattels, houses and lands, messuages, casements and hereditaments, even men's souls and bodies.—Harvey Sutherland, in Ainslie's.

Triumph.

"She seems so happy. Did she marry him for love or for money?" "Neither; she took him to spite a lot of other girls."—Chicago Times-Herald.

Horticulture.

Some Facts About Tree Planting.

BY GEO. L. CLOTHIER, IN ANTHONY REPUBLICAN, MARCH 29, 1899.

Forest-trees may be profitably planted with various ends in view. One of the first and most important of these is pecuniary gain. There are different methods, however, of obtaining this end. One way is to plant something that will give quick returns. It often happens that the kind of a tree that will give the largest gains in the shortest time will not continue productive for a very long time. This is especially true of the hardy Catalpa on the uplands of eastern Kansas. After a Catalpa grove has passed the age of its most rapid growth, its rate of growth declines, and at the same time, destructive agencies multiply very rapidly. A time comes, sooner or later, when the holding of the crop is a losing investment. This law operates in handling all kinds of forest trees, but with the slow growing, long-lived species the time when the crop begins to decline is delayed about ten times as long as it is with the Catalpa. The Black Locust gives results very similar to the Catalpa. It grows rapidly, matures early, and if not harvested by the planter at the right time, the borers are liable to harvest the crop.

The farmer who contemplates growing a pure plantation of short-lived temporary trees will do well to consider what use can be made of the land after the trees have matured. If the plantation consists of a single species having the peculiarities of the Locust, the farmer will run the risk of being compelled to clear the land when the trees are harvested, and he may venture a second crop from the sprouts the returns from which are not yet definitely known. Clearing land is expensive in Kansas. A better method for the management of a timber plantation is to design it for a perpetual forest. If long-lived species of economic value are selected, a sustaining income may be realized for a great many years. This result is attained with greatest certainty by the use of mixtures rather than pure plantations.

It is believed that farmers in southwestern Kansas are awake to their own financial interests. For this reason the writer desires to call attention to a few facts of vital importance to prospective tree planters. To be sure of success, it is imperative that the planter select the best species obtainable. These are usually native to our state. There is something in human nature which causes it to venerate the things coming from afar and to despise the common things at home. Unscrupulous nurserymen find in this vein of human character a rich mine to be worked. It pays farmers to purchase nursery stock from reliable dealers, permanently located, rather than from "transient peddlers," representing the name of some fictitious firm in Florida or California.

If we leave out of consideration the immediate commercial value of our proposed plantation and view it from the standpoint of a silvicultural undertaking, the trees best adapted for this part of Kansas are the following:

White Elm, Honey Locust, Kentucky Coffeetree, Hackberry, Burr Oak, and Red Cedar.

Of the list cited above, all but the Hackberry and White Elm are valuable for post timber and railway ties. The list includes slow growing and long-lived trees only. The farmer will need a good deal of patience to wait for an Oak to grow into a fence post. There is a law of plant growth, however, which we must respect if we would be successful in establishing a successful forest on the arid prairies. It is this: Only such trees are permanent and long-lived in dry countries as can adapt their rate of growth to the available food supply. Water is the most important food of a plant. If the moisture in the soil is a limited and variable quantity, the growth of a tree on the same must, of necessity, be irregular or else slow enough to adjust itself to the least possible available water supply. The hardiest species are rather slow to respond to improved conditions and seem to hold themselves in readiness to enter, at any time, into a state of inactivity corresponding to conditions of drought.

The Black Walnut is a very valuable long-lived tree, adapted to rich bottom lands in protected situations. It does best in mixed plantations. The hardy Catalpa on low lands and the Black Locust on high lands are perhaps the most rapid growing temporary species of pecuniary value. The Osage Orange and Russian Mulberry are trees that produce very valuable post timber. These are hardy, but can scarcely be

rightly termed forest trees because of their short stature and shrubby nature. They deserve a place, however, in every commercial plantation on the uplands of this part of Kansas.

A Good Way to Buy Walnut.

As many of our readers know, W. O. King, the well known hardwood dealer of Chicago, began his lumber career a number of years ago as a buyer of walnut for H. Hermann, the late extensive manufacturer and handler of that commodity. In his travels Mr. King found it necessary to carry a great deal of money in order that when he saw an opportunity to purchase walnut he would have the cash to pay on the nail. Hearing of quite a large amount of walnut on a farm near Keokuk, Iowa, Mr. Hermann sent two or three men there to estimate the quantity and then sent out Mr. King to buy the standing timber. The owner of the farm, which consisted of over 700 acres, was a thrifty German and he wanted \$22 a thousand feet for the standing trees. Mr. King estimated the timber very carefully and found that to buy the trees it would cost him about \$20,000. He then concluded that it would be cheaper to buy the farm than the timber, and, upon broaching the subject to the owner, the latter agreed to dispose of his holdings for \$20 an acre, making a neat sum of \$14,000. The deal was quickly concluded and H. Hermann became the possessor of a fine farm with dwelling, barns, farming utensils, and all the paraphernalia thereunto belonging, and above all, one of the finest blocks of walnut timber then standing in the country. He then procured two or three portable saw mills and sent them to the scene of operations, together with a large force of men. After cutting half the walnut that was worth cutting they found 1,250,000 feet, or sufficient to realize approximately \$50,000 at the price walnut was then bringing. After the walnut was taken off and shipped, Mr. King placed the farm on the market and it was eagerly bought by an agriculturist, who paid for it the price at which it was originally purchased, \$20 an acre. If there was ever a walnut transaction that was carried to a more profitable or successful issue than this, we have yet to hear of it.—American Lumberman.

To Prevent Potato Scab.

The Vermont Experiment Station says:

Scabby potatoes won't pass in a critical market. In fact, the hired man hardly wants to eat them at home, and the hired girl objects to peeling them. It is a good thing not to have scabby potatoes.

Potato-scab may be prevented by very simple means. Potatoes should not be planted in soils where scab has been prevalent in previous years. Changing the potato-patch to another field is a good preventive measure in such cases.

Scab is often brought in on the seed potatoes, however, and one of the most important means of prevention lies in the disinfection of the seed. This is accomplished by soaking in corrosive sublimate or formalin.

To treat potatoes with corrosive sublimate, make up a solution of 1 ounce of the chemical in 7 gallons of water, and soak the seed potatoes one and one-half hours in this. This solution is more poisonous than town agency whiskey and must be handled with care. It is best to put the potatoes in a loose gunny-sack and let them down into the solution by this means.

To treat potatoes with formalin (or formaldehyde, as it is sometimes called), put a half pint of the chemical (which is a liquid), into 15 gallons of water. Soak the potato seed two hours in this.

Take the potatoes out of either of these solutions, dry them, and plant as usual. The solutions kill the germs of the scab disease and practically prevent its occurrence unless fresh germs happen to be present in the soil from scabby potatoes formerly grown on the same ground.

Consumption of Railway Ties.

There are no exact statistics as to the railway tie consumption in the United States, but the average consumption per mile is known with reasonable closeness, so that figures which are accurate enough for practical purposes are available to those interested. There are about 205,000 miles of main line track in the United States at the present time. The mileage of the railroads of the country, excluding side tracks, second track, etc., is about 190,000 miles, to which must be added 15,000 miles for second, third, and fourth tracks, making the figure given above. It is estimated by railroad men that about 400 ties to the mile are each year required

- ARMSTRONG & McELVY Pittsburgh.
- BEYMER-BAUMAN Pittsburgh.
- DAVIS-CHAMBERS Pittsburgh.
- FAHNESTOCK Pittsburgh.
- ANOKOR Cincinnati.
- EOKSTEIN Cincinnati.
- ATLANTIC New York.
- BRADLEY New York.
- BROOKLYN New York.
- JEWETT New York.
- ULSTER New York.
- UNION New York.
- SOUTHERN Chicago.
- SHIPMAN Chicago.
- COLLIER Chicago.
- 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.

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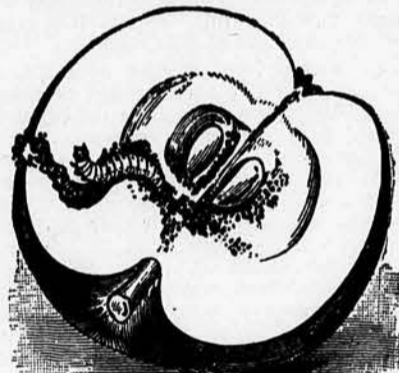
for replacements, the average number of ties to the mile is 2,800, and the average life of the tie is seven years. There is, therefore, required on the present railroad mileage of the country, about 82,000,000 ties annually for replacements, with another 14,000,000 needed for new track, assuming that the construction is about 5,000 miles annually, which it is likely to be for some years to come.—American Lumberman.

A Thrifty Scot.

An Aberdeen man in London told a friend that he was going home at Christmas and that he had decided to go by steamer. His friend advised him to take advantage of the excursion railway ticket but the Scot considered the sea voyage cheaper. "But, Sandy," persisted his friend, "your food on board will total up to the railroad fare." "Nae fear," replied Sandy, "ye ken I'll be sick the whole time."

Spraying Fruit Trees.

The question of spraying fruit trees to prevent the depredations of insect pests and fungus diseases is no longer an experiment but a necessity.



Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing twenty-one styles of spraying outfits and full treatise on spraying the different fruits and vegetable crops, which contain much valuable information, and may be had for the asking.

We are very glad to call the attention of our readers to the Harry N. Hammond Seed Co., of Bay City, Mich., who have been advertising in these columns for some time past. Very many of our readers will remember when Harry N. Hammond started growing and selling seeds in a comparatively small way at Field, Mich. At this point the business grew to large proportions when an almost overwhelming calamity befell their business in the shape of a fire about a year ago, which destroyed their warehouses. This blow would have probably crushed out the ambition of most business men, but with commendable pluck and enterprise Mr. Hammond decided to re-establish his business on an even broader and more substantial basis than ever. Realizing that it would be an



advantage to have his warehouses and shipping business in a larger city, he incorporated his company and located at Bay City, where large and commodious buildings were erected for his use. The above illustration shows the quarters now occupied by the Harry N. Hammond Seed Co. These people issue a very complete catalogue which we will be glad to have our readers write for if they have not already done so. In writing please mention this paper.

Cash For Your Farm
Residence or Business Property may be obtained through me. No matter where located. Send description and selling price and learn my successful plan. W. M. OSTRANDER, 1215 Filbert St., Philadelphia, Pa.

STARK TREES SUCCEED WHERE OTHERS FAIL.
Largest Nursery. Fruit Book Free. Result of 16 years' experience. STARK BROS., Louisiana, Mo.; Danville, N.Y.

HARDY FRUIT AND TREES
Forest Tree Seedlings, Small Fruit, Grapes and shrubs. We pay freight or give premiums, such as Sprays, Flower Stands, Brackets, Pruning Knives and Shears, Incubators and Brooders. Send for catalogue, English or German. German Nurseries, (Carl Sonderegger, Prop.) Box P, Beatrice, Neb.

EVERGREENS
Hardy sorts, Nursery grown, for wind-breaks, ornament and hedges. Prepaid, \$1 to \$10 per 100-50 Great Bargains to select from. Write at once for free Catalogue and Bargain Sheet. Local Agents wanted. D. Hill, Evergreen Specialist, Dundee, Ill.

OTWELL'S TREE PAINT
Will rid your orchard of Borers and is absolutely guaranteed never to injure a tree. You get a sample gallon cheap. In use in every state 10 years. Farmer Agents wanted. Will B. Otwell, Patentee, Carlinville, Ill.

I Am Fishing...
For orders for Western Grown Evergreen Trees that are acclimated in Kansas; from 1 to 5 feet in height; price, 10 to 30 cents each. Send for price list. A. W. THEMANSON, Wathens, Kansas.

GOT A DOLLAR?
Invest it in our choice **FRUIT TREES, SHRUBS or VINES.**
25 Grafted Apple Trees for \$1. Ours will grow. They are well rooted, healthy and true to name. Send a trial order to-day. Due bill good for 25c and Catalogue in German or English free. We pay freight on \$10 orders. Fairbury Nurseries, Box 16, Fairbury, Neb.

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It matters not how rich the land, Or hard the labor on it, Vexation is the only crop Bad seed will raise upon it.
All seed warranted to be pure and reliable, as per page 2 of catalogue. Our trade with market gardeners is immense; and market gardeners buy none but the best of seed. Write for our new Vegetable and Flower Seed catalogue—free to everybody.
J. J. H. GREGORY & SON, Marblehead, Mass.

GREEN RAPE costs 25 cents per TON.
Greatest, Cheapest Food on Earth for Sheep, Swine, Cattle, Poultry, etc.
Will be worth \$100 to you to read what Salzer's catalogue says about rape.
Billion Dollar Grass will positively make you rich; 12 tons of hay and lots of pasture per acre, so also Bromus, Pencil, Spills (400 bu. corn, 200 bu. oats per a.), etc., etc.
For this Notice and 10c. we mail big catalog and 10 Farm Seed Novelties, fully worth \$10 to get a start.
For 14c. 7 splendid vegetable and 5 brilliant flower seed packages and catalogue.
JOHN A. SALZER SEED CO., LA CROSSE, WIS.

The Apiary.

Conducted by A. H. Duff, Larned, Kans., to whom all inquiries concerning this department should be addressed.

Notes for the Apiary.

A colony of bees in spring should not be allowed to run short of stores. This cripples it for the entire season, and no amount of careful management will bring it to as profitable a state as could have been done by feeding it during the time it should have produced the bees, to lay up a good surplus at the time when surplus honey could be obtained.

CLEAN YOUR HIVES.

All hives of bees should get a good cleaning up in early spring. Many of the combs should be trimmed up and put in good working order. During the honey season previous, when crowded for space, the bees will build comb in every available nook and corner, and many of the combs will be out of shape, so that rapid and easy manipulation is out of the question. When combs are thus we can not handle them without killing bees, and this makes them cross and hard to handle.

IMPORTANCE OF THE QUEEN.

No time in the year is a queen of so much importance as in the spring. A colony without a queen even for but a few days now, will not do the best of service later on, and the queen's presence and good work in keeping all the comb occupied with brood that the bees can care for is the proper thing to have now, if we are to get the best results when the honey season comes. Weak colonies are always late in getting down to business, and we can count on only half a crop at best, if they are very weak in bees. We are to blame to a great extent for our weak colonies, if we do not bring them up in strength by feeding.

WHEN TO ADD BOXES.

Let colonies get strong before putting on surplus honey-boxes. It keeps them back to add boxes while they are weak. This is frequently done by many, not knowing just when the boxes should be put on. The colony should be strong, the hive full of bees, and the combs well filled with brood, and when in this condition the boxes may be put on with no injury to the colony. But it is still better to note a little closer, and add them when honey is beginning to come in rapidly, and just at the opening of the principal honey season. It is true that some extremely strong colonies should have more space before this

time, and should be given it before they are so crowded as to prepare to swarm.

KNOW WHAT YOU WANT.

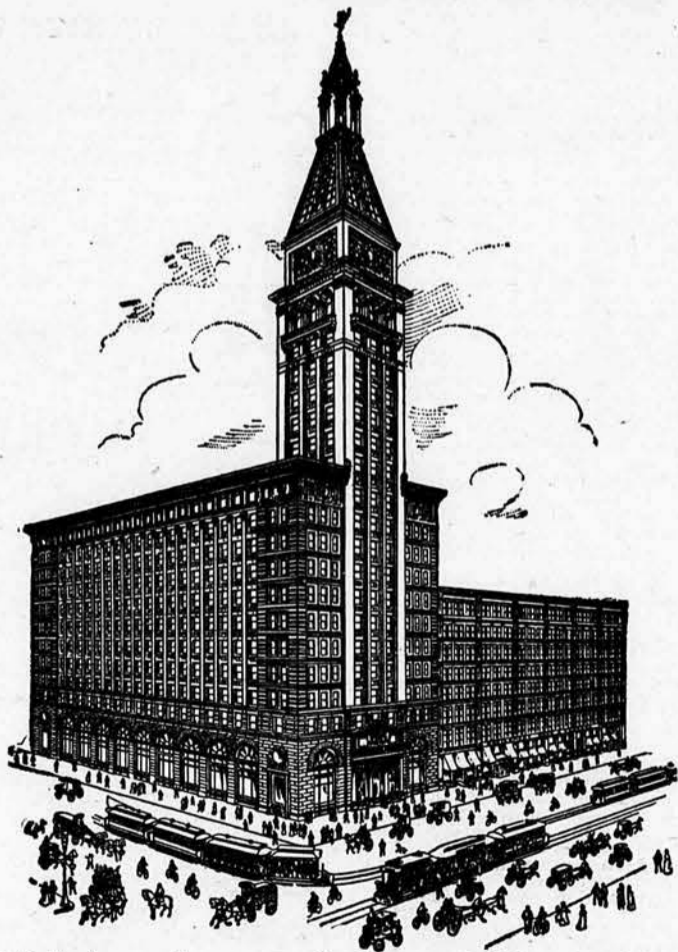
We should begin work with the bees and continue to manage them with the end in view as to what we wish to accomplish, whether we want honey alone and no increase, or a moderate increase and a fair crop of honey, and whether we manage for comb or extract honey. It is bad policy to change our mind right in the middle of the season. If we extract, we should add to the strongest colonies upper stories of comb or foundation, and, if in advance of the honey season, we should allow the queen to occupy some of the combs for brood, if she is crowded for room in the brood chamber; by this means we will have powerful colonies that will prove profitable. I do not believe in using queen-excluders thus early in the game, preventing the queen from expanding and turning her attention to swarming.

HAVE GOOD STOCK.

Do not think that because you have the best variety of bees that you have the best stock. There is as much in stock as in variety. We have experimented in this line, and find that some stocks of bees are worth much more than double that of others. I have queens of selected varieties that could not be bought for the price of a horse. When a colony of bees will bring in a good profit while sitting beside others that scarcely make a living, it is time to put value on them different from that of the ordinary stock. Bee-keepers are awaking up to the fact that it pays to get the best and keep only that kind of stock that has proven itself to be far superior. We can advance very rapidly in a change of stock, and from one queen we can raise enough to supply a large apiary in one season. Rapid strides were made after the Italian bees were introduced into this country, but the improvement in select breeding of this race of bees bids fair to again double the profits in the products of the business.

A GOOD WINTER.

We hear no complaints of losses in bees during the present winter. It seems that the bees have wintered well, and are in good condition generally and much stronger than usual. The first part of the winter was very favorable to bees, and this part of the winter tells more upon them than the latter part. They can much better stand severe weather in the latter part of the winter than in the fore part, providing the very cold weather does not come very late when they are breeding largely. When bees can get frequent flights, as they did in the fore part of this winter, they get themselves in first-class



Comparatively few people are aware that the new building erected by Montgomery Ward & Co., the great catalogue and mail order house of Chicago, is the tallest in the world. Of course there are a few spires that are higher, such as the Washington monument and the statue of William Penn on top of the Philadelphia City Hall, but these are the only two points on this continent, erected by the handiwork of man, that equal this wonderful Chicago building. The twin towers of the Cathedral of Cologne are also higher, but in the Chicago tower the conditions are immensely superior. For instance, the Chicago tower is 42 feet square, and is used for office purposes, an electric elevator running all the way to the 25th floor. It is indeed a busy place. The extreme top is 394 feet from the ground.

J. G. Poppard MILLET CANE
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KANSAS CITY, MO. TIMOTHY GRASS SEEDS. **SEEDS**

SEED CORN All the leading and best varieties of choice selected. Thoroughly tested seed corn, 75c per bu. and upwards. Ask for large descriptive catalogue of Corn and all kinds of Farm Seeds. Most valuable book ever published for western farmers. Free if you mention this paper. IOWA SEED CO., Des Moines, Iowa.

SEEDS FIELD-GARDEN-FLOWER Everything for Farmer or Gardener. Choice quality, high germination. Planet Jr. Garden Tools, Seed Sowers, Bale Ties, Onion Sets, Clover, Timothy, Alfalfa, Millet, Cane, Kaffir, Seed Corn, Potatoes, Blue Grass, Orchard Grass. Good treatment to everybody. Write for our Catalog—Free. **TRUMBULL & CO., Kansas City, Mo.**

TREES Ours have stood the test of 50 years. Send for price list. 600 Acres. 13 Greenhouses. Established 1882. **PHOENIX NURSERY COMPANY, 1200 Park St., Bloomington, Illinois.**

SEEDS ALFALFA SEED A SPECIALTY. Cane and Millet Seeds, Kaffir and Jerusalem Corn, and all other farm seeds. All crop of 1900. Write for our "How to Sow Alfalfa," and prices on seeds. **McBETH & KINISON, Garden City, Kansas.**

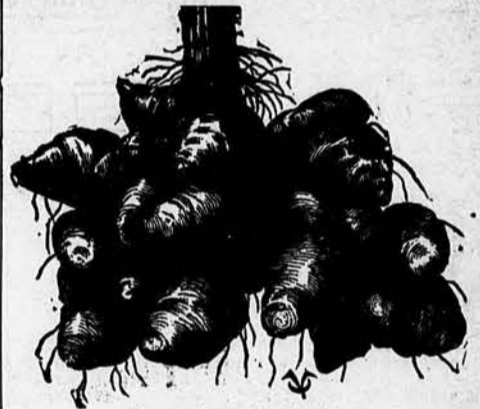
Fire Dried Seed Corn That has won four-fifths of first and sweepstakes at Nebraska State and District Fairs for the past seventeen years. At 1900 Nebraska State Fair we won first and second prizes for best large yellow corn; first and second best large white; first and second largest ears any variety or strain. For prize list or samples, address (Washington County.) **M. H. SMITH & SON, De Soto, Nebraska.**

KANSAS SEED HOUSE. F. BARTELDES & CO., Lawrence, Kansas. EVERYTHING in the SEED line. QUALITY and PURITY unexcelled. All seeds CAREFULLY TESTED. MOST Complete Establishment in the West. Headquarters for ALFALFA, KAFFIR CORN, CANE SEED, MILLET, and all other Field and Grass seeds. Introducing and growers of the KANSAS STANDARD TOMATO, the Earliest and Best variety known. Send for our New Catalogue for 1901, now ready, FREE for the asking.

shape to endure very cold weather without injury. As the general opening of spring is late, we look for a good honey season, and those who have bees should see that they are in shape to catch a good surplus honey crop.

GET YOUR FIXTURES ON TIME.

Those who wait until the honey season is on and the bees are beginning to swarm, lose more than would pay for a complete outfit in the way of hives and fixtures to accommodate the bees and the honey crop, if they would purchase them early and on good time, so that they could apply them just at the time needed. There is no mistake about this; they will lose more, perhaps three times as much in many cases, than would pay for these things, if they had gotten them on time. There is scarcely a location now to be found where bee-hives and fixtures generally are not kept for sale by some one, and the nicest part of it is that these supplies are all the standard make of bee fixtures now used by all leading bee-keepers, and are of the kind which have proven successful in the hands of the expert, so no mistake can be made in their purchase. When you buy your hives and honey-boxes, smokers, etc., do not forget foundation comb enough to fill the frames in the brood chamber. Of course, it costs something to supply a hive in full with foundation comb, but it is by far the cheapest in the long run.



Jerusalem Artichoke.

ARTICHOKE
—FOR—
HOG FEED. 75 Cents Per Bushel.

SEED CORN—NORTHERN GROWN
Golden Beauty, King of the Earlies, Pride of the North, Champion White Pearl, Improved Hickory King, H. S. Co.'s White Perfection. \$1.00 Per Bushel. Sacked and delivered f. o. b. cars, Kansas City, Mo. **THE HARNDEN SEED CO.,** —WHOLESALE SEEDS— Telephone 1818. 505 Walnut St., Kansas City, Mo.

A Sure Preventive of Blackleg

Is Parke, Davis & Company's Blackleg Vaccine Improved. Ready for Immediate Use. No Expensive Outfit Needed.

All you have to do is to put the Vaccine in your syringe, add boiled water according to directions, and inject into your cattle. It will positively PROTECT your cattle from the dread disease, Blackleg, the same as vaccination prevents Smallpox in the human family. Specify Parke, Davis & Co.'s Blackleg Vaccine Improved, and get the kind that is sure to be reliable. EVERY LOT IS TESTED ON CATTLE BEFORE IT LEAVES OUR LABORATORIES. Write for Literature and Full Information, Free on Request.

FOR SALE BY ALL DRUGGISTS.

PARKE, DAVIS & CO., Detroit, Michigan.

BRANCHES: New York City, Kansas City, Baltimore, New Orleans, Walkerville, Ont., Montreal, Que., and London, England.

The Topeka Business College
LEADING SCHOOL OF BUSINESS, SHORTHAND, PENMANSHIP & TELEGRAPHY

Large School. Reasonable Rates. Good Position. Catalogue Free. Address L. H. Strickler, Topeka, Kans.

WHEN WRITING ADVERTISERS MENTION KANSAS FARMER.

In the Dairy.

Conducted by D. H. OTIS, Assistant Professor of Agriculture, Kansas Experiment Station, Manhattan, Kans., to whom all correspondence with this department should be addressed.

The Skimming Station as an Economic Factor in the Creamery Industry.

OBJECT.

Creamery companies, wishing to enlarge their business, so as to cover more territory, are quite generally accomplishing their purpose by means of what is known as skimming stations. These small plants contain enough machinery and utensils to handle the milk, skim the cream, and return the skim-milk to the patrons. The cream from the stations is then carried to the central factory, where it is mixed and ripened with the cream already received. With this system there is no expense in shipping tubs and salt back and forth, much less fat is lost in churning, and a more uniform quality of butter secured by having one expert butter-maker at the main factory, than by having an ordinary butter-maker at each receiving point. The expense of labor and refrigeration is also considerably reduced. When the main factory is located in the midst of a good market the butter can be packed into the dishes desired by the local trade and thus save tubs and the expense of extra handling of the butter. Of course there is the expense of transporting the cream, but this may be skimmed thick so as to contain 45 to 50 per cent butter fat, when the expense of transportation will be less than the butter, and its necessary accompanying supplies at points off the railroad. The skimming station operator, who usually gets through receiving his milk in the forenoon, is employed to haul the cream to the railroad station or factory in the afternoon. This gives steady employment to the operator, who can be hired at a less rate per hour than where he is employed only half a day at a time. By handling such large quantities of cream at the main plant the creamery can afford better equipment. In our larger plants a nightman is employed who attends to the stirring of the cream and keeping it at the right temperature. One of our Kansas creamery companies operates 142 skimming stations and ships all its cream to one central butter factory. Some of it coming as far as 400 miles.

Another factory in the eastern part of the state has 15 stations in Kansas besides a large number in Missouri, and all their cream is shipped to one place to be manufactured into butter.

LOCATION.

A new station should not be started within a radius of less than ten miles from the main factory or from any other skimming station. This gives a radius of at least five miles that is tributary to each station. Closer connections are liable to reduce receipts for any one station below a profitable basis. Creamery companies usually consider it safe to start a skimming station when a promise of 300 cows is secured. This makes allowance for the usual number of broken promises. A station can be run at a profit when it receives 3,000 pounds of milk for each running day (six days per week in summer and three days in winter). A skimming station should be located where there is plenty of good water, and if the cream is to be shipped by rail, it is well to locate near the depot.

EQUIPMENT.

The skimming station building, while it should be large enough to accommodate all the machinery and milk utensils and give plenty of room in which to work, should be compact and arranged so that the boiler, engine, and separator can be seen from the receiving platform, in order to save as many steps as possible. Although there are skimming stations of all sizes and shapes, those most highly recommended to-day are 16 by 24 feet, or 22 by 28 feet.

The actual equipment of a first-class skimming station (Princeton, Kans.), has been furnished the writer by Mr. J. A. Reh, the operator, and a graduate of the Kansas dairy school. It is as follows: Ten-horse power boiler (upright); ordinary iron suction-pump, set high enough so water will run into barrel (the well is on outside of building, pump on inside); 150-gallon receiving vat, set high enough so the top is level with the upper platform. The weigh-can emptying directly into it, through a vat strainer; to the vat is connected a 2-inch pipe (in which is the ideal heater), which leads to the separator. The skim-milk runs into a wash-tub, in the bottom of which is a jet-pump which forces it into the tank up on the platform. The 40-gallon weigh-can stands on a 2-beam; 600-pound Victor scale. The skim-milk scale is a 1-beam 400-pound Victor. Sterilizer is

DO YOU NEED A
CREAM SEPARATOR
THIS YEAR?

IF SO, let us send you a new catalogue, and also have the nearest local agent personally place the facts before you. Try a machine and decide in that way if you wish.

A De Laval Separator is as much superior to other separators as the best of such other separators are to setting methods. The poorer makes of them are mere fakes.

THE DE LAVAL SEPARATOR CO.

RANDOLPH & CANAL STS., CHICAGO.	General Offices: 74 CORTLANDT STREET, NEW YORK.	1102 ARCH STREET, PHILADELPHIA. 327 COMMISSIONERS ST., MONTREAL.
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similar to the Jensen. The receiving door is 6 feet above main floor, but there is an 18-inch drop on the side where the skim-milk is sent out; this is to allow enough fall so that the skim-milk runs directly into the cans which stand on the scales. The building is 16 by 32 feet by 12 feet high; the separator is a steam-turbine; a separate steam pipe supplies the separator; this is to make a more uniform pressure. Aside from these, the equipment includes an injector, twelve dollars' worth of piping, 4 dozen sample jars, a wooden sink, pails and dippers, brushes, mops, a milk sheet, and a day-book.

COST.

A good substantial frame building with good foundation piers, and properly equipped for station work, will cost under Kansas conditions from \$1,000 to \$1,200. The cost of operating such a plant for a year, not including salary of operators, which will vary from \$20 to \$40 per month, has been itemized by one of our leading creamery companies as follows: Fuel about \$80; oils, washing-powder, and brushes, \$15; other small items, \$15; natural depreciation of building and machinery, \$120; total \$230.

RUNNING ON COMMISSION.

A new system of hiring station operators has recently been inaugurated in a number of Kansas plants, i. e., to pay the operator in proportion to the amount of milk he receives at the weigh-can. Under this system the operator will take greater interest in his work, will do all he can to organize new routes, to encourage the patrons to milk more cows, and better feed and care for the cows they already have, and in general to leave no stone unturned that will in any way advance the dairy interest in that community. Enterprising station operators are receiving \$40, \$50, and \$60 per month, and in one instance the writer learned of a man that got \$100 for a month's work. Since the crying need of our creameries to-day is more milk, it would seem to be a rational proposition to use every effort to develop a skimming station operator from a man who knows barely enough to run a separator and is willing to work for \$20 per month, to a man who may be classed as a dairy expert, one who is willing to study the subjects of feeds and feeding, breeds and breeding, crop-production, milk-testing, or any other subject that will help the farmer to get more out of his soil, more out of his feeds, and more out of his cows. Many of our Kansas station operators are beginning to realize the importance of this phase of the subject and have arranged to take a short course of the Kansas dairy school in order to study more fully the patron's side of the creamery business. When this idea is followed out as it should be the skimming station will not only be a profitable investment, but will be an educational center for the community in which it is located. D. H. O.

Notes from a Kansas Dairy School Student in Northwest Iowa.

The land here in northwest Iowa is rolling and \$50 per acre is considered to be very high. This being the case, the farmers are being forced into raising a great many cattle, hogs, horses, and sheep, some very good specimens being produced. There were six span of draft-horses shipped out of the little town of Rock Valley the 16th inst., and any one span would weigh very close to 3,200 pounds. There are also a great many people interested in dairying, it being no very uncommon thing to find a farmer milking from 15 to 25 cows. The people here are mostly Hollanders and Germans and very fair dairymen, comparatively speaking, but as a rule they know nothing of balanced rations and little of dairy types and forms. It will be very hard to teach it to them under one or two generations, as anything savoring of newness or reform and advancement is regarded with suspicion by them.

The hand separator has just touched this place and while a great many are being put in and much good is expected, the results must be guessed at as yet. The plan adopted in putting them up here is to put in a machine for any farmer who has cows, instructing him how to run it and giving him a twenty-days' trial, by which time he will know what can be accomplished with it. About 90 per cent of them keep the machine. The size put up the oftenest is the 600-pound per hour capacity, and while it may at first thought seem large, yet it simply means less time put in each time used, and this being twice per day, it soon counts up to a point where it can be appraised in money value. The hand separator seems to be the solution of a great many tough problems, both for the farmer and the creamery man, as it keeps sweet milk at home for the calves and pigs and sends sweet cream to the creamery where it can be ripened to suit the taste of the butter-maker's customers. It is expected to produce and keep a harmonious feeling between the farmer and the creameryman.

D. P. YODER.

Loaning Separators to Farmers Free of Charge.

Mr. J. H. Ahlers of Colorado Springs has met with good success in handling farm separators and relates his experience in the following language: "I have operated creameries under all systems known during the past twelve years. I find the hand separator system far ahead of anything I have tried. It is the only system where I have found the farmer well pleased. Nearly all of my patrons are increasing their herds as fast as possible. I have 55 separators out, and have orders on my books for 20 more, to be delivered

To make cows pay, use Sharples Cream Separator. Book "Business Dairying" and Catalogue 287 free. West Chester, Pa.

U S U S U S U S U

It is very amusing to see how our "would-be competitors" now prate about

TESTS AND TESTIMONIALS

In the past they have been very fast to advocate tests, but they have been beaten so many times by

The Improved United States Separator

they are now trying to cast slurs on all tests and discredit all testimonials. When they were competing with inferior separators and they could sometimes beat, then

TESTS AND TESTIMONIALS

were in great favor with them and they were advising everybody to "put it right in the contract," but now that they are competing with a better separator they wish the public to believe that

Tests are Fake and Testimonials are Bought

claiming they are manufactured out of whole cloth and that it is impossible to locate the places or the persons. In this connection we call attention to the following statement and ask if they have any trouble in locating it.

Three U. S. Separators to one of all other makes

POUGHKEEPSIE, N. Y., October 23, 1900.

Fourteen years ago this month we started our creamery on the co-operative plan recommended by your agent, fitting the building with machinery from your Company, and using the Cooley Creamers for the patrons. We have run on this same plan for all these years until a year ago last month we put in separators. Our patrons are using more than three to one of the U. S. Separators over all other makes and we believe the U. S. Separator to be the best on the market.

We are still working the cream gathering plan and believe it to be the best for the rural districts, where unavoidably some of the patrons are a long distance from the creamery. We are satisfied with it because we believe it to be the best and the cheapest. No farmer can afford to hitch up and carry his own milk, even if he live within a half mile of the creamery, if he can get it done, as we have this year, at the average cost to each patron per day of 8 1/4 cents.

H. R. HOYT, President LaGrange Creamery.

As the main works of the DeLaval Separator Co. are located at Poughkeepsie, they are painfully aware that the LaGrange Creamery is right under their shadow and that there are so many more United States Separators than DeLaval's used right around them. They tried hard to keep the U. S. out, having as many as eight men canvassing there in their endeavors to do so, but Mr. Hoyt's letter shows how vain were their efforts.

Merit is sure to win, which is why the U. S. is so popular.

Readers will remember that these "would-be competitors" advertised that the separator business "is perforce productive of fraudulent claims and misrepresentations of facts." The dairymen can judge from this frank admission of theirs what they have been compelled "perforce" to do to get their tests and testimonials.

We have never been compelled to resort to dishonest methods or make dishonest claims or claim a Grand Prize at Paris, as our "would-be competitors" did, when the official lists of awards showed none was awarded them. How is this for a Fake Claim?

The Improved United States Separator

has merits sufficient to win without such dishonorable methods. It is acknowledged to be

The Standard Separator of the World

For further information and illustrated circulars, write

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

U S U S U S U S U

next month (December), and a number of orders for later on.

"The two best features of this system are, first, the farmer can raise his calves successfully; second, it saves any amount of hauling.

"For cream delivery to the nearest express office I paid for butter fat as follows: May, 20 cents; June, 18 cents; July, 18 cents; August, 19 cents; September, 20 cents; October, 22 cents. Profits have been very good. Our make ran as high as 800 pounds this summer. Considering the inquiries I have for separators, I expect next summer to make 2,000 pounds. Three-fourths of my cream comes from farmers that have been hauling milk for years to established creameries. I have not gone ten feet to solicit or to put out separators. I have made it a point to let the farmers come here and ask for them. I own the separators, but make no charge for their use, and I find, as a rule, the farmers take good care of them. I make each man sign the following contract:

"Running your own separator has everything in its favor. Nobody can come into your territory and overbid on cream and divide the patronage, which as a rule is a loss to both parties. Again you can get many more patrons. I have not found any objections to this system. My operating expenses are only half of what a power separator creamery would be, and I get all my business under one roof. I consider the hand separator the only system."

Testing Frozen Milk.

Mr. C. A. Gage, while a dairy student at the Kansas Agricultural College, had occasion to make a test of some frozen milk. The can received contained a layer of ice that remained fast to the sides of the can after the center, or liquid portion, had been emptied into the weigh-can. The portion that went into the weigh-can tested 4.6 per cent butter fat. The results indicated a great variation that may take place where milk is allowed to freeze and is not thawed out before the sample is taken for testing. Where every particle of milk is thawed before being sampled, no change in the per cent of butter fat is noticed from freezing.

Kansas Farmer's Handy Guide

Contributed from various sources, including correspondents, scrap-books, and farm papers. Compiled and arranged by J. Clarence Norton, Moran, Kans.

CASTRATING.

Safe and Easy Way to Cast a Horse.

—Take an inch rope 24 feet long and a ring large enough to admit double. Pass the center of rope through the ring, then pass the loop over the animal's head, letting it rest on the neck above the shoulders, and the ring on the breast. Then pass both ends of the rope between the fore legs and back between the hind legs, carrying the ends right and left and dropping them down around the fetlocks or cavities above the hoofs. By holding the ropes firmly and backing the animal he sits down easily, when the legs may be secured by the ropes. I have practiced this method for years and have never had a horse injured. I submit this for the benefit of brother farmers and horsemen.

Castrating a Hog.—A day before performing the operation, put a little meal in a barrel in the hog pen, as the animal will go in to eat the meal. When ready to castrate put some more meal in the barrel, and, as the animal is eating it, place one hand on the barrel, the other on the animal's leg or tail, raising the barrel quickly; then perform the operation.

Castrating a Hog.—Have a tight-fitting crate, with slide ends. Get hog in crate, tip crate over on side, remove tail-board and operate. Put in tail-board, right up crate, and open front end, letting hog out.

CATCHERS.

How to Catch a Chicken.—Take a piece of No. 10 or 11 wire, straighten, and bend back 6 inches at one end for hook, flare hook out 2 inches at point, and narrow back so it will not slip over foot. Now bend back 3 1/2 feet at other end, and twist it so as to make a handle and stiffen wire. With a little practice one can catch chickens very readily by hooking it over the leg of a chicken while standing, running or on the roost.

Device for Catching Chickens.—Make a movable trap for corner of yard by nailing 2 pieces of lath 1 by 4 inches across others of same size, making it as large as you please. Lean it up in corner so as to have one opening, in which your fowls will run, and you have them hemmed.

A Poultry Catcher.—Procure a broom-

handle, bore a hole in one end the size of a No. 9 wire. Then get a No. 9 wire the same length as the handle. Bend

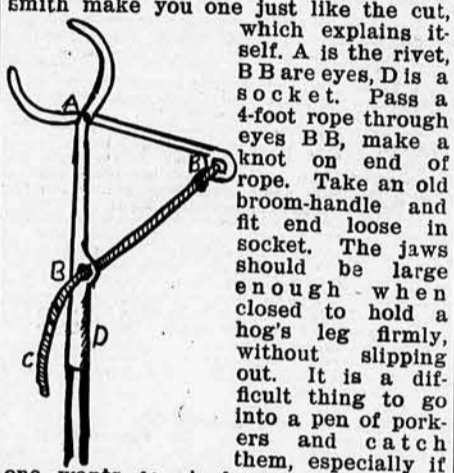


one end into a hook like illustration. The figures show how large to make it. Fasten the other end into the handle and wrap the hook with cotton cord so it won't hurt the chicken's leg. When you want a fowl throw down some grain and hook it above the foot with the catcher.

To Catch a Horse Quickly.—Take a stout wire about 4 feet long, bend the wire at one end into a loop in which to put the hand; bend the other into a hook. With this device you can easily get near enough to a horse to hook it in the halter, if he has one on. Take a couple of tablespoonfuls of sugar with you and feed it to the horse after catching him. After a few times he will quickly come for the sugar. This will save many hours of time spent chasing a horse around the pasture.

Coaxing to Catch.—When you go to catch the horses never fail to have some sweet apples or other delicacy in your pocket for them, and so avoid all trouble in catching them.

Handy Hog Catcher.—Have a black-



smith make you one just like the cut, which explains itself. A is the rivet, B B are eyes, D is a socket. Pass a 4-foot rope through eyes B B, make a knot on end of rope. Take an old broom-handle and fit end loose in socket. The jaws should be large enough when closed to hold a hog's leg firmly, without slipping out. It is a difficult thing to go into a pen of porkers and catch them, especially if

one wants to single out one animal. Take the catcher by handle in right hand, and rope in other. Hold it to the hog's hind leg, pull rope, and you have the animal fast. The cost is very small, and the farmer will find it a saver of time and temper many times during the year.

To Catch Small Pigs.—A handy thing to catch pigs where the sows are cross is to take a coffee sack and fasten the mouth to a hoop, and then fasten a pole (the same way as a landing net for fish), long enough to reach to any part of the pen, and in this manner pigs may be caught quickly and easily.

Catching Pigs and Chickens.—When wanting to move little pigs, pick them up by the ear, and you will have no squealing to alarm the old sow. When wanting chickens that are roosting above your reach, take a board and hold it under, and touching their feet, they will slip on it, and you will have no squawking. An old soldier said he had done it many times.

CATERPILLARS.

Destroy the Caterpillars' Nests on Fruit Trees.—Take a muzzle-loading gun; put a charge of loose powder, with little or no wadding, into the barrel, and fire into the nest. It beats kerosene and does not injure the trees so much.

Tent Caterpillars and Potato Beetles.—To destroy tent caterpillars, take a pole long enough to reach the nest, wrap a piece of cloth around one end, put on a little coal oil, light it, and hold it under the nest a few minutes. It must be done before they leave the nest. A good way to destroy potato beetles, is to take a hoe, using the end of the handle to push the vines aside to find the bugs, and the blade to pick them up, then treading on them; it saves a good deal of stooping. At the same time weeds left by cultivator can be destroyed.

CATTLE.

To Clear Obstructions in Throats of Cattle.—Cattle frequently choke on apples, potatoes, turnips, etc.: To remove obstructions, take a strap (backing strap preferred), and fasten tightly around the neck between the body and the obstruction, then gradually work the strap forward toward the head, keeping the object ahead of the strap, keeping the strap tight as it is moved forward; as soon as it reaches the larger opening it will fly out in the mouth. This remedy never fails.

To Relieve Choked Cattle.—Take of fine-cut chewing tobacco enough to make a ball the size of a hen's egg, dampen it with molasses so it adheres

closely, elevate the animal's head, pull out the tongue and crowd the ball as far down the throat as possible. In fifteen minutes it will cause sickness and vomiting, relaxing the muscles so that the apple or whatever may be choking it will be thrown up. This remedy was never known to fail.

To Relieve Cattle When Choked.—Give 2 ounces of fine-cut tobacco and place wood bit or stick 2 inches in diameter in the mouth, just like bridle bit. The tobacco causes the muscles of the throat to relax, and the bit, by holding the mouth open, allows all gas to escape. A sure cure and no risk. Fasten cord to each end of bit and tie to horns. Give tobacco clear or dry.

To Relieve a Choking Cow.—If cow gets choked with an apple or potato, holding up her head and breaking an egg in her mouth is a sure cure.

Relief for Choking Animals.—Take 8 feet of wire the size commonly used in fences. Double it in the center over a block of wood 2 inches thick and 1 foot wide. Twist the rest of the wire to the end and attach a handle. This instrument can be passed down a cow's throat until the loop is beyond the obstruction, when it can be easily withdrawn. This is much better than forcing the article down the throat.

Keeping Cattle from Choking.—To keep a cow from choking when eating potatoes and apples, which you wish to feed, tie a rope around the horns and to the foot to keep her from raising her head above a level; or, if in stable, fasten a block across the stanchion for the same purpose. To keep a cow from sucking herself, place a bar bit in her mouth; she can not curl the tongue.

To Relieve Choking in Cattle or Horses.—Insert in the throat a section of 1-inch rubber hose, fill hose with water and use as a drill. As soon as obstruction is forced down the water will lower in hose.

Confining Cattle.—To prevent cattle from going under 1-wire fence, for such are common in this country, take a large ring; one from an old saddle girth is just the thing; place it over the animal's horn. Fasten it there with a strap to the other horn. Now take a small pole 8 feet long; bore a hole in largest end through it; put a strap with buckle; run the small end through ring on horn, and buckle the other end to fore foot. This will not prevent them from grazing or lying down at will.

Cattle Mangers.—The best and most convenient manger in use here is made as follows: Make long boxes 2 feet wide and 6 or 8 inches high. Place them in front of cows directly on the floor. Hinge the side furthest from the cow to the floor in such a manner that

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—A CHEWER'S PHILOSOPHY.

A chewing tobacco a man can enjoy at all times with every confidence in its quality, purity, and cleanliness. No premiums are offered for chewing Wetmore's Best. It sells on its merits. It's all in the quality. Ask for it at your dealers.

M. C. WETMORE TOBACCO CO.,
St. Louis, Mo.
The largest independent factory in America.

they can be turned over a little more than a quarter of the way. When turned back they make an excellent manger and all dirt falls out of the feed trough. Then turn back again and the feed trough is ready for grain feed. The troughs are large and cattle do not waste their feed much.

Protecting Young Trees from Cattle.—Cut long branches of black-thorn, Osage orange, or other thorny wood; set about 4 around each tree, and tie securely with fodder twine. Trees so protected are safe from cattle, even in the pasture fields, lanes, or barn-yards.

Habitual constipation is the door through which many of the serious ills of the body are admitted. The occasional use of Prickly Ash Bitters will remove and cure this distressing condition.

...MEN...

Book for men only, explaining health and happiness sent free in plain envelope. Address
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Blood poisoning and all private diseases permanently cured. Permanently cured in a few days without pain or danger.

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Sundays 10 to 12.

Grange Department.

"For the good of our order, our country and mankind."

Conducted by E. W. Westgate, Master Kansas State Grange, Manhattan, Kans., to whom all correspondence for this department should be addressed. News from Kansas Granges is especially solicited.

National Grange.

Master.....Aaron Jones, South Bend, Ind.
Lecturer...N. J. Bachelder, Concord, N. H.
Secretary.....John Trimble,
514 F. St., Washington, D. C.

Kansas State Grange.

Master.....E. W. Westgate, Manhattan.
Lecturer.....A. P. Reardon, McLouth.
Secretary.....Geo. Black, Olathe.

The following interesting letter from Sister McCracken came to our office one day too late for last week's FARMER. It is in some respects unfortunate that the editor of this department lives so far from the headquarters of the FARMER. All copy must be in our hands by Tuesday of the week preceding the date of publication.

We have now no communications from any grange for publication. Officers and delegates of the state grange send in something for the good of the order. Only one state officer and not a single delegate has sent us a word for this department:

OAK GRANGE NO. 665.

I have been much interested in the reports of granges from various counties which, from time to time, have appeared in the KANSAS FARMER, and am pleased, as every patron should be, that the order is in a growing, healthy condition.

The last issue of the FARMER, in the page devoted to grange matters, contained something in addition, which must attract the attention of all interested grangers: "Things for Patrons to Think About." I am so wholly loyal to the welfare of Oak Grange that very seriously I studied the list to discover whereof, if in anything mentioned, we were amiss. As I read I checked up the result. I may be partial, but I came to the conclusion that Oak Grange is living the "Strenuous Life," and when weighed in the balance will not be found wanting. For twenty-eight years it has stood, a monument of faithfulness to the noble principles for which it was inaugurated.

There are still a number of charter members on the roll who are at present as actively interested in the progress of the order as in its days of infancy, when they gathered, a half dozen or more, in the little schoolhouse across the way from the comfortable and commodious home which the grange now owns and occupies. A truly fraternal affection exists among its members. Diligence and harmony guide all its arrangements.

The lecturer's hour has an important bearing on the educational progress of the grange. Our worthy lecturer, Sister Emma Wallace, has made the literary program a pleasant feature of every meeting.

Questions of great importance, which seemed to outsiders quite beyond chance of fulfillment, have been taken up and brought to a successful conclusion. For instance, Rural Free Delivery for this part of the world originated in Oak Grange. Petitions, letters, personal and official, besieged our representatives at Washington until it became a blessed reality.

And now, the subject of a neighborhood telephone is being agitated. Judging from the past it will be an assured fact at no distant day.

On the third Wednesday of each month, an all-day meeting is held. A tempting feast is spread and the "grange family" surrounds the board in happy reunion.

Six new members have been lately initiated into the mysteries of our order. The insurance department is also in a thrifty condition; the patrons generally availing themselves of its benefits.

Fraternally,

KITTIE J. MCCRACKEN, Secretary.
Mission Center, March 25, 1901.

The National Grange.

Patrons of Husbandry,
Office of Legislative Committee,
514 F. St., Washington, D. C.
To the Patrons of Husbandry of the United States:

The information we desire to convey at this time is the result of our conference with President McKinley upon legislative matters. During the closing hours of the recent session of the National Grange a communication was read from President McKinley inviting the members of the legislative committee to the White House at four o'clock the same afternoon for a conference. The members of the committee were greeted in an exceedingly cordial man-

ner by the president, who immediately entered into conversation in regard to the session of the National Grange just closed, and manifested deep interest in its deliberations and objects. In the most informal and agreeable manner the president inquired what position the farmers of the country took through the organization upon various matters, and manifested great interest in ascertaining what we desired to have done to aid the vast agricultural interests of the country. The president seemed to recognize the fact that the national grange is the only organization qualified to speak for the farmers of the entire land, and manifested toward the legislative committee, representing those farmers, a courtesy and consideration that was gratifying in the extreme. The legislative committee named various measures which the farmers are supporting, among them the Grout bill, the extension of free rural mail delivery, against false branding of dairy products, pure food bill, regulating and controlling trusts, and giving additional powers to the interstate commerce commission. The specific features of some of these bills were cited and the principle involved in all was stated. It was extremely gratifying to your committee to learn that the principle upon which this proposed legislation is based has the endorsement of the president of the United States. The president could not be expected to state his opinion to a committee upon specific bills, but he endorsed their principle and expressed great confidence in the opinions expressed by this great non-partisan farmers' organization that has given these matters close study for years, and analyzed its conclusions in a most comprehensive and gratifying manner. The farmers of the country have a friend in President McKinley in their efforts to advance the interests of this great fundamental industry of the country and one within the reach of a committee of their own number for conference upon legislative matters. The result should awaken interest and enthusiasm in the grange from ocean to ocean and more firmly establish its reputation for leadership in all agricultural matters:

AARON JONES,
E. B. NORRIS,
N. J. BACHELDER,

Legislative Committee National Grange.

Things for Patrons to Think About.

The well conducted grange makes neighbors more neighborly.

Granges should keep on petitioning Congress for the passage of the Grout bill.

Unless all the officers of a grange work together there can be no success in the work.

The patron who does not take a grange paper is like a Christian who has no Bible.

Grange entertainments by home talent go a good ways toward popularizing the order.

The fundamental purpose of the grange is to bring peace, prosperity and happiness to farmers' homes.

Grange meetings should be made so interesting that no member will want to stay away from a single one.

An intelligent patron recently remarked that next to his religion his grange gave him his most happiness.

If you wish to get along with your brothers and sisters in the grange, don't become overcharged with a sense of your own importance.

The grange in which the Golden Rule is observed by every member will prove a great blessing to the community in which it is located.

One reason you can not get your neighbors to join the grange is because you talk so little about the order.

No one should accept office in the grange who is not willing to prepare himself to perform the duties of the position.

The meetings of the subordinate granges furnish opportunities for bringing out some of the best thought of the day.

Regular debates make grange meetings interesting and instructive, if the subjects are not too difficult for those of average ability.

The granges which keep the educational and social features of the order prominent are the most prosperous and the most influential.

The time is here when the farmers of this country must fight for their

Time Savers are Money Savers

Did you ever stop to consider that when you have a big gang of men threshing at your place, with a big pay roll and a big board bill, that every time the machine stops for a moment you are losing money at a very rapid rate? If something goes wrong with the thresher or the engine, causing delay, you lose money. The remedy is to employ a machine so built and so equipped with conveniences and time savers that there will be no time wasted and no money lost by inconvenient stoppages.

The Nichols-Shepard Machinery

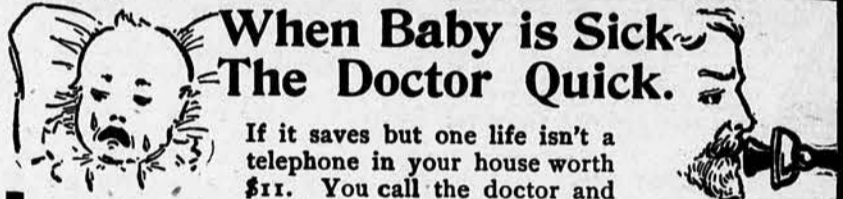


is of that kind. Take for instance the changing of the sieves in wind-stacker separators. In most machines this change is attended with much difficulty and loss of time. In most machines these sieves must either be poked down through an opening in the top or pushed up through an opening in the bottom. In either case the operation is a difficult one and loses lots of time. Now look at the cut and see how quickly and easily this is done in the Nichols-Shepard Separator. Just swing up the hinged opening and slide the sieve into place, drop the leaf and the thing is done. This method and all its train of advantages is peculiar to the Nichols-Shepard Separators only. It is but one of the many advantages that make it advisable for the farmer to employ them in his threshing.

If you want any Thresher Goods, apply to
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Send us your name and that of your nearest neighbor and the shortest distance from your house to his and we will send you full particulars and facts on Telephone construction worth while knowing.

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Have You a Farm?

If Not, Get One—And Get It Soon!

Ness County has some as good wheat farms as can be found anywhere and the wheat raised is amongst the very best raised anywhere on earth. Much of the land now offered for sale is owned by non-residents and is the same kind of land as that on which the good farms are made. The foundation to build a farm on is here, all ready for the plow, no grubbing, no stones, or anything to remove—ready for the plow to turn the native grass under. Here is where a man gets double pay for his labor: Once in the crop, and the second in the value he adds to his land, and frequently the third pay in a good crop of calves. The price of land is so low that most people who are not acquainted with the country do not believe it. Come and see me, or write, and I will send you copies of our weekly newspaper. A business man does not need to be told the same thing over and over. As soon as you have read this write to me,

SAM G. SHEAFFER,
Ness County. Ness City, Kansas.



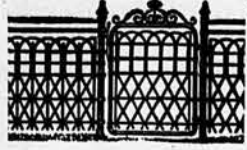
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DO NOT BUY WELL DRILLING MACHINERY until you see our new Catalogue No. 41 We will furnish it to you **FREE.** Write to our address, either **Harvey, Ill., Chicago, Ill., or Dallas, Texas.**

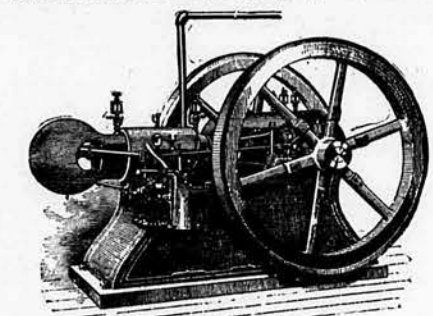
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DR. MILES' ANTI-PAIN PILLS.
At all drug stores. 25 Doses 25c.

rights, and they are able to wage a winning battle if all stick together.

The reason politicians play fast and loose with farmers is, they feel certain that farmers will always vote the ticket their ancestors did. Stand for your rights and you will get there.

Every subordinate grange should send out delegates to canvass from house to house and arouse the farmers to the important advantages to be derived from organization.

It is to the interest of farmers to keep step and they are foolish if they do not, for if they do not take care of themselves, others will not do it for them.

Strengthen the grange lines, get the farmers together, hunt up those who have stayed away from the grange meetings and get ready for the coming battle for equal rights and privileges.

If the grange meeting is dull, turn it into an experience meeting and give members a chance to tell how they cultivate certain crops. This would prevent the mistakes of one becoming the mistakes of many.—From Farmers' Friend and Grange Advocate.

From Pennsylvania State Lecturer.

Dear Brother Freeman: For some time past I have been wanting to say a few words to the many readers of the Stockman and Farmer along grange lines, for having been out in the field now for nearly five weeks and coming in touch with so many workers, I have come to realize more than ever in the past the unquestioned value of our order to the agricultural interests of this commonwealth, and doubtless what applies to Pennsylvania would hold good as a nation.

Come into a locality where our order is strong and the principles and teachings are closely adhered to, noting there the progressive activity of the people and the enlarged conception of the possibilities that we might attain by thorough organization, education and cooperation, then go perhaps into an adjoining township and note there the difference in sentiment, or I might say the indifference in thought, to many of the questions relative to our present and future welfare. Truly as I see the existing conditions it seems to me that the grange is not only a great benefit but an absolute necessity if ours, as the greatest of occupations, is to hold the position it ought by right to have. A portion of this week was spent at Harrisburg, our capital city, where with other patrons good and true we presented and pressed the grange side of the questions before committees of the law-making bodies. And here again, if farmers could only realize the power of united action when well directed, I feel sure they would accept the grange as never in the past.

I know your space is limited, and I must not write more; but I wish all could see the need of the grange as I do.—Fraternaly, Albert M. Cornell, in National Stockman and Farmer.

An Example of Success.

A man who is owner of one of the largest concerns in Chicago is an example of the success that may come from doing things well.

His first business venture was the making of haying tools. They were at that time by far the best tools on the market. There are none better to-day, and their sale still continues.

Then he invented a "Dictionary Holder," and coined that name. You will find it today in about every intelligent home in the country. You can find it wherever you go in the world.

The dictionary holder was made as well as it could be. It was made by the right machinery—made in the largest quantities—so that the price could be low. Any intelligent person who saw it would buy it, and he received the worth of his money.

This device made him a fortune. Then he turned to windmills, and he spent most of that fortune in learning how to make them right. He conducted five thousand experiments to learn how to make a wind wheel that would get the most power from a breeze. There were plenty of windmills that would work in a gale, but gales were uncommon. He started to make a wind wheel that would move in a zephyr. And before he made his first windmill he had devised a wheel that would move when all other wind wheels stood still.

Then he made a windmill to go with it. He took up each part and improved it. For each part that was used in a windmill he invented something better. He kept on until he had revolutionized the whole windmill business, and covered his improvements by fifty-five patents.

Then he invented machinery for making them fast and cheaply. He reduced the cost so that every farmer could afford one.

The difference between the windmills of to-day and of twelve years ago is almost entirely a result of his efforts. It was he who first introduced the most desirable features found in any windmill to-day. And success came so swiftly that his windmills now dot every country of the earth which is even half civilized.

The man is Mr. Laverne W. Noyes. The company he owns is the Aermotor Company, makers of more than half the windmills now sold in the world.

Use Rock Salt for Brine, Pickles, Hides, Meats, Ice Cream, Ice Making, Fertilizing and Refrigeration.

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SEND NO MONEY, out this advertisement and send to us and we will send you this **OUR HIGH GRADE DROP-HEAD CABINET NEW QUEEN SEWING MACHINE**, by freight, C. O. D., subject to examination. You can examine it at your nearest freight depot, and if found perfectly satisfactory, exactly as represented, equal to the highest grade sewing machines advertised by other houses at \$30.00 to \$40.00, and as good a machine as you can buy from your dealer at home at \$30.00 to \$40.00, the greatest bargain you ever saw or heard of, pay your railroad agent **OUR SPECIAL OFFER PRICE \$11.25** Give the machine three months' trial in your own home and we will return your \$11.25 any day you are not satisfied.

OUR \$11.25 NEW QUEEN SEWING MACHINE IS COVERED BY A BINDING 20-YEAR GUARANTEE, is made by one of the best sewing machine makers in America, has every new and up-to-date improvement, high arm, positive four-motion feed, very light running, does any work that can be done on any sewing machine made. It comes in a beautiful solid antique oak, drop head cabinet, as illustrated. Oak cabinet is beautifully finished, highly polished, elaborately finished throughout.

AT \$11.25 WE FURNISH THIS SEWING MACHINE COMPLETE WITH ALL ACCESSORIES, including 1 quilter, 3 screwdrivers, 6 bobbins, 1 package of needles, 1 cloth guide and screw, 1 oil can filled with oil, and a complete instruction book, which makes everything so plain that even a child without previous experience can operate the machine at once. **FOR 25 CENTS EXTRA**, we furnish, in addition to the regular accessories mentioned, the following special attachments: 1 thread cutter, 1 braider, 1 binder, 1 set of plain hemmers, different widths up to 3/4ths of an inch.

SEWING MACHINE DEALERS who will order three or more machines at one time will be supplied with the same machine, under another name, and with our name entirely removed, but the price will be the same, viz., \$11.25, even in hundred lots. **ORDER TODAY, DON'T DELAY.** Such an offer was never known before. **OUR \$98.50 UPRIGHT GRAND PIANO IS A WONDER.** Shipped on one year's free trial. Write for free Piano Catalogue. Address your orders plainly to **SEARS, ROEBUCK & CO., CHICAGO, ILL.**

The Three Million Acre FARWELL RANCH in the Panhandle of Texas FOR SALE IN TRACTS TO SUIT.

The land is largely chocolate or black sandy loam, deep, rich, capable of producing forage crops in great abundance. It is thickly coated with buffalo, mesquite, grama, sedge and other choice grasses. Rainfall ample for production of forage crops, grasses and fruits. Admirably adapted for Grapes, Pears, Peaches, Apples, Plums, Melons, etc. An inexhaustible supply and excellent quality of water is procurable at an average depth of 125 feet.

The altitude varies from 2300 feet at the south to about 4700 at the north. The temperature is equable and the climate unexcelled for healthfulness. This is the best cattle and stock breeding country in the world. Panhandle cattle are of very superior quality, a carload of steers bred on this Ranch having been reserve number for the grand champion carload of fat steers at the International Live Stock Exposition in Chicago, December, 1900. The stock subsists on the pastures the entire year, finding very nutritious food in the cured native grasses. This is an unprecedented opportunity for those desiring to engage in the stock farming business or for investors willing to hold for appreciating values. The small ranchmen in the Panhandle have made more in recent years for the capital and energy invested than the farmers in any section of our country.

The Ft. Worth & Denver City Ry. traverses the north end of this land, the Pecos Valley and Northeastern Ry. (part of the Santa Fe system) the south end, and the Chicago, Rock Island and Pacific Ry. is constructing a line from Liberal, Kas. to El Paso, Texas, which will soon traverse the middle of it.

Title perfect. Will be sold in solid blocks to suit purchaser for cash or very liberal time payment.

To inspect lands call on A. G. Boyce at Channing, a station on the Ft. Worth & Denver City Ry. in Hartley Co., Texas, and for full particulars write him or Wm. Boyce, agent, Amarillo, Texas; or Geo. Findlay, agent, 148 Market Street, Chicago, Ill.

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The Kansas Farmer office is equipped with all the needed presses, type, and other materials for doing the highest grade of book, catalogue, and newspaper printing. For several years this has constituted a considerable part of the work of this office. We do not execute the ordinary commercial job printing. This can be obtained at the office of your home paper and ought not to be sent away. But if you have a book or catalogue of any size to print, a first-class job can be had at the Kansas Farmer Office, Topeka, Kans.

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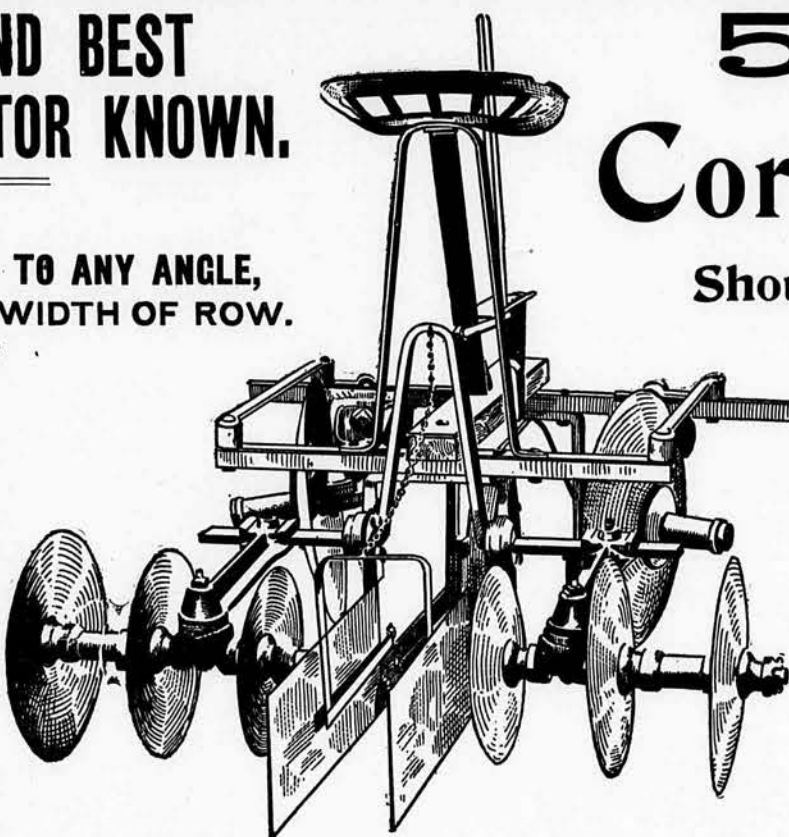
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