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Correspondence invited.

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Young stock at all times. Satisfaction guaranteed.

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Poland-China Swine, Short-horn Cattle,
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Herd headed by Anxiety 20261 A., assisted by Com-
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Choice young bulls for sale now. Visitors welcome.
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Choicest stock for sale of both sexes. We will sell
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Also eggs for sale from Black Langshans scoring
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Butler's Darkness No. 6846 S. and Ideal U. S. Nemo
at head of swine herd. Only choice stock shipped
on order. Sows bred and a few extra good young
boars for sale. Three are out of my Orient sows.
Write your wants. Satisfaction guaranteed.
BERT WISE, Reserve, Brown Co., Kas.

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CHESTER WHITES AND
POLAND-CHINAS. Light
Brahma eggs \$1.50 for 15.

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300 head, registered or eligible. Boars in service,
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Breed and have for
sale Bates and Bates-
topped Short-horns
—Waterloo, Kirklev-
ington and other fashionable families. Also breed
and have for sale the best thoroughbred Poland-
Chinas that can be obtained. Write or come and see.

(Breeder's Directory continued on page 16.)

Agricultural Matters.

PLOWING AND PRESERVATION OF MOISTURE.

A paper read by Martin Allen, at the Ellis County Farmers' Institute, at Hays City, Kas., December 6, 1894.

In the outset let me inquire what sort of a plow was Cincinnatus using when called upon to become dictator of the Roman empire? And was he using the same old crooked stick for a plow to stir his four acres when the messenger went after him the second time for a like purpose? What sort of a plow was Gen. Putnam using when he left his oxen standing in the furrow that he might proceed with unusual haste to the defense of his country? Was the mould-board entirely of wood, or was it plated with wrought-iron? It was probably the former. That was nearly one hundred and twenty years ago, while Solon Robinson, in his "Facts for Farmers," tells us that ninety-seven years ago one Charles Newbold, of New Jersey, had spent what was then a princely fortune (\$30,000) in a vain endeavor to introduce the cast-iron plow and gave up in despair, leaving the American farmers wedded to their idols, the old wooden plow. These were the good old times that some are still hankering for, when ignorance prevailed. Witchcraft was generally believed in, and some even maintained that these cast-iron plows poisoned the ground and rendered it unproductive.

Our present style of plows, made of steel, did not come into use until about forty-five years ago. They were the outgrowth of efforts to cultivate the soil on the prairies where the cast-iron mould-board could not be made to scour.

All the later styles of plows are intended to turn over the soil, or, in other words, to bury the surface soil and at the same time turn the subsoil to the surface, at least to the extent of the depth of the furrow. This we believe to be wrong in principle, notwithstanding its universal practice, because the elements of greatest fertility in all soils undisturbed, is found at the surface. With the proper conditions of moisture, seeds germinate most freely near the surface; roots of trees and young plants of all sorts seem to strike most freely and to grow most rapidly very near the surface of the soil. Then, why bury this best part of the soil below its place of present usefulness? It may be true that these best elements in time again come to the surface, where they are most available; but to wait for their return is a waste of time and often may result in the loss of a crop. Therefore, I apprehend that the best results may be obtained by stirring the ground deeply—the deeper the better—once in three or four years, without turning it over, as is now practiced, and for the intervening time to cultivate quite shallow but often—the oftener the better.

Deep plowing, as usually practiced, is a delusion, because in our driest seasons the soil dries out as deep as the plow goes, and in seasons of quite fair moisture with the subsoil or the soil from the bottom of the furrow brought to the surface for a seed-bed, the best results cannot be obtained.

About forty years ago, or rather more, a boom upon deep plowing swept over this country. It was led by that eminent philanthropist, Horace Greeley. He induced his warm friend, the great showman, P. T. Barnum, to use an elephant to aid in plowing deeply a part of his magnificent estate at Bridgeport, Conn., but tradition has preserved no record of the crops that followed. I think it quite safe to conclude that these crops did not compare in yield or magnificence to the effort put forth to get them.

These booms follow each other quite rapidly, sometimes upon one subject and then upon quite another. They seem to be the escape-pipe for the enthusiasm of the best talent and most heroic devotion to the public good. During a lifetime they reach many subjects, not omitting war and politics. The persons prominently engaged in them are generally patriots and their intentions are for the betterment of

themselves and their race. But, alas! how often they do fail, for the want of the most mature consideration or the fullest details in facts and figures; but oftener by insisting upon applying the facts and figures obtained in one locality to another locality, where the conditions are somewhat different. The difference may be only slight, yet enough to upset and bring to naught the nicest theories and even the most stubborn facts from the other locality.

The boom now on top in western Kansas is irrigation. Much of the best talent of the country is engaged in advocating it, and much good will grow out of it; but the wasted effort probably never will nor never can be fairly and properly estimated. We are getting many nice stories of the results of irrigation, but a great truth upon one piece of land may turn out to be a great lie on another piece of land, even in the same locality. I do not want to discourage irrigation, but rather to admonish people to consider it carefully in the beginning and to go slow in the start.

It is well known that with eighteen or twenty inches of rainfall well distributed we can raise good crops of wheat, and that with ten inches more we can do well with corn and potatoes. But without the clouds as an accompaniment of so much rain, without the moisture left in the atmosphere, without the consequent dews, and without the ammonia and other fertilizing ingredients coming with the rain; with a dry atmosphere and hot wind that so rapidly suck up the moisture from an already dry soil; then and under these conditions, how much water will it take to raise a crop of wheat or corn? Does any one know, or does any one have any idea of the amount? I mean here under the conditions existing throughout the most of the western half of the State of Kansas. These conditions, be it remembered, are quite different from such as are found in narrow valleys, surrounded by snow-capped mountain peaks. There the atmosphere is cooled to begin with and the water is already fertilized by the sediment washed down from the mountain sides. Here the water might be fertilized by running it through tanks and vats supplied with manure, but very much of it at best would be taken up by the hot and hungry atmosphere.

Yet, wherever water can be had in plenty anywhere from eight to fifteen feet below the surface, and a chain pump can be constructed to be run by horse-power and throw a stream, say, six inches, or filling a spout made by nailing four fence boards together, then under such or somewhat similar conditions it might do very well to water a garden of two or three acres, or possibly a farm the size of that tilled by Cincinnatus, and where this can be faithfully done there is almost no limit to the amount of human food that can be produced on a limited area. But, beware, I beseech you, of the temptation of trying to irrigate broad acres when water to do it with has to be raised forty or fifty feet and the volume limited at that.

I find myself dwelling upon the application of moisture, or rather giving caution against injudicious efforts to apply it, instead of its preservation.

The deep stirring of the soil, as already suggested under the head of plowing, would be one of the ideal ways of holding large volumes of water and preventing much of the surplus rainfall, that comes at times, from passing rapidly away towards the larger waterways. When once caught in the deeply-loosened soil, one of the best means of holding it there, is to stir the surface quite shallow, but often. The earth itself is full of minute pores, through which the surplus water finds its way into the soil. By these same pores this water rapidly escapes whenever a hot dry atmosphere presents itself; and the best means of preventing it is by stirring and disturbing the surface, disorganizing, breaking up, or cutting off these pores, and by this means preventing the escape of moisture from the soil.

Another means of preventing the escape of moisture from the soil is mulching. This may be done with manure, which will be found an excel-

lent thing to prevent evaporation when spread upon the surface of the ground; while if the same manure be plowed under, as usually done, it only promotes evaporation from the soil, and in this way, instead of being a blessing it may be of great damage in cases of severe drought.

Succulent vegetable growth, while it is promoted by moisture, both in the soil and atmosphere, is one of the leading factors in transmitting moisture from the soil to the atmosphere, and therefore should be promptly discouraged and prevented so far as possible in all useless things.

A heavy crop of useless weeds while growing uses up more moisture than a useful crop of grain; therefore, all such useless incumbrances to the soil are to be cut off in the physical world as carefully and as thoroughly as the use of profane or untruthful language should be in the moral world.

We have all of us very often seen where perhaps a good farmer or gardener, being overburdened with cares, had let a rank growth of weeds completely cover a piece of ground and keep possession of it until the seed was ripened. The crop was dry and the ground with all the moisture sucked out of it. Then, with more leisure time to go at it in the fall or early winter, for the mere looks of it, burn off the weeds and plow the ground. It would have been much better to have left these weeds upon the ground until spring to have shaded the ground and perchance have caught a large volume of snow drifts, and by this means have transmitted much moisture to the soil in compensation for the damage that had been done. A better course, however, would have been to have disposed of these weeds while in the most active stage of growth, either by mowing them and leaving lie as a partial mulch to the ground and shade from the sun or by plowing them under as a green manure. Then, when necessary to clear a patch of rubbish, the usual plan of burning is of very doubtful utility. All such stuff, including even corn stalks, it seems to me, had better be cut into short pieces and left upon the ground, where they grew as a partial mulch and a limited aid in the preservation of moisture. So far as this saving of moisture is concerned, it seems to me that a fire is always a misfortune, let it be either in the garden, upon the farm land, on the prairie or in the woodland, most of the materials consumed being factors in the preservation of moisture, either as a mulch, or by their influence as a shade, and a cooling influence from the direct rays of the sun.

Hedges, wind-breaks of trees and other defenses against winds, also, have their effects in withholding evaporation and thus preserving moisture, so far as they control the winds beyond the reach of their own growth.

When plowing in the ordinary way, it will be found quite beneficial to use the harrow every half day to smooth down the newly-plowed ground, thus very much reducing the surface exposed to the drying influences of sun and wind, or maybe, better still, to use a float that will leave the plowed surface more smooth than the harrow and slightly more compact, and thus providing a finer seed-bed for the crop that is to follow, and at the same time providing against such rapid evaporation of moisture as would have otherwise taken place.

I now come to the most prominent and leading feature in the preservation of moisture, a plan that I had the honor to advocate as long ago as the spring of 1880. It has received quite widespread attention, but has not been put into practice yet, at most, not very much. I refer to the plan of making dams—small dams and a great many of them. By this means it would be possible to hold nearly all the water that fell from the clouds. To do this it would be necessary to begin at or near the head of each draw or canon and make numerous dams throughout its whole length. Two or three dams near the lower end of such dry waterways will not do, because they can be depended upon only to wash away with each recurring flood without the restraining influences of the many dams

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Pills that I received anything like permanent benefit. A single box of these pills did the work for me, and I am now a well man."

C. H. HUTCHINGS, East Auburn, Me.

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Medal and Diploma at World's Fair.

Ask your druggist for Ayer's Sarsaparilla.

above them, where great volumes of water will be kept from reaching the lower grounds. "But," says one, "I don't see how these small dams spread all over our fields and waste lands would be available for watering our cultivated grounds." To this I have to reply that, as most of the elements of growth come to our crops by and through the atmosphere, that it is of very much less importance that our soil be moist than that the proper degree of moisture be contained in the atmosphere itself; therefore, if we improve the air in moisture the soil will naturally take care of itself. Our soil is dry and unproductive because the atmosphere is dry and hot and robs the ground of the moisture that falls upon it. Our atmosphere is dry and hot because the slope of the country is such as to carry most of the water that falls upon it away toward the sea with more than ordinary haste, and the remedy is simply to retain the water that does fall from the clouds, and let its cooling and moistening influences be applied to the atmosphere. It takes water to make rain, and in our times of greatest need we have to get it from the Gulf of Mexico, and then it most always comes too slow. Let us keep a supply always at home, gathered from the last heavy shower, and thus we can regulate to some extent the rain service. In this way can the whole country be re-deemed and made productive; while by the plans proposed for irrigation, only a very small proportion can at best be reached, probably not more than would be represented by five or six threads, should the whole country be represented by a blanket.

Have not all of you often noticed when corn and other vegetation was withering, during some of our hot days, how it would be revived the next morning, solely on account of the cooler atmosphere during the night? None of you will pretend that this revival was from any influence of the soil; no rain had come and no dew had fallen; only a rest of a few hours from the parching hot sun and drying winds had produced the change. Now, if we could only improve a little upon this all would be well. Suppose, in addition to this rest for the night, that our growing corn before tasseling could get moisture enough from the atmosphere to fill its cups on its tops each night, it would grow freely, even if the soil was dry. This condition, I maintain, can be brought about and quite rapidly, too, for the whole country, while it cannot be done at all by the systems of irrigation proposed, only to the extent of 3 or 4 per cent. of the whole country. If all of the semi-arid regions east of the Rocky mountains could only be systematically organized

by its people for working the roads, and as much time, energy and skill expended to save moisture as has been put forth by the people of the Middle States to get rid of it in working their roads, and then use the same amount of diligence in making dams, ponds and reservoirs wherever practical in our fields and pasture lands to preserve moisture, that these people of the Middle States have already spent in draining their lands and getting rid of their ponds and swamps, and a mere tithe of the work in planting and cultivating trees that our friends in the East have expended in the destruction of their magnificent forests. Then, when we have proved ourselves faithful over these few things we will have become masters over many things. Then our atmosphere would be as much more moist as that of the East has become more dry in the past lifetime. Our hot winds would only be known in the history of the past. We would be favored by gentle rainfall. Our crops would be regular. Our winds would be no longer noted for their great violence. Weeds would no longer be found growing in the channels of our main watercourses. The dews of heaven would abound and nightly kiss the otherwise parched crops of the husbandman and cause him to rejoice with exceeding gladness. The beautiful thoughts of the Deity will find expression in the full development of his handiwork, as exemplified in the choicest fruits and flowers; the irrigation boom will have subsided, and we will have become a happy and contented people.

The Stock Interest.

THOROUGHBRED STOCK SALES.

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

OCTOBER 4—Winterscheidt Bros., Horton, Kas., Poland-China swine.
OCTOBER 9—Geo. W. Null, Odessa, Mo., Poland-China swine.
OCTOBER 22—F. M. Lall, Marshall, Mo., Poland-China swine.
OCTOBER 23—C. G. Sparks, Mt. Leonard, Mo., and G. L. Davis, Elmwood, Mo., Poland-China swine.
OCTOBER 24—L. C. Sydnor, Corder, Mo., Poland-China and Berkshire swine.
OCTOBER 30—L. N. Kennedy, Nevada, Mo., Poland-China swine.

THE HORSE INDUSTRY.

By F. H. Avery, Wakefield, Kas., before the Kansas Improved Stock Breeders' Association.

It seems almost like a punishment after death, for a horse breeder, buried under this era of complete depression, to be dragged forth by the relentless Secretary *pro tem* of this association to talk upon the subject of all subjects the most painfully uninteresting at the present time.

I feel that I shall perhaps be cruelly imposing upon the patience and long suffering of horse breeders, however I may approach the subject. Treated seriously it seems like trying to be philosophical under a spell of the toothache; treated lightly, it seems like making merry at a funeral. But really, with one institution engaged in manufacturing horse beef for the poor "heathen Chinese" and another making them up into chicken feed for the whole world, the situation appears to have come to a pass bordering on the ludicrous. Why, it is getting up our way so that a horse breeder can no longer get into elite society. If he is an old-timer and confirmed in the business, he can't even get into debt. I have not heard yet whether he can get into jail or not, but I presume he would be admitted to jail without bail. An ordinary "scrub" cattle man suffers us to enter his circle, but a swine breeder or poultry producer simply cuts us cold. Yet it was not always thus. Time was when we horse breeders belonged to the aristocracy and enjoyed the privileges coincident thereto. We could spend money faster than we were making it, and overdraw our bank account with impunity, and owe more than we were worth; and I fear that a good many exercised all of these prerogatives. But things have been going from bad to worse, and it is no wonder that my stolid, patient German neighbor, who is also in the horse business, bursts out with the very pertinent exclamation: "Dish horse pishness is getting no better faster." About the only consolation left us is that which

the negro lad took to himself when he philosophically ejaculated that he "would a heap sight rather be a was than a never-has-been."

I have deviated somewhat from the topic assigned me because, as I believe, there is a question far more important than matters of detail, confronting all horse breeders to-day, one which we breeders of improved horse stock have got to answer to the satisfaction of our patrons. It is the stereotyped interrogation: "Does it pay? Is it going to pay to raise horses in the future?" A year ago and two years ago we told our patrons that it did pay to raise choice draught horses, fancy drivers and good roadsters. But there is no use of beating around the bush now. It don't pay to raise horses at the present prices. As to the future, we may, of course, shrewdly conjecture.

The conclusion arrived at by nearly every breeder who has given the matter careful study is that the prevailing low prices and lack of firmness in the horse market are due to the general business depression that pervades the whole country. We are but suffering in common with every other industry. The conclusion seems reasonable. The policy of every business concern for the past year and a half has been rigid economy. With the falling off of trade there came, as a natural consequence, a corresponding reduction in the demand for horses. But that this general depression will last for any great length of time, no one believes. We are experiencing the results of a collapsed boom. As soon as business gets readjusted upon a sound basis a reaction is certain, and with a reaction of business in general will come a renewed active demand for horses.

To my mind, in the light of these facts the future outlook of horse breeding is very satisfactory indeed. But there are a good many people who are exceedingly skeptical on this subject. They pretend to figure out that we have got on hand an immense over-supply of horses to meet a constantly decreasing demand. "Bicycles," they say, "have shut off the demand for an immense number of horses," and then they paralyze you with the dolorous prediction that the wonderful application of electricity is going to ultimately eliminate the horse from the field of usefulness which he now occupies, coupled with the solemn advice to abandon the horse business before it is everlastingly too late. I presume we may safely place this prediction in the same category along with the perpetual motion prophecy and the end of the world prophecy, and all the other kindred hallucinations. It is evidently the result of a disordered stomach or a torpid liver. It must be admitted, of course, that bicycles, to a certain extent, and the application of electricity to a considerable degree, limit the demand which has heretofore existed for horses. But there are, either operating now, or certain to be felt in the near future, other causes and circumstances tending to materially increase the demand, sufficient, I believe, to at least neutralize the depressing effect which the causes before mentioned have exercised. Since the advent of modern paving stone it probably requires two horses to do the same period of service that one did before. Under the impetus of irrigation immense areas of arid land are being brought rapidly to a higher state of cultivation. The large farms of the country are being subdivided and subjected to a more thorough system of cultivation, all of which will call into requisition more horses. The importation of horses, even for breeding purposes, has practically ceased. We are beginning to export horses to European countries, and in time will no doubt build up an extensive export trade with these countries. Mexico, Central and South America, as in everything else, are beginning to look to us for breeding stock with which to improve their native horses. The Pacific islands are taking considerable numbers of our horses. The Southern States of our own country used to purchase but comparatively few horses in our Northern markets, but for the last few years they have been enjoying a period of

remarkable growth and development, and with other causes operating to assist, they now, probably, call for more horses annually than the street rail ways ever did. Saving the influence which the present hard times have exerted on the market, it becomes evident that the demand for horses is as great as it ever was and is likely to remain about constant with the chances in favor of an increase.

But what about the supply? With the demand constant, if we know the supply we may conclude whether the future prices will tend to be higher or lower. It is a theory with a good many that, in general, markets may be forecast with about as much—or perhaps I should say as little—certainty as the weather, and there is considerable evidence in support of it. Undoubtedly the men who bought corn on last October's market would testify in its support, and the speculators who dealt in wheat one and two years ago would add their testimony. And I presume that the KANSAS FARMER, which some of you will remember made quite an exhaustive review of the cattle industry a few years ago and predicted an early and extensive shortage in the beef supply which has failed to materialize up to date, would concur with the rest. But the horse market moves in a groove of its own. When cattle and hogs are ripe they must be sold, whether the market is favorable or not. When the new crop of wheat and corn comes on, the bins and cribs must be cleared to make room for it; hence there is never much more than a year's supply of these commodities on hand. With the horse market different conditions exist. It takes fully five years to mature a horse ready for the market, and they remain salable for four years and many of them longer. We may, therefore, find ourselves in this condition—with an over-supply of marketable horses to meet the demand and four or five full crops of younger ones still coming on. The first effect will be a decrease in prices, which again will probably cause large numbers of horses to be carried over in anticipation of better prices; but their increasing age would eventually force them onto the market along with the crops of younger ones that have been coming on, having the effect to still further depress the market.

Now if, in the meantime, severe depression has overtaken the business and breeders have become discouraged and are sacrificing their brood mares, and even forsaking the business, there is certain to be a marked decrease in the supply of horses. That there has been an unmistakable falling off in the extent of breeding here in Kansas is a fact familiar to us all, and distinctly and emphatically so to stallion owners. In my own section of the State the decrease is as great as 75 per cent., and I presume that this is not far from the average for the entire State. Kansas seems to be a pretty good index for the whole country. A year ago a prominent breeder of Illinois sent out a thousand letters of inquiry to all parts of the United States and Canada, and with the exception of about twenty-five they answered that "the farmers in this vicinity are giving up breeding horses." A commission dealer of Boston writes me that he is handling large numbers of mares, from 7 to 9 years old, of excellent type. They have evidently been kept for brood mares. He says that these and other circumstances lead horse dealers there to the conclusion that there is going to be a short supply of horses at a not very distant date. Briefly stated, then, the conditions are these: We have a decreased supply to meet a constant demand with; and the effect, other things being equal, will be an increase in prices. But the change may not become perceptible for a year or longer, and we may scarcely expect prices to get back to what they were once.

In the meantime shall we simply hang on with patience and grim determination and a never-wavering faith in the business, consoling ourselves with joyful anticipations, something after the manner of the darkey who "liked to have his shins kicked because they felt so good when they

quit hurtin'." It seems to me that now is a golden opportunity to correct some mistakes, to make some needed reforms. [What follows I have dedicated especially to our scrub cattle friends, who have so kindly extended the mantle of charity in this hour of adversity. They don't, of course, know very much about horses. It is largely in the nature of instruction.]

Well, we have been taking municipal reform, legislative reform and tariff reform in allopathic doses for some time, but the system of horse breeding has been crying for reform in vain. In the palmy days of the industry the character of the market permitted the utmost latitude in management. Careless breeding, careless feeding, and careless preparation for market were the rules, and even then almost every kind of a horse found a buyer at a price generally remunerative. Certainly, even then, the more judgment exercised in breeding and the more care used in feeding and the better the preparation for market, proportionately greater were the returns, but, generally speaking, all classes of horses yielded a profit to the breeder. The prices of other stock fluctuated widely, leaving a balance sometimes on the right side of the account and often again on the wrong side, but the prices of horses remained uniformly high and the balance steadily on the right side of the account. People began to believe that the demand for horses was a constantly increasing one and that the market could never be glutted, with the natural result that everybody wanted to get into the horse business. Men borrowed money and went into the business and others took it up as a kind of a genteel side line. Well, the latter have been finding all that they could attend to in their legitimate pursuits of late; and most of the fellows that borrowed money and invested it in the business took it out in experience and paid their creditors in the same commodity.

Yes, there is getting to be considerable more elbow-room than there used to be. But to return: In the early rush for grand-stand privileges, we selected sires from every known breed under the sun, with results equally as diversified. For mares to breed from we saved the good, bad and indifferent. If they were balky or blemished or vicious, worthless to work and impossible to sell, we saved them, just the same, to perpetuate their infirmities. What are the results? The quality of the horses in Kansas is probably not above what it was five years ago. Another cause has helped to bring this about. There is a tendency all the time for a man to sell his good horses and keep his poor ones. Not that he wants to do so, but the buyer wants to buy them. The good ones are nearly always the fat ones, and the harder the times the more likely the owner is to part with them. The remedy is not to keep the inferior ones fat and the good ones poor, but to keep them all fat and keep the inferior ones in sight and the good ones out of sight.

But to return to the matter of sires and dams. There is a whole lot of horses eating their heads off in Kansas this year that were sired by nothing in particular but damned by everybody in general. Administer a dose of reform here. Begin a little ruthlessly, as the custom is. Weed out every undersized, blemished or inferior animal and dispose of them. You probably won't get very rich from the proceeds, but it will, nevertheless, be a sagacious business transaction fraught with good and lasting results. While the reform movement is on don't spare some scrubby old mare because she raises a colt every year. Every colt she raises will run you in debt. Ordinarily these measures of reform would seem unnecessarily rigorous, but the exigencies fully demand them and the conditions are ripe for them. There will never be a more advantageous opportunity to replace cheap, inferior animals with good ones than the present time affords.

Lastly, fix an ideal and keep it ever in view. Whether you are an admirer of trotting horses, or coach horses, or draught horses, do not mix them up with the hope of getting a general-purpose horse. Life is too short for ordinary horse breeders to establish any more types of horses, and our posterity may take to the poultry business.

THROAT DISEASES commence with a Cough, Cold or Sore Throat. "Brown's Bronchial Troches" give immediate and sure relief.

Irrigation.

POTATOES BY IRRIGATION.

[Mr. A. H. Cox, of Quincy, Kas., permits us to lay before the readers of the KANSAS FARMER the following valuable letter from Senator Boyd, of Greeley, Colo., showing how are produced the potatoes which have astonished the world and are making the farmers of that vicinity rich. The letter should be read carefully by every potato-grower, even if he do not irrigate, for it contains valuable suggestions to every grower.—EDITOR.]

GREELEY, COLO., April 6, 1895.

I have just received your letter, asking advice concerning irrigating potatoes, etc.

I would say that your pumping plant that you say has a capacity of 350 gallons per minute is a most valuable one, provided your water supply can keep it steadily going during the irrigation season. This is nearly equal to two second feet [two cubic feet per second] and if kept going night and day should afford water enough to irrigate 300 acres.

By no means think of flooding a potato crop. If the ground is not moist enough to plow well in the spring, flood before plowing, and then after plowing, if the weather is dry, harrow down to keep in all the moisture you can. If lumpy, run over with a clod-crusher. We plow deep here—some ten inches deep. We keep from irrigating as long as the plants are thriving, preferring not to put on the water until the crop is in bloom. By this time we have cultivated about as deep as plowed three times, throwing the soil up towards the plants the last two cultivations. Then we run through with a lister or shovel plow with wings, as deep as we can run it, usually putting on two horses with a long evener.

If you have not water enough to get over the field as fast as you want, it is better to furrow out every other row and follow up with the water. Then furrow out the other as soon as you see the crop is needing it. I prefer to run the rows east and west rather than north and south, if the lay of the land permits. The rows do not dry out so soon, in my opinion. Your success will depend largely upon the evenness and gentleness of the slope of your rows. From fifteen to twenty feet to the mile is best. With a uniform slope of this degree, I have run water for 160 rods in the rows. If the slope is less the rows should be shorter, since, in order to force the water through to the lower end, one has to turn so much into the upper end that it fills the rows up to the top and the soil bakes and with us the potato scab results. If the rows are steep only a small head must be allowed to run and let run long enough to wet through into the centers and under the rows. A little wetting on the outside of the rows is no good. You can know whether the work is thoroughly done only by digging into the center of the row as deep as the soil is plowed. How often a crop needs to be irrigated, depends upon so many contingencies that it is not possible to lay down rules. Here we irrigate from two to four times, according to the thoroughness with which the work is done and the dryness of the weather. Small showers are not of much use but are better than a sand-storm or a hot wind, the latter of which we are not much troubled with this near the mountains. In general, it may be said that it is the roots that need moisture, and any surface wetting that does not reach them is of no use further than reducing the temperature of the soil, which is important to the potato crop, as the tubers will not grow if the soil around them is too hot. This is why it is next to impossible for us here to grow a large crop of early potatoes. The long hot days of June and early July make the soil too hot in spite of all the irrigation you may give it, to allow the tubers to maintain a healthy, vigorous growth. They become stunted and the vines often become blighted with a yellow fungus product that uses up the sap and stiffens leaves and stems, and arrests all further development of the tubers. Hence we plant not until

the middle of May and then do not stimulate by early watering the early setting of the tubers. With a well-moistened deep plowed soil to start with at planting time, by clean, deep cultivation, the plants can be kept thriving well without watering and without setting tubers until the middle of July, or better, if possible, until the 1st of August. Extremely dry weather may necessitate earlier watering, but in that case it had better be light and in every other row. You need the thorough, deep saturation of the soil to set the tubers, and after setting the soil in contact with them should not be allowed to get dried out and hence hot. The surface of a row may be dry, while under, where the feeding roots are and the tubers, it may be moist enough as a result of a thorough irrigation as above advised.

A porous surface and nearly impervious subsoil, other things equal, are the best for raising potatoes by irrigation. These we have in the best potato lands near Greeley, and have contributed quite as much to our success as skill and care in cultivating.

DAVID BOYD.

Ditch to Irrigate Five Hundred Acres.

WOODWARD, O. T., March 25, 1895.

EDITOR KANSAS FARMER:—I would like to hear from some man who knows as to feasibility of irrigating from a river that goes dry June 22 and runs again September 15. Also whether a wing can be built across the river, of sand sacks, bound with rope, and how long it will last if not carried away by flood? Can a ditch be built so its head will not choke up with sand? How large a ditch will it take to irrigate 500 acres? Most of the land is hard and the subsoil harder. What is the probable cost of ditch three miles long on an air line, or, say, three and one-half miles, to take in the curves? No sand except at head of ditch. Can plow the whole length. I intend to use, as a reservoir, a draw twenty feet deep, over a mile long and 100 feet wide at mouth, water in upper end of ditch to be three feet deep. An early reply will greatly oblige.

O. B. LIPPINCOTT.

[Referred to H. V. Hinckley, irrigation engineer, Topeka, Kas.—EDITOR.]

It is not possible to answer such questions satisfactorily without a careful investigation of all the conditions on the ground. The feasibility of irrigating from a stream that is dry during three months of the summer must depend upon having a storage sufficient for use in those three months. At the very lowest safe estimate the land must get twelve inches of water between the dates given. The draw being probably in the form of a pyramid, its contents, if full, would be—

$$\frac{100 \times 20}{2} \times \frac{5400}{3} = 1,800,000 \text{ cubic feet,}$$

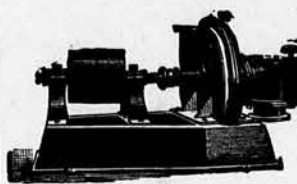
or, say, 413 acre feet. The loss by evaporation before using would probably be in the neighborhood of 25 per cent., reducing the irrigable area to 309 acres. And even this depends on there being no loss from reservoir by percolation and on being able to use all the reservoir water for irrigation—which means being able to carry it all, from the reservoir, by gravity (or pumps) onto the land to be irrigated. If water be crudely used it will not irrigate over 150 or 200 acres.

If the river bed is sand, a wing of sand sacks will probably stand from thirty to sixty minutes after enough water comes down to go over or through between them, when they will sink to a level of the river bed by the scouring action of the water. If they be used with a liberal supply of hay and be bedded on hay, say two feet lower than river bed, the dam will stand longer and might do service several years for deflecting the current, but should not be depended upon for backing up the water to any considerable extent. Canal should be taken out low enough to draw water from the river, instead of attempting to raise water much in the river. There should be no trouble whatever about choking up with sand if provided with proper sand flume and gate.

A depth of two feet of water with a width of two feet at bottom and fall of two feet per mile (with side slopes 1½ to 1), will, if kept in fairly clean condition, carry eleven cubic feet per second, which would irrigate from 500 to 2,000 acres, if flowing continuously. The acreage irrigable by a given flow of water depends as much upon the irrigator and the preparation of his land for applying the water as it does upon

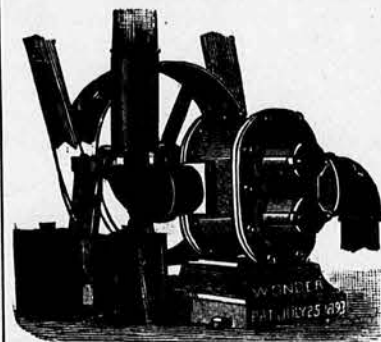
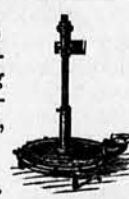
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the flow. With a fall of one foot per mile the same canal will carry eight cubic feet per second, which, with reasonable care in application, will grow good crops on 500 to 1,000 acres.

Such a canal will mean the throwing out of 2,000 yards of earth per mile. The cost per yard will depend on how badly somebody wants to do the work. At 12 cents a yard (which is a fair average contract price) the cost is \$240 per mile. At the upper end there would be heavier work. A cut of six feet (getting away from river) would mean 10,000 yards or \$1,200 per mile. Then, too, the general length of canals is twice the air line length instead of the ratio which you give, but this must be determined by an intelligent survey—not by rule. It often happens that the fall per mile is determined (after careful survey is made) by the relative elevations of best head-gate location and land to be irrigated.

Canals should generally not be built with steeper insides than 1½ to 1. Too many have tried economy on slopes and paid for it afterward. Before any money is spent on canal, reservoir or any other works, the matter of water supply and the feasibility of using it, both with and without pumps, should be carefully determined. A canal is not always a desideratum, neither is a reservoir, but it is not possible at this distance away to pass final judgment on a scheme of this nature. The size of the canal evidently must depend, not on the acreage to be irrigated, but on its capacity to fill the reservoir, and this must depend on the flow of the stream. The flow of the stream will also determine whether any winter irrigation may be done.

H. V. HINCKLEY.

Water Under the Sand.

LOGAN, KAS., March 28, 1895.

EDITOR KANSAS FARMER:—Given, a river 160 rods wide, shale bottom, over which is running water (in gravel and coarse sand) ten feet deep and over that dry sand two to thirteen feet deep. Slope of river fifteen feet per mile. What portion of the ten feet is water? How fast does it move and how much would it irrigate if diverted?

E. A. CHASE.

[Referred to H. V. Hinckley, irrigation engineer, Topeka.—EDITOR.]

Per cent. of water in coarse sand, 35 to 40. Flow per month (fifteen feet per mile), approximate, 1,500 feet. Per cent. of volume available by gravity, about 25. Acre feet of water available per month:

$$2640 \times 10 \times \frac{25}{100} \times \frac{1500}{43560} = 225.$$

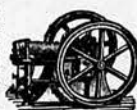
This should irrigate successfully at least 500 acres, if the stated flow keeps up during the summer.

H. V. HINCKLEY.

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Will Irrigate and Succeed.

EDITOR KANSAS FARMER:—I received KANSAS FARMER of February 27, containing your answer to Mr. Cox—"Water Out of His Own River"—and have the desired information.

I left \$1 with Mr. Kies for your valuable paper, which send to my address. As a number of copies have contained valuable information about irrigating, I shall read those items with great interest, as I expect to irrigate on a large scale, having water in great abundance and rich, level soil. I have a No. 5 centrifugal pump, ditches and flumes ready for work. I have no doubt as to success, as rich soil, water and heat will produce in great abundance. We know this by twenty years experience in Rice county. I saw wonderful crops growing in California last year by irrigation alone, as in southern California but little rain had fallen. I have taken particular notice as to their mode and art of irrigation, and I shall try some of the best methods, and if it proves well I will give it to the readers of the KANSAS FARMER. I will flood about sixty acres before planting to corn. As our subsoil is always too dry, and as soon as a rain comes it generally soaks in about four to eight inches, all corn roots reach for this moist soil and lay too near the top, and as soon as this is dried out our corn is burning up. I believe if we can get the subsoil wet before listing our corn we induce the roots of the corn to grow down instead of lying so near on top. South of Springfield, Ill., I found corn roots two and one-half to three feet deep, but here they seldom go so deep.

Sterling, Kas. W. F. ROSE.

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IRRIGATION.

Weather-Crop Service.

The National Weather Bureau and the State weather services throughout the country collect and publish in bulletin form, from week to week during the season of planting, cultivating, and harvesting of crops, prevailing weather conditions and their effects upon farming operations and crops. Both State and national bulletins are issued on Tuesday, the national bulletin treating of the general weather and crop conditions of the whole country while State bulletins give detailed information concerning the weather and its effects upon the various staples of the several States.

All State weather services are branches of the National Bureau, and the general plan of work, in the several States, is practically identical. The National Weather Bureau furnishes, through the local weather services, to weather-crop correspondents, a suitable blank, for rendering reports, in the form of postal cards, bearing the government frank, which admits of their transmission through the mails without postage. These card forms provide for a brief statement of the weather and crop conditions of the week, and also for a record of temperature and rainfall for each day, but the temperature and rainfall data can only be supplied by those who are provided with thermometers and rain gauges. Very valuable reports, however, can be rendered by those who have not these instruments, as an intelligent and accurate statement of the general conditions, as observed by correspondents, affords valuable information to the State weather service official in the preparation of his weekly bulletin.

The card reports are mailed by the special correspondents to the central station of the State weather service, the official in charge furnishing the necessary instructions as to time of mailing. Upon receipt of the reports at the central station of the State service they are carefully summarized and used in the preparation of the State bulletin, in which the reports of the correspondents are, whenever practicable, printed in full. The bulletins are sent to co-operating correspondents in exchange for their reports and are published in newspapers and given conspicuous display in commercial exchanges, postoffices, and other prominent places for the benefit of the public.

A file of these bulletins, preserved from year to year, will certainly be found a valuable and interesting means of comparison, and in time a study of them in connection with the meteorological data, which the State weather service collects and publishes, will discover some of the causes of the general success or failure throughout the State of any one crop, and in case of diversified farming, point out the particular products which will average best in each section of the State; also whether other products cannot be acclimatized and profitably grown. Records of this nature must be accumulated before the science of agriculture can be advanced to the point where it will be of the greatest value to the practical farmer.

The National Weather Crop Bulletin, besides giving a brief telegraphic summary from each State weather service center, contains a series of four charts, showing respectively for each week (1) lines of maximum and minimum temperatures, (2) departures from normal temperature, (3) departures from normal rainfall, and (4) the actual rainfall. Meteorological tables also accompany the charts, showing the detailed data for the several Weather Bureau stations from which the charts are constructed. The records of observations at Weather Bureau stations for the most part cover periods closely approximating a quarter of a century. From these records temperature and rainfall normals for each day in the year have been computed, with which current data telegraphed weekly from the several stations are compared, enabling the bureau to construct the charts above referred to, showing in graphic manner how the prevailing weather conditions of the current season throughout the United States com-

pare with the average for a long series of years.

The map of maximum and minimum temperature lines shows to what extremes of temperature the various sections of the country are subjected during each week; those giving departures from normal temperature and rainfall, show the regions receiving an average, excess, or deficiency of heat and rainfall, while the fourth map shows the actual amount of rain that has fallen. These charts, in connection with the summaries of the reports furnished by more than 10,000 special correspondents throughout the United States, constitute the National Weather-Crop Bulletin which furnishes to all classes interested in agriculture—producer, consumer and dealer alike—accurate and impartial information as to actual weather and crop conditions from week to week throughout each season, which information is given extensive circulation throughout the country. The Chief of the Weather Bureau will, as far as the edition will allow, furnish copies of the National Bulletin to postmasters or others who may be willing to give the bulletin prominent display for the benefit of the public, but the limited edition will not permit him to supply the bulletins to private individuals.

The Weather-Crop service, which was begun as an experiment in a very limited way in 1887, has grown in importance and efficiency from year to year until at this time it is regarded as second only to the work of issuing daily weather forecasts.

The Chief of the Weather Bureau acknowledges his indebtedness to the voluntary observers and special correspondents throughout the country for their valuable aid in furnishing, gratuitously, weekly reports from their respective communities. Without such voluntary assistance it would be impossible to carry on this important work.

A Discouraging Outlook.

EDITOR KANSAS FARMER:—Never before, in twenty-three years, have I seen a spring like the present—dust storm after dust storm, with but little variation, except a change of the wind from one point of the compass to another. Ninety-five per cent. of the soft wheat is dead, 25 per cent. or more of the hard wheat the same. March freeze and wind did it. Corn, oats and barley will take the place of the dead wheat.

The past two years have been hard on the horticulturists of Sumner county. Many of our trees are dead and many more are badly damaged. Fruit trees, bushes and vines of all kinds that are alive indicate an abundant crop, provided we have rain, and they are not killed by frosts hereafter.

Stock of all kind in fair condition; no disease. Stock hogs and cattle scarce.

With but little moisture near the surface and the subsoil dry, the prospect for the farmer is anything but encouraging. Many of us, who have up to this time had faith in Kansas, have symptoms of "elongation of the physiognomy."

GEO. W. BAILEY.

Wellington, April 7.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven Catarrh to be a constitutional disease, and, therefore, requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from ten drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address, F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75 cents.

"Among the Ozarks,"

the Land of Big Red Apples, is an attractive and interesting book, handsomely illustrated with views of south Missouri scenery including the famous Olden fruit farm of 8,000 acres in Howell county. It pertains to fruit-raising in that great fruit belt of America, the southern slope of the Ozarks and will prove of great value, not only to fruit-growers, but to every farmer and home-seeker looking for a farm and a home Mailed free. Address,

J. E. LOCKWOOD, Kansas City, Mo.

Publishers' Paragraphs.

We can furnish you KANSAS FARMER and Peterson's Magazine, each one year, for \$1.75. Or KANSAS FARMER and Arthur's Home Magazine for \$1.05. Send to this office amounts above named.

FARM RECORD.—Our "Farm Records" have been such a splendid seller because of their practical value that our supply is now quite limited. We have a number of the best binding only, which the KANSAS FARMER will deliver to any address for only one dollar.

The Kansas Weekly Capital publishes more Kansas news than any other weekly paper. A free sample copy will be sent on application to THE TOPEKA CAPITAL CO., Topeka, Kas. Or send \$1.50 to this office for KANSAS FARMER one year and also Capital twice a week.

Speaking of sewing machines, there is nothing better made than the "Kansas Farmer" machine, which is not only modern and substantial but has all the latest improvements, and the price is within the reach of every reader of this paper. Look up our great offer and remember that we guarantee satisfaction.

THE UNTERRIFIED.—The Topeka Advocate still champions the cause of the 118,000 unterrified Populists of Kansas and their brothers in other States, yet it talks politics in such an unprejudiced way that it is read by many Republicans, Democrats and Prohibitionists. You can get it for \$1 a year, 25 cents for three months. The Advocate and KANSAS FARMER a year for \$1.50.

The Weber Gas and Gasoline Engine Co., of 459 Southwest Boulevard, Kansas City, Mo., have recently completed a new addition to their plant. The increased business of the company, during the last six months has made this necessary. The offices will be removed from the second floor of the main building to the new building and will be on the street floor. This will give about 8,000 square feet additional for light machine tools in the main building.

ADVANCE THRESHER.—Every grain-raiser or thresherman should know the merits of the Advance thresher, advertised in this issue. Sometimes the profit of a whole crop may be wasted because of poor threshing or lack of clean, grain-saving work. The best threshing outfits are always the cheapest, therefore we advise such of our readers as may be interested in modern and model machinery of this sort to write for a free sixty-page catalogue to the Advance Thresher Co., Kansas City, Mo., and mention this paper.

TO FRUIT-GROWERS.—Prospects for a good yield of all kinds of fruit were never more promising than now. The severe winter which proved so disastrous to Southern orchards has had rather a salutary effect on the more hardy trees and shrubs grown in Northern latitudes. We consider the occasion opportune to refer our readers to the advertisement of Blymyer Iron Works Co., of Cincinnati, Ohio, which appears in this issue. Their "Zimmerman" Evaporators for fruits and vegetables are the recognized standard machines, and intending purchasers will do well to write for their handsome catalogue.

NEW CATALOGUE OF BUGGIES, ETC.—One of the most elegant and complete illustrated catalogues of carriages, buggies, harness, saddles and bicycles it has ever been our good fortune to examine, has just been issued by the Alliance Carriage Co., of Cincinnati, Ohio. It is quite beyond our comprehension how such beautiful and stylish goods can be manufactured and sold for the remarkably low prices named. This free book will certainly be appreciated by every horse owner. Our readers should send for one at once, if they have not already done so. Please mention the name of our paper when you write.

The Famous Manufacturing Co., of Chicago, recently received a letter from one of the largest hay-raisers in the State of Indiana, which reads as follows: "For the past six years I have been putting up on my farm in Porter county, Indiana, from 5,000 to 7,000 tons of hay each season, and have had in use on my farm all the different contrivances used in putting up hay. Last summer I had about fourteen different outfits at work and the Champion Swinging Stacker and Derrick was far superior to anything ever used on my place. It makes the best stacks I ever saw and they keep better during the winter than those made by any other stacker. Respectfully, James C. Burke." From this letter it is very evident that the way to take care of your hay is to use the "Champion" Swinging Stacker and Derrick in connection with the "Champion" Three-Wheel Broad Sweep Sulky Hay-Gatherer, or the "Peerless" Two-Wheel Sulky Gatherer. These goods are all manufactured by the Famous Manufacturing Co., Chicago, Ill., who have been manufacturing hay tools for the past fifteen years and who are well known and need no introduction to our readers. We would advise all having hay to take care of to get illustrations and descriptive circulars of the "Champion" Rakes and Stackers.

No Risk

in Vacuum Leather Oil. Get a can at a harness- or shoe-store, 25c a half-pint to \$1.25 a gallon; book "How to Take Care of Leather," and swob, both free; use enough to find out; if you don't like it, take the can back and get the whole of your money.

Sold only in cans, to make sure of fair dealing everywhere—handy cans. Best oil for farm machinery also. If you can't find it, write to

VACUUM OIL COMPANY, Rochester, N. Y.

WILL YOU distribute Circulars and samples for us? We compensate. Salary and expenses to travel. Send stamp. ADVERTISING BUREAU, 447 6th Ave., NEW YORK CITY.

FREE SPRAY PUMP to one person in each place. We mean it. If you mean business and want agency send 10c. We will send a complete pump that will do the work of a \$10 spray. A. SPEIRS, R 54 North Windham, Maine.

Write for Information of the

Sunny Grand Valley of Colorado

The Home of the Peach and other Delicious Fruits. The land of perpetual sunshine, where there are neither blizzards, cyclones, nor malaria; where the fruit crop never fails, and the farmers are prosperous and happy.

THE WESTERN LAND & ORCHARD CO.
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but sell direct to the consumer at wholesale prices. Ship anywhere for examination before sale. Everything warranted. 100 styles of Carriages, \$50 styles of Harness, Saddles, Fly Nets, etc. Send 4c. in stamps, postage on 112 page catalogue. Elkhart Carriage and Harness Mfg Co., Elkhart, Ind.

W. B. PRATT, Sec'y.



Tea and Coffee Pots that pour by the lid without lifting or tipping. Simple beyond belief. Practical and artistic. Send for pamphlet. THE ASBURY-PAINE MFG. CO., Phila., Pa. This is a good thing—Ed.

A CATALOGUE!

Send us your name and address and we will send you free our handsomely illustrated 128-page CATALOGUE, listing thousands of articles we sell through the mails. Please mention KANSAS FARMER.

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Early Seed Corn.

Ten Good Yielding Yellow and White Varieties. Will fully mature good seed if planted June 15. You may need such corn this year. Prices low. Quick shipment. Catalogue and sample free. Address J. C. SUFFERN, Seed Grower, Voorhies, Ill.

Seed Corn!

New NEBRASKA IRON-CLAD—made 80 bushels per acre in Nebraska in 1894, without irrigation. A cross between the well-known Golden Beauty and Early Yellow Dent. Sample ear, 10 cents, postpaid. Early Thompson and King of Earlies, 80 bushels per acre, without irrigation in Nebraska. Send for our new catalogue.

DELANO SEED CO., Lee Park, Neb.

Treatise on HOW TO GROW

PEDIGREE CORN

FREE ON APPLICATION.

PARLIN & ORENDORFF CO.

Manufacturers Agricultural Implements,
CANTON, ILLINOIS.

EVERGREENS!
Headquarters in the United States for all varieties and sizes of Hardy Nursery grown evergreens and ornamental trees. Prices the lowest. Six \$5.00 and \$10.00 bargains. Over ten million evergreens and a large stock of other trees. Illustrated catalogue free. I want a good Local Agent.
D. HILL, Evergreen Specialist, Dundee, Ill.

The Home Circle.

To Correspondents.

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

GARDEN.

For the winters are long and the snow lies deep. Tomatoes are good, and tomatoes will keep. It pleases a wife, and it pleases a man. When down in the cellar rests can after can. It bothers a wife when there's nothing to eat. Except a few peaches, potatoes and meat. With never a parsnip or cabbage in sight. I tell you a woman regards it a fright. Then make up a list of what you need now. Don't wait till the season has forced you to plow.

Oft I have noticed in my fleeting years, A garden delayed will remain in arrears. It's all very well to say to your wife "A garden's a bother, the plague of my life. It's cheaper to buy on the market than grow it. You can say what you like. I'm right, and I know it."

These wives will reply, with a good deal of truth: "That promise is made every year since our youth."

If this system prevails, our table's supply Will remain as it is until we both die. "Matilda, my dear, I'm converted at last. The future looks brighter, forgive all the past. And I must confess you have had a poor show. You shall have every fruit, every plant I can grow."

—T. W. Brown.

Two hands upon the breast,
And labor's done;
Two pale feet crossed in rest,
The race is run;
Two eyes with coin-weights shut,
And all tears cease;
Two lips where grief is mute,
Anger at peace;
So pray we sometimes mourning our lot;
God in his kindness answereth not.
Two hands to work and rest,
Aye, for his praise;
Two feet that never rest,
Walking his ways;
Two eyes that look above,
Still through all tears;
Two lips that breathed but love,
Nevermore fears;
So pray we afterward, low at our knees:
Pardon those erring prayers: Father, hear these.

—Dinah Maria Mulock.

FOR BABY'S MOTHER.

An Apron Which Is Serviceable As Well As Extremely Pretty.

A very serviceable and pretty gift for a young mother who presides at a pink-and-white bit of humanity's daily bath, is suggested in the accompanying illustration. We will call it a "mother" apron. It is white and yellow, and at first sight some prudent sister may pronounce it much too delicate and dainty for everyday use and everyday splashing; but it will wash almost as well as the baby who sits on it and tries to admire it—besides, is anything too dainty for that same baby's use? The materials are fine, soft, white cotton-and-wool flannel, broad yellow ties, and "wash" embroidery silk to match. It is about a yard wide, and as long as the big or little mother who is to wear it. A three-inch hem is turned up at the bottom, and a very narrow one at either side. At the head of these hems, all around the apron, extends a line of lovely yellow feather-stitching. The top of the apron is turned down and cross-stitched, making room for the inch-and-a-half yellow ribbon to run through it, in lieu of a belt. The handsomer, heavier and longer the ribbon, the better. The creamy flannel and golden yellow trimmings take very



AN APRON FOR MOTHER.

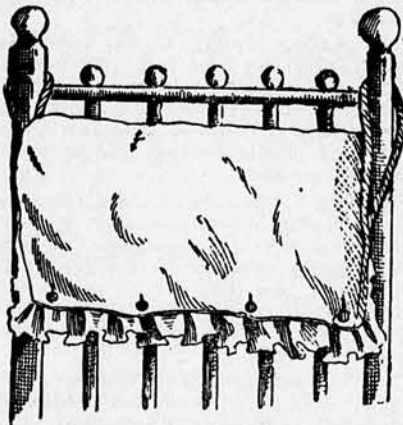
kindly to each other's company, and the result of their union is quite charming.

The flannel must surely contain some cotton—a goodly share of it—to make it serviceable as a bath apron that his babyship can be depended upon to sprinkle lavishly with soap and water. —Annie Hamilton Donnell, in Country Gentleman.

GRANDPA'S HEAD REST.

Simple and Plain Enough to Be Enjoyed by the Old Gentleman.

The dainty head rests that have been so popular recently are often confined to the chairs that are least in use. Their daintiness and the difficulty in washing them make them distinctly ornamental instead of useful, and the "grandfather" would be likely especial-



GRANDPA'S HEAD REST.

ly to shun them as altogether too "fixed up" for his after-dinner nap in the rocking chair. But grandfather's white head must be pillowed. One of his granddaughters might make him a simple but very pretty head rest like the one in the accompanying sketch.

A downy pillow is first made and covered, just big enough to fit the special chair it is to hang upon. Then a pillow case of dainty gingham is made in fine stripes or plaids and in the daintiest, softest colors obtainable, for it will wash like a pocket handkerchief and so need not be any of those depressing colors that "won't show dirt." Let it be as pretty a gingham as the counters offer.

The case is trimmed across the bottom with a full ruffle that curves round the lower corners and gradually merges into the sides. Four flat—very flat—buttons fasten the pillow into the casing and also add somewhat to its appearance. They will not come into contact with the head as they are down under the curve of the pillow, and so will not be likely to cause discomfort.

Two strong loops of cord fasten the rest to the chair, and these may be of cotton cord whose colors go well with the gingham case. Then, when the whole needs washing one has only to slip out the pillow and send its covering just as it is to the laundry. When it comes back as good as new, the pillow is buttoned back into it and grandfather's chair is ready again to coax him into another nap.—Country Gentleman.

AROUND THE KITCHEN.

According to "Good Housekeeping," It Is Well to Remember

THAT a small vegetable knife with a sharp point is a handy kind to have to pare fruits and vegetables with.

THAT apples are dusty even before they are picked from the trees. They accumulate dust from being handled, from traveling, and various other ways.

THAT one of the best ways of preparing apples for any purpose is to cut them in quarters before paring, as the core is more easily taken out, and decayed places cut out.

THAT snap beans are much nicer cut fine with a knife than when snapped in two or three pieces as some prepare them. They need a generous piece of butter when cooked.

THAT a baked custard is one of the easiest things to make, and one of the easiest to spoil in baking, if left to its own devices. It must be made of fresh materials, and bakes better in a shallow dish than in a deep one.

THAT fruits for the table, apples, pears, plums, oranges and peaches, should be wiped with a clean cloth, grapes looked over and washed lightly, red spiders are often found on peaches, spiders on grapes.

THAT all green vegetables as a general rule should be cooked as soon as gathered. Especially is this true of peas and corn. The former lose their sweetness very soon, and should be put into rapidly boiling water, (salted), boiled uncovered, if you wish the green color to remain; a teaspoonful of sugar to a quart of peas flavors them nicely, a generous piece of butter added when cooked.

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

Royal Baking Powder

ABSOLUTELY PURE

WAS READY TO SERVE.

Mrs. Soden Was Summoned as a Juror, But the Court Excused Her.

For the second time within two weeks a lady has appeared at the criminal court building at Chicago in answer to a jury summons. Mrs. B. K. Soden, 5206 Kimbark avenue, is the latest one to receive such distinction. She is young and pretty, and was summoned to Judge Burke's branch the other morning. A case of mayhem was on trial there, and when Mrs. Soden presented herself she was accompanied by her husband. They stepped to the judge's railing together.

"Were you summoned on this jury?" she was asked by the judge.

"Yes, sir."

"It was a mistake, was it not?"

"I presume so," Mrs. Soden replied, with a blush and a smile.

"Are you a voter?"

"I voted at the last election."

"Are you willing to undergo the hardships imposed upon a juror?"

"Yes, sir; and when I came here I was fully determined to perform any



MRS. SODEN APPEARS BEFORE JUDGE BURKE.

duties required of a person privileged to have a voice in an election and vote."

The court answered that he would have to excuse her, and did so regretfully. He expressed the hope, however, that the time would come when women would serve, and thus elevate jury service, if such were possible.

No small objection which young folks had to the old-time spring medicines was their nauseousness. In our day this objection is removed and Ayer's Sarsaparilla, the most powerful and popular of blood purifiers, is as pleasant to the palate as a cordial.

To the Traveling Public.

Before purchasing tickets to points east of Chicago, first ascertain the rate to that point over the Nickel Plate road. City ticket office, 199 Clark street, Chicago, Ill.

When the Kicks Come In

Is not the title of a new song, nor does it refer to the backward action of that much-maligned animal, the mule.

It is a phrase used by the inhabitants of Oklahoma to designate the approaching opening of the fruitful acres of the Kickapoo Indian reservation.

If you wish to find out all about the Kickapoo lands, as well as those belonging to the Wichita and Comanche tribes—where cotton, wheat and fruits will pay handsomely—ask G. T. Nicholson, G. P. A., Santa Fe Route, Topeka, Kas., for a free copy of Oklahoma folder.

A Drawing Room's Decorations.

The walls of a certain drawing-room are very effectively treated and in a unique manner. Deep maroon brocade has been tacked over it to simulate wall-paper, but with a result far richer than the costliest variety of paper. The heavy fabric forms a superb background for the pictures and ornaments of the room, and is splendid in its effect when lighted by the many glittering candelabra with which the apartment shines at night.

SAVE TIME AND MONEY.

Ladies waste hours darning stockings or dollars throwing away those half-worn, when by using our improved stocking foot pattern, they could in a few moments re-foot them, making as good as new. Does not shorten leg; and seams cannot hurt feet. Sent for 10c by NOVELTY PATTERN CO., Davenport, Iowa. Mention This Paper.

WE CAN MAKE AN ELEPHANT OR HEN EGGS

Or Anything in Cast-Iron. Models, Patterns and Fine Machine Work.

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Buy direct from MANUFACTURER and save all Middlemen's profits. 15 days' trial in your home before you pay for the same.

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You take no risk. We will send our beautiful catalogue, giving full description and illustration of our organs FREE. Address us with your full address, BEETHOVEN P. & O. CO. P. O. Box No. 678 Washington, N. J.

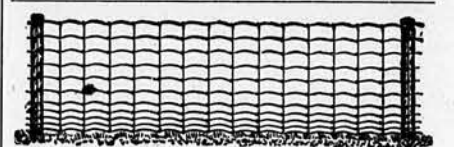


Cabled Poultry, Garden and Rabbit Fence, also Cabled Field and Hog Fencing. Steel Web Picket, Lawn Fence, Steel Wire Fence Board, steel gates, steel posts, steel rail, tree, flower and tomato guards. Catalogue free. De Kalb Fence Co., 23 High St., De Kalb, Ill.

"HARTMAN" STEEL PICKET LAWN FENCE



STRONGER THAN IRON | CHEAPER THAN WOOD | HANDSOMER THAN EITHER. PROTECTS a lawn without CONCEALING it. Posts driven deep and ANCHORED. Get Prices for your Garden, or Church, or—2. HARTMAN MFG. CO. 277 BROADWAY, NEW YORK. Factories: ELLWOOD CITY, Penna. For Beautiful Calendar, send 4 cts. in stamps.



A STANDARD OF EXCELLENCE

Should be adopted for "fence viewers," judges at fairs, etc. At present, "just as good as the Page" is the universal claim. As a suggestion we offer the following scale of points for farm use:

Strength	.20
Height	.20
Closeness of mesh	.20
Attractive Appearance	.10
Elasticity and Durability	.30
Total	1.00

If the last two are separated, Elasticity should have 25, as Durability is almost wholly dependent on it.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

When writing advertisers mention FARMER.

If It's a Sprain, Strain, or Bruise

St. Jacobs Oil

Will Cure It

The Young Folks.

THE LEGEND OF THE FORGET-ME-NOT.

By the margin of a river
Walked a youth and maid together;
He with brave and knightly air,
She, blue-eyed, with golden hair.
Fair the picture that they made
As upon the shore they strayed;
Love had early found the twain,
And had bound them with his chain.
Soon that lovely maiden died,
Growing by the river side—
Just below the shelving bank,
Flowers of softest, tenderest blue,
Matching her bright eyes in hue,
Looking o'er the steep decline—
"Ah, that those fair flowers were mine!"
Said the maid.

Her faithful knight
Plunged into the waters bright,
Caught the flowers—but soon to sink
At the river's treacherous brink!
But he flung the flowers on shore
Ere he sank to rise no more,
Calling from that fatal spot
To his love: "Forget me not!"
Ever since these blossoms blue
Have been sign of love so true;
And a spirit haunts forever
At the midnight hour, that river,
Sadly calling o'er the spot
Where he sank: "Forget me not!"
—Florence M. Wright.

EDUCATION UP TO DATE.

We teach the children Danish,
Trigonometry and Spanish;
Fill their heads with old-time notions,
And the secrets of the oceans;
And the cuneiform inscriptions
From the land of the Egyptians;
Learn the date of every battle;
Know the habits of the cattle;
Know the date of every crowning;
Read the poetry of Browning;
Make them show a preference
For each musty branch of science;
Tell the acreage of Sweden,
And the serpent's wiles of Eden;
And the other things we teach 'em
Make a mountain so immense
That we have not a moment left
To teach them common sense.

—Truth.

ARTHUR'S ROUND TABLE.

All Those Who Sat Around It Were Brave
and Noble Men.

There is no period of history more fascinating than that romantic chapter dealing with the days of King Arthur, his court and the chivalrous deeds of his brave and gallant knights. It is the period that schoolboys ask questions about and love to linger over, for it tells them of a day when adventure and romance went hand in hand with beautiful legends and picturesque superstitions. The thrilling tales of the Knights of the Round Table make up one of the most popular books for boys ever written.

King Arthur's Round Table, according to one version of the legend, was a sort of mutual protective association, composed of a dozen of the bravest



KING ARTHUR'S ROUND TABLE.

and most powerful nobles of the country. King Arthur, who died in 542 from a wound received in battle, was the prince of a tribe of Britons, the Silures, in South Wales.

"Arthur," says a famous Welsh scholar, "is the great bear, as the name (Arcturus) implies, and perhaps this constellation being so near the pole and visibly describing a circle in a small space is the origin of the famous Round Table."

Merlin, the famous enchanter and magician, King Arthur's chief counselor, organized the Knights of the Round Table. There were thirteen seats in memory of the apostles. Only twelve were ever occupied, and these only by knights of the greatest fame and the best established prowess. The thirteenth seat was meant to represent that of Judas, the traitor. It was known as the perilous seat. A rash and scornful Saracen knight once presumed to sit in it, and the earth opened beneath it and swallowed him up, seat, trappings, armor and all.

Some magic power wrote upon each seat the name of the knight who was

entitled to sit in it. No knight could succeed to a vacant seat unless he surpassed in valor and daring the knight that had occupied it before him. Without these qualifications some hidden and mysterious force would repel him if he occupied the seat, and his name would not appear upon the back of the chair.

One of the principal seats was that occupied by Sir Moraunt, of Ireland. When he died the seat became vacant, and remained so for ten years, because no knight was able to show bravery superior to his. Sir Moraunt's name still remained on the chair. At last Sir Tristram, a knight who afterward became one of the most famous among those of the Round Table, performed some specially valorous deed, and King Arthur led him by the hand to the seat. Strange and beautiful music was at once heard in the air and sweet perfumes floated down around the head of Sir Tristram, whose name at the same time blazed forth in light on the back of the chair.

It was the law of the Round Table that each knight after his admission should spend the next ten days in search of all sorts of adventures during which time his fellow-knights might disguise themselves and try their strength and skill with him.

All knights admitted to the Order of the Round Table were further bound by oath to assist each other at the hazard of their lives, to attempt singly the most perilous adventures, to lead when necessary a life of monastic solitude, to fly to arms at the first summons and never to retire from battle till they had defeated the enemy, unless night came and separated the combatants.

The real round table was made by Merlin for Uter Pendragon, who gave it to King Leodograunce, of Camelyard, who gave it to Arthur when the latter married his daughter.

There were 150 knights known as Knights of the Round Table. King Leodograunce brought over 100 men when at the wedding of his daughter he gave the table to Arthur. Merlin filled up twenty-eight of the remaining seats and King Arthur elected Gawaine and Tor. The remaining twenty seats were left for those who might prove worthy.

The thirty knights seated with Prince Arthur at the Round Table in the picturesque scene given in the "Famous History of the Renowned Prince Arthur" are Sirs Acolon, Ballamore, Blaumaus, Beleobus, Belvour, Bersunt, Bowe, Foll, Galahad, Gareth, Gaheris, Galohalt, Gawain, Grislet, Hector of Mares, Iwein, Kay, Ladynas, Lancelot, Lionell, Marhaus, Paginet, Palemede, Pelleas, Percivall, Sagris, Superbilis, Tor, Tristram and Turnique.

Other Famous Knights of the Round Table were: Amoral of Wales, Banier, Brandiles, Brunor, Caradoc the Chaste, Colgreavance, Dinadam, Driam, Eric, Lavain, Morolt, Persaunt of Inde, Ryence, Wigalois and Ywain.

The illustration shows the round table that is preserved at Winchester, in England, as a curious piece of antiquity.

Hearing with the Fingers.

There is said to be in Indiana a boy who hears with his fingers. When he was nine years old he had a very serious illness, which left him practically deaf. For a long time the poor little fellow led a most unhappy life because he could not hear what was said by others; but one day, several months ago, while his mother was conversing with a visitor, he happened to place his hand on her throat, and observed that while his hand rested there he could hear perfectly. Later on he tried the experiment with others, and discovered that, by making use of the sense of touch in the ball of his fingers he could make up for all that he had lost by the trouble which had befallen his ears. The result is that he is a much happier lad than he ever expected to be again, although he finds it awkward in some cases to have to put his fingers on the throat of his friends who happen to be talking with him.

A Possible Reason.

"I know why flowers grow," said Wilbur. "They want to get out of the dirt."—Harper's Young People.

Agents wanted for Gearhart's Family Knitter. For particulars address J. E. Gearhart, Clearfield, Pa.

BILLY PUSHED THINGS.

A Western Church Collector Who Allowed No Shrinkings.

The amount realized in a collection not infrequently depends on the individual who "takes it up." This fact is well realized by a good pastor who serves in a Colorado mission. "We keep him," writes Dean Hart, of Denver, giving the pastor's name, "on the frontier. He is a rough diamond, and has a knack with the miners."

Not long ago this excellent preacher went to a camp called Rico, borrowed the dance hall over the saloon for his service, "rounded up the boys," as he expresses it, and filled the hall.

After the sermon came the collection. This was a very important feature. The preacher cast his eyes over his audience, and saw a certain "hard case," known as Billy the Kid.

"Billy," he said, "take up the collection."

Very much honored, Billy took his big sombrero hat and with an air of



BILLY TAKING UP THE COLLECTION.

importance and dignity, made his way around to the front, and held out the hat toward a spruce young miner on the foremost chair.

The young man dropped in a quarter of a dollar. Billy looked at the coin with one eye closed. Then he looked at the young man, and put his own hand around under his coat tails to the place where, in that part of the country, revolvers are known to be carried.

"Look here, young man," said Billy, gravely, "take that back! This here's a dollar show!"

Then, with his hat in one hand and the other still on the revolver, he moved around the hall, and got as many dollars as there were people.

VERY FEW PEOPLE VOLUNTARILY

Invite Trouble,

But a good many through ignorance or by accident sow seed that bears it. If you need more skillful workers and honorable helpers, write or call upon DR. HATHAWAY & CO., leading and True Specialists of the United States. Consultation free.

SPECIALTIES:

Blood poisoning, nervous debility, pimples on face, kidney and urinary ailments, piles, ulcers, rheumatism, catarrh, and diseases of womankind.

Address or call on DR. HATHAWAY & CO., 70 Dearborn street, corner Randolph, Chicago, Ill.

Mail treatment given by sending for symptom blank. No. 1 for men. No. 2 for women. No. 3 for skin diseases. No. 4 for catarrh. Sixty-four page Reference Book for men and women sent free to any address by mentioning this paper.



I have given Dr. J. H. McLean's Liver and Kidney Balm a very severe test as a medicine for diseased kidneys, and it has proved entirely successful. I suffered great anguish from Bright's Disease, from which I could get no relief until I used the Liver and Kidney Balm. It cured me and I am deeply grateful for it.

Yours truly,

WM. P. WINTER,
926 N. CAREY STREET,
BALTIMORE, MD.

You see them everywhere.

Columbia Bicycles

—\$100—

COLUMBIAS are the product of the oldest and best equipped bicycle factory in America, and are the result of eighteen years of successful striving to make the best bicycles in the world. 1895 Columbias are lighter, stronger, handsomer, more graceful than ever—ideal machines for the use of those who desire the best that's made. HARTFORD BICYCLES cost less—\$80, \$60. They are the equal of many other higher-priced makes, though.

POPE MFG. CO.
General Offices and Factories, HARTFORD.
BOSTON, NEW YORK, CHICAGO, SAN FRANCISCO, PROVIDENCE, BUFFALO.

Columbia Catalogue, telling of both Columbias and Hartfords, free at any Columbia agency, or by mail for two 2-cent stamps.

WM. TAYLOR,
Agent for Columbia and Hartford Bicycles
TOPEKA, - KANSAS.

A friend advised me to try Ely's Cream Balm and after using it six weeks I believe myself cured of catarrh. It is a most valuable remedy.—Joseph Stewart, No. 624 Grand Ave., Brooklyn, N. Y.



CATARRH

ELY'S CREAM BALM opens and cleanses the Nasal Passages, Allays Pain and Inflammation. Heals the Sores, Protects the Membrane from colds, Restores the Senses of Taste and Smell. The Balm is quickly absorbed and gives relief at once.

A particle is applied into each nostril and is agreeable. Price 50 cents at Druggists or by mail. ELY BROTHERS, 56 Warren Street, New York.

SMOKE YOUR MEAT WITH
KRAUSERS LIQUID EXTRACT OF SMOKE
SEND FOR CIRCULAR. E. KRAUSER & SONS, MILTON, PA.

Kansas Tannery.

ESTABLISHED IN 1889.
Does a general tanning business, including robes, rugs, etc. Tanning Galloway hides for robes specialty. First-class work, reasonable prices. All kinds of leather in stock—best quality. Have you any oak bark? Good prices paid for it. Write me. M. C. BYRD, Lawrence, Kas.

10,000 AGENTS WANTED.

Ladies or gentlemen to introduce an article of merit, that does its own talking. A household necessity. Sells on sight to rich or poor. Over 200,000 sold in one year; a money maker in the face of hard times. \$2.00 will start you in business. Send 25 cents for full particulars and get an article post-paid, guaranteed to be worth \$1.00. Address, NEW COMET, Box A, Shenandoah, Iowa.

High Arm Sewing Machine
MY HUSBAND
\$50 Kenwood Machine for - \$28.00
\$50 Arlington Machine for - \$19.50
Standard Singers - \$8.00, \$11.00, \$15.00, and 27 other styles. All attachments FREE. We pay freight ship anywhere on 30 days free trial, in any home without asking one cent in advance. Buy from factory. Save agents large profits. Over 100,000 in use. Catalogue and testimonials Free. Write at once. Address (in full), CASH BUYERS' UNION, 164 West Van Buren St., B 64, Chicago, Ill.

A Severe Test.

February 28th, 1895.

The Dr. J. H. McLean Medicine Co.,
St. Louis, Mo.

Gentlemen:

I have given Dr. J. H. McLean's Liver and Kidney Balm a very severe test as a medicine for diseased kidneys, and it has proved entirely successful. I suffered great anguish from Bright's Disease, from which I could get no relief until I used the Liver and Kidney Balm. It cured me and I am deeply grateful for it.

KANSAS FARMER.

ESTABLISHED IN 1863.

Published every Wednesday by the

KANSAS FARMER COMPANY.

OFFICE:

No. 116 West Sixth Avenue.

SUBSCRIPTION PRICE: ONE DOLLAR A YEAR.

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

Address KANSAS FARMER CO., Topeka, Kansas.

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

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

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

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

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

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

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

Address all orders—

KANSAS FARMER CO., Topeka, Kas.

If you want one of the finest magazines published, send us \$2.25 for *KANSAS FARMER* and *Cosmopolitan*.

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

One dollar and sixty-five cents will pay for the *KANSAS FARMER* and the twice-a-week *New York World*. Everybody should read.

Many of our subscribers desire a daily newspaper. In renewing your subscription it is well to note the fact that we can furnish you a year's subscription to *KANSAS FARMER* and daily *Kansas City Star* for \$4. Or, *KANSAS FARMER* and daily *Leavenworth Times* for \$3. The amount for both papers to be sent to this office.

Every farmer in Kansas, and especially the breeders and stock-raisers, should have the greatest live stock journal in the world, the *Breeder's Gazette*, of Chicago, price \$2 a year. We make a special offer of it and the *KANSAS FARMER*, both papers one year, for only \$2. Subscribe now through this office.

Bulletin No. 48, by the farm department of the State Agricultural college, has just appeared. It treats of "Six Years' Experience With Ensilage," "Some Forage Plants," and "Renovating a Prairie Pasture." In this bulletin Prof. Georges has done a valuable service in furnishing authoritative answers to questions frequently asked. Extended excerpts will appear next week.

Messrs. G. C. Robbins and C. H. Bardshar, of Mt. Hope, Sedgwick county, are putting in a large pumping plant with which to irrigate 500 acres of land. Their engine is a seventy-five horse-power Corliss engine. This is to drive a No. 10 Van Wie centrifugal pump which is rated at 7,500 gallons per minute. The water will be pumped from the Arkansas river when there is any in sight and from the sands of the river bed when there is none on the surface.

At the last meeting of the State Board of Agriculture Hon. T. W. Harrison read an able paper in which he suggested that the "hundred-dollar steer" should be the aim of the Kansas farmer. The reviewers of the Chicago stock market gave a rather gloomy picture on account of a sharp decline from the prices of the week before. But the top price for heavy beefs was quoted at \$6.25. The next lower grade was stated to be cattle ranging from 1,350 to 1,600 pounds. Doubtless the "heavy beefs" weigh 1,600 to 1,800 pounds, and at the top price—\$6.25—would bring \$100 to \$112.50 each. The "hundred-dollar steer" is now a possibility and doubtless several Kansas feeders have him this spring.

OUT AMONG THE IRRIGATORS.

The Santa Fe road ran an irrigation excursion last week, from Newton, Kas., to Rocky Ford, Colo. The first section left Newton on Tuesday evening and was landed on Wednesday morning at La Junta. There is not much irrigation to be seen at La Junta, but there is a newly-made artesian well at the railroad roundhouse. It is flowing about fifty gallons per minute of pure soft water from a depth of 420 feet. The surface water in this part of Colorado is so impregnated with minerals as to be unfit to drink and scarcely usable in engine boilers. La Junta is a railroad town. The saloon was plainly in evidence along the principal street. Public-spirited citizens are proud of two things, however. These are the fine school building and the free public library. The latter is a most creditable institution for so small a town, containing about 5,000 well-selected volumes, stored in a fire-proof building. It is the gift of a public-spirited citizen who holds that individual wealth is a trust to be administered for the benefit of mankind. The free reading-room, containing the best of current periodical literature, and the free library are powerful counteracting forces to the tearing-down influences of the saloons. Kansas wheat is shipped into La Junta, ground into flour and sent along on the same bill of lading on which it arrived. Business!

Rocky Ford, famed for its melons, is a very small town in a big country. Indeed, the town seems to be simply a convenience for the country, instead of the too common reverse case, in which a surrounding country is treated as a necessity for building a town. The irrigated lands are right around and all through Rocky Ford. There are here many five-acre farms on which people are making a living and more. Melons are probably a more prominent part of the products now than they will be in future. Everybody is raising fruit trees and shrubs. There is never any disappointment as to the effect of irrigation upon these. They grow in simple perfection under irrigation and bear young and with great regularity. The "formerly of Kansas" man is much in evidence at Rocky Ford. One of them, Henry F. Hagan, who has a fine half-section farm near Ellinwood, is raising fruits on nine acres at Rocky Ford, and, by way of amusement, last year sold 18,000 pounds of honey for \$2,000 to Kansas and Missouri people. In the stores one reads on the shelves of cans "Rocky Ford Cannery." The State has an experiment station near Rocky Ford, and it is said that it sells enough produce to pay its expenses. A little west of town were 3,000 fat sheep ready for shipment. What there is about 3,000 sheep to suggest pumps and engines may be hard to imagine, but certain it is that in less than five minutes W. L. Gamage was talking Van Wie pump and Weber engine to the owner of the sheep.

Water for irrigation is obtained from the Arkansas river by means of ditches. The Arkansas has not, just now, a superfluity of water, so the ditches have or have not water, according to their "priorities." If there is no more than water enough for the ditch to which the first priority attaches, people along this get water, while those along the others "stand back like a bound boy at a husking" and wish for water. This may have something to do with the interest they have in a pump man, even in Colorado.

Irrigation came to Colorado from the Southwest, and it used to be said that nobody but a Mexican could make water run up hill. But the knowing Western man has made much improvement over the ways of the Mexican. With less labor he irrigates more land. But the small farms have not impressed upon their owners the necessity for economical work as have Col. Perry's 1,200 irrigated acres at Englewood, Kas. One of the five-acre farmers at Rocky Ford thought that if he wished he could irrigate his entire place in three days. Col. Perry's irrigator, it will be remembered, averages seventy-five acres per week.

The effects of irrigation are strikingly apparent at Rocky Ford. The

coarse, dead-looking soil produces nothing without irrigation. Its desert character is at once changed to the acme of productiveness by the application of water. Stored in warehouse at Rocky Ford the writer saw over 5,000 bushels of alfalfa seed, several carloads of beans and great quantities of oats. The years of general crop failures are the irrigation farmer's best, on account of the greater demand for the products which he is sure to have for sale.

The next day was spent near Syracuse, Kas., by a few of the excursionists. Mr. G. C. Robbins, who is putting in a large pumping plant at Mt. Hope, Sedgwick county, Kansas, and the writer were taken in charge by Mr. Gamage, the wide-awake agent for the Van Wie centrifugal pumps. The first place visited was the farm of James H. Gates, who has 800 acres of Arkansas valley land which he somehow acquired in consequence of herding cattle, selling buffalo bones, and farming. His farm is well irrigated, well farmed, well stocked and pays well. Alfalfa is his principal crop, and he is now feeding the hay to cattle, horses and hogs. His method of applying water is well "up to date." Mr. Gates is an Englishman, but is now reversing his former policy of buying all the land next to him and is selling on easy terms so as to reduce his cares as old age creeps on.

The next place was that of Thos. H. Ford, adjoining Mr. Gates'. He irrigates, of course, and it is said that last year he sold \$9,000 worth of produce from his farm, \$5,000 of which was alfalfa seed.

But one of the most interesting things shown was the pumping plant of H. C. and A. W. Price. With a nine-horse-power gasoline engine they are raising water a height of seven feet. Neighbors told them they could never pump water enough to run half way across their field. They started their engine for the day just as we drove up. The pump discharges directly into the ditch through a flume three feet wide. The water was running out at a furious rate and measured eighteen inches deep. They had up to that time irrigated at the rate of an acre per hour and consumed one gallon of gasoline per hour in pumping the water. We went out to see the water applied. At a distance of three-fourths of a mile from the pump it spread rapidly over the alfalfa. Just as we came away the man in charge of the water reported that it would, at the rate it was running, cover five acres in two hours. The Messrs. Price are greatly elated at the success of pumping and on account of the low cost of water by this method.

Returning to Syracuse, the party was joined by I. J. C. Grey, editor of the *Republican*, and Henry Block, editor of the *Journal* and postmaster. Thus re-enforced, the fine farm of L. P. Worden was visited. Mr. Worden irrigates his field crops from the ditch and his orchard and garden from a windmill pump and reservoir. His alfalfa, wheat and oats were excellent. His irrigated wheat yielded last year nearly forty bushels per acre and weighed sixty-three pounds to the measured bushel. His orchard trees were bought from J. F. Cecil, of North Topeka. If it were not so far he might expect the Shawnee county nurseryman to exhibit the Hamilton county orchard as a sample of what his stock will do when properly cared for. The bee ranch of Capt. J. H. Wing was next visited. Capt. Wing has just removed his bees to their present location, but says he shall be disappointed if he does not sell 200 pounds of honey per stand and double their number by next fall. Whether or not the centrifugal pump man showed all the successes in the vicinity of Syracuse the writer is unable to state, but the company voted him an admirable guide and took the afternoon train for Garden City. There are some interesting fruit farms near Lakin, and one can see from the car window how irrigation has transformed portions of the desert-like country to great fruitfulness.

Approaching Garden City from the west, the train runs through a forest of windmills. This is indeed the home

of windmill irrigation, although good use is made of the ditches also. The great storm of April 4 and 5 tried the strength of the mills and towers and found some wanting. Some have even been led to declare that the best irrigation windmill has not yet been designed. Certain it is that the windmill works for nothing and boards itself and if only made with sufficient strength and power would raise water at less cost than any other motor. Many new windmill plants are being erected near Garden City, and the results, which the gardeners and truck farmers of that vicinity have to show, produce a most favorable impression for this method. A hasty visit to the fine farm of I. L. Diesem found that member of the State Board of Agriculture busy at an additional windmill pumping plant. Mr. Diesem claims to be the original windmill irrigator of his section. He has undoubtedly been a successful one. Besides having orchards, gardens, etc., he has in his reservoirs some of the finest varieties of fish, such as black bass, channel cat and rainbow trout. Carp are raised that the young ones may serve as food for the game fishes.

Of course there are bees at Garden City, as is natural to an alfalfa country. The ranch of A. D. Bennett, who removed his bees from Rocky Ford to Garden City, was visited. He thinks his present location greatly preferable to that in Colorado. His last year's honey record was somewhat broken into by moving, but his bees were a source of profit and are in A 1 condition now. He took care of a stand of bees, last season, for a Garden City professional man. During the season there was obtained \$31.20 worth of honey from this stand and in the fall there were two strong stands instead of one.

Time is always too short at Garden City and night made an end of our perambulations. Judge D. M. Frost, President of the State Irrigation Board; F. W. Dunn, of the Agricultural College Experiment Station; John M. Irwin, of the Stover Manufacturing Company, and others interested in irrigation contributed to hasten the flight of the hours of the evening until low twelve was reached on the dial.

On Friday morning the train carried us rapidly out of the land of paradise about Garden City, through wastes which need only irrigation to make them, too, enchanted grounds.

At Rocky Ford the water was nearly all taken out of the Arkansas. Every ditch, from that place to Garden City, had its mouth open and was swallowing the surface water; yet each mile below Garden City showed more water than the one above it, so that when the head of the great Soule canal, on which \$1,000,000 was borrowed, was reached, a strong stream was rushing into it. This canal has never been of much use and is in the hands of a receiver. But farmers living under it have formed an association, assessed themselves 15 cents per acre for necessary labor, and are making good use of the otherwise idle property.

At Great Bend, Hon. H. R. Hilton, government soil expert for Kansas, and the writer were taken in charge by Hon. G. N. Moses and shown some new pumping machinery in that vicinity. On the writer's farm, near Great Bend, the windmills were found idle, but inquiry disclosed the fact that the rains had already made the soil too wet to work well, so that there is now no use to pump water upon the land. There was, however, a half acre of water in the reservoir and the wind appeared frisky enough to raise it from eighteen inches as at present to four feet in depth on request. Mr. Hilton bored his testing-auger into the soil and found it moist to a depth of two and a half feet. This assures a good spring growth of corn, and the farmer who is prepared to anticipate a dry spell in July by storing a surplus of moisture in his subsoil before the drought catches his corn, and then by diligent surface cultivation keeping evaporation from stealing it, will have nothing to fear as to this year's crop.

KANSAS FARMER and *Semi-Weekly World* (N. Y.), you can have for \$1.65 one year.

OUR NEW CHIEF JUSTICE.

Some surprise was occasioned last week when it was announced that Chief Justice Albert H. Horton, of the Kansas Supreme court, had resigned that high office, the resignation to take effect April 20. The term for which Judge Horton was elected will not expire until January, 1897.

The Governor has done himself great credit and the State a valuable service by appointing Judge David Martin, of Atchison, to fill the unexpired term. If persons acquainted with the attorneys of Kansas had been asked to name the three finest lawyers in the State, the answers of most of them would have included Judge Martin in the list. In lists of six instead of three, nearly all would have included Judge Martin. As a lawyer he climbed from the foot to the top of the ladder by hard, faithful work, and while doing it, maintained a record of honesty and fair dealing without a blemish. When proposed for Judge of his district, he was elected without opposition. Re-election came in the same way. When he resigned the Judgeship it was commonly remarked that he could have held the position for life had he desired.

It will interest the friends of prohibition to know that it was he who, in the early days of the prohibitory law, rendered the famous decision in the brewery cases, which afterwards went to the Supreme court of the United States, in which high tribunal Judge Martin's decision was confirmed and his reasoning adopted. This forever put an end to the plan to make the State pay for the loss of value of brewery properties on account of the prohibitory law.

As a man, Judge Martin is broad-gauged, well informed, generous and genial. On questions of public policy he is above the restraints of party dogma, and basing his principles on the broad foundation of human experiences and actuated by the most kindly impulses, he holds what some call radically advanced views on social questions. He has written some of the most powerful arguments yet published in favor of the restoration of silver to its former place in our coinage, and, with other close investigators, he holds that a large proportion of our financial ills have resulted from legislation had in 1873. He has also made a learned presentation of a plan for taxing inordinate inheritances. In this he has shown not only the expediency but also the justice and constitutionality of such tax.

As an attorney Judge Martin is one of those intense workers who, by the force and keenness of application, accomplish marvelous quantities of work. As a man off duty he is jovial and full of laughter. He enjoys the naive and honest ways of little boys and finds great entertainment in getting their answers to questions. He never attempts to puzzle them. In this connection an instance will be interesting. Having business frequently at Conway Springs, in Sumner county, Judge Martin took much enjoyment in drinking the water fresh from the flowing springs. One day some children were there with their pails for water. The Judge asked the little boy which spring he thought afforded the best water. "I wouldn't drink out of that one," was the reply. "Why? They come out pretty close together. Do you think there is much difference?" "Well, I wouldn't drink out of that one, anyhow." "The water looks just like the other." "Yes, but a dog got into that one." "Did the dog drown?" "No-o! John Simmonds helped him out. But I wouldn't drink out of that spring." "How long ago was it?" "I think it was summer before last." "The water runs out pretty fast. Don't you think it would be clean by this time?" "Well, I wouldn't drink out of that one, anyhow." And the little fellow trudged off with his pail of water, leaving his questioner greatly amused.

Judge Martin is a self-made man. He learned the trade of a miller when a boy and while working at this studied law. He is now fifty-six years old, uses neither tobacco nor liquors, has excellent health and a capacity for work which will enable him to dis-

charge readily the heavy duties of the highest judicial position in the State. His appointment should, and probably does, remove this high office from the contentions of politics. He should be nominated by all parties and elected without opposition.

The Secretary of the Inter-State Deep Harbor committee reports the near approach of the great accomplishment of obtaining a deep water harbor on the Gulf coast of Texas.

In view of the rise in the price of beef, J. Sterling Morton, Secretary of Agriculture, has so modified his order excluding Mexican cattle that they may be admitted at certain places after inspection by officers of his department. If the admission of these animals was unsafe when beef was cheap it is difficult to see how the fact that cattle have reached a remunerative price in this country can make it now safe to admit the cheap Mexican cattle to destroy the profits of the farmers of this country.

In the report of Professor Hay's survey of the water resources of a typical region of the great plains, made to the United States Geological Survey, it will be stated that in the region examined particulars of 300 wells were collected, and of these sixty-nine were being used for irrigation, of which twenty-two are in Nebraska, seventeen in Colorado, and thirty in Kansas. Many of these are in valleys where the wells are from twenty to fifty feet deep, but some of them are on the plains where it is from 100 to 180 feet to water. It is also stated that the number of wells so used is being increased all the time. A single county (in Kansas) now has more than that of the whole area examined last fall. The region examined was a strip of about thirty miles wide lying on each side of the 102d meridian, from the North Platt river to the South Fork of the Smoky Hill. The report is illustrated by profiles and geological sections, showing the country on the meridian for about two-thirds of the whole distance, and east and west sections showing relation of the water-bearing strata to the west to east slope of the country.

Weekly Weather-Crop Bulletin.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending April 15, 1895—T. B. Jennings, Observer Weather Bureau, Director:

CONDITIONS.

The temperature this week has been much more uniform than the preceding week, and has been warmer, averaging about 2° above normal in the western part of the State and about 3° above in the eastern. Light rains have occurred in nearly all parts of the State, with excessive rains extending through Phillips, Rooks and Ellis into Rush.

RESULTS.

EASTERN DIVISION.

Ground in fine working condition, plowing largely done; wheat in fine condition, growing fast; oats all in and mostly up, a good stand; flax mostly sown; corn planting and listing being pushed vigorously; fruit trees—peaches, peaches, early cherries and plums—in full bloom, early apples coming into bloom; stock in good condition.

Brown.—Splendid growing week; ground moist and warm—has made wheat, oats and grass grow rapidly; peaches and cherries in full bloom; corn planting commenced.

Marshall.—Crops are doing fine.

Pottawatomie.—Peaches, plums and pears in full bloom on 10th; early apples and cherries blossoming on 13th; oats, alfalfa and gardens doing nicely; tame grasses not so well; enough surface moisture to keep things growing, but not enough for the subsoil.

Riley.—Peaches, plums and pears bloomed on 10th, early apples and cherries on 13th; oats made excellent growth; gardens up and growing; tame grasses (alfalfa excepted) do not thrive so well as usual, having lost a good deal of vitality because of the severities of last season.

Johnson.—Wheat and grass fine; week favorable for seeding oats.

Woodson.—Present indications point to a big apple, peach and cherry crop; corn largely in; stock on pastures; need more rain.

Coffey.—Great deal of corn planted; ground in good condition; wheat looking well but a great many chinch bugs

on it and in the air; fine prospects for fruit, orchards appearing like beautiful bouquets in the distance; much flax sown; grass coming nicely, oats fine.

Wilson.—Wheat, rye and oats look fine, but ground getting dry; air full of chinch bugs last day or two; stock on pastures but grass rather short yet.

Labette.—Prospects for fruit are good; wheat and oats good; corn and potatoes coming up; ground in good condition.

Montgomery.—Light showers this week have improved grass and small grain; corn nearly all planted, early planted coming up; wheat doing well and bids fair for average crop; red-bud, cherries and apples in full bloom; all fruit prospects good.

MIDDLE DIVISION.

The wheat is in bad shape in this division, being largely killed either by the past season or the recent sand storm. Oats and barley largely sown, up and doing well; much corn being listed or planted; fruits of all kinds promise well.

Phillips.—Showers had good effect on small grain; wheat generally dead; many are sowing oats with the wheat, some listing in corn.

Cloud.—Oats in fine condition; grass growing very fast; corn planting well under way; fruit trees full of bloom; wheat has improved a little.

Mitchell.—Plum, peach, apricot and pears loaded with bloom; no improvement in wheat; most of it will be plowed and put in other grain; oats up and growing nicely; much alfalfa being put in; corn planting in progress; gardens progressing favorably.

Osborne.—Wheat all killed in my (Downs) neighborhood.

Clay.—Weather fine for wheat and oats; oats give great promise at present; corn planting has commenced; plum, peach and pear trees are in full bloom; pastures and forests putting on green coats.

Ottawa.—Much sunshine, making a good growing week; peaches and plums full of bloom; corn planting pushed right along; wheat has done very well but needs more rain to make it do its best; cherries beginning to bloom.

Ellis.—Rain of last Saturday night and four inches of very wet snow in the morning, followed by warmer weather, has started oats and barley; wheat looking little better.

Dickinson.—All vegetation doing well; less than 50 per cent. of wheat sown last fall now growing; oats are up and corn planting will begin this week; all fruits slow about blossoming this year; grass getting a good start.

Saline.—Large acreage of oats sown, some coming up; some corn planting this week, will become general next week.

Barton.—Wheat doing well so far; barley and oats up; corn planting begun; fruit trees in bloom; alfalfa and pastures look well; rain needed.

Harvey.—Wheat making fair growth but will need rain soon, oats up and doing nicely; corn planting in progress; early fruits now in bloom in great abundance.

Reno.—Fruit of all kinds promise well, everything in full bloom.

Stafford.—Fine growing week, all spring crops growing fast; listing corn in full blast; wheat greatly damaged, a poor prospect, the sand storm of the 5th damaged whole fields.

Sedgwick.—Peach, apricot and plum trees in full blossom, apple and pear blossoming slowly; wheat very uneven; a large part of it is being planted to corn; oats look well; grass starting but needs rain.

Kingman.—Wheat generally in bad condition for want of rain, and much of it will go in corn; corn planting begun; oats and barley are looking fairly well; all fruit trees are loaded with blossom.

Kiowa.—Good growing week; living wheat reviving to a considerable extent; oats and barley recovered from the storm of the 5th; immense acreage of corn; peach trees heavily loaded with bloom.

Cowley.—Wheat damaged by high winds in places on uplands, but growing well on bottoms.

Summer.—Favorable for corn planting, one-third of which is in; good prospect for fruit.

WESTERN DIVISION.

Received a severe blow in the sand, rain, snow and wind storm of the 5th and 6th, which, coming this time of year, had the same effect as a winter blizzard on stock and man, but the snow and rain were beneficial in the end. Wheat is improving in the south part, and all spring crops over the division; alfalfa, however, is queen and asserts her sway. Fruits are in bloom in the southern part and coming into bloom in the north.

Cheyenne.—Wheat saved for a while

GOT A BABY BOY NOW.

Happiness in a Southern Man's Home—Tells About The Red Flag of Danger at The Railroad Crossing—Warning to America's Men.

"For twenty-six years I have used tobacco in great quantities and of late years took to cigarette smoking," writes Mr. W. E. Simpson, of Lecompte, La. "I want to go on record that tobacco has robbed me of many years of life and a great deal of happiness. I realize it now as I compare my feelings and my condition with that of a year ago, when I was a tobacco saturated cigarette fiend. Many and many a time I try to quit smoking myself into eternity, but I could not put through a day without suffering extreme nervous torture, which would increase hour by hour till finally, to save myself as it seemed, from almost flying to pieces, I had to light the little, white pipe-stick and swallow the smoke. One day I read in my paper 'Don't Tobacco Spit and Smoke Your Life Away,' just what I was doing, it came to me like the warning of the man who waves the red flag of danger at the railroad crossing, and said that No-To-Bac was an absolutely guaranteed relief from tobacco slavery. I did not believe it, but like a drowning man grasping at a straw I commenced taking No-To-Bac. The effects were magical, it destroyed the nerve craving and desire for cigarettes. Two boxes, would you believe it, made me well and strong. I have gained mentally, physically, in vigor and manhood, and with the brain free from the nicotine and a breath no longer befouled with tobacco smoke, I am so happy to-day to write No-To-Bac did it all a year ago, so the cure is time-tested and tried, not only in my own case, but several of my friends who have also been cured.

"We have a baby boy now. My wife and I feel that all this happiness started from the time when I first used No-To-Bac, and in evidence of our appreciation and in order that the memory of the happiness may be perpetuated in a living form, we want to name our baby boy after the man who wrote the line 'Don't Tobacco Spit and Smoke Your Life Away.'

"No-To-Bac is popular here and all our druggists sell it. Hardly a day passes but somebody asks me about No-To-Bac, so I don't want you to hesitate to use these lines in any way that you think will make known to suffering humanity the happiness that there is in No-To-Bac for the many men with nicotineized brains and weakened resolutions. If they will only make up their mind to save the waste of vital power—to say nothing of the money—now going up in smoke and out in tobacco spit."

by the little moisture of the 6th; the storm caused no loss of life but blew down several windmills; some spring plowing and breaking being done.

Graham.—Fine week for farm work; soil in excellent shape; planting in progress; grass for stock starting finely.

Sheridan.—Ground thoroughly wet and in fine condition, and the weather first-class for work and crops.

Trego.—Growing week; green grass colors the low land; some few wheat fields begin to show life; rye is better than wheat; plowing for corn; cattle about recovered from storm of 5th and 6th.

Gove.—Ground in good condition but wheat don't get through.

Wallace.—Spring wheat and barley coming nicely; winter wheat not blown out looks well.

Ness.—Storm of preceding week did great damage; soil was distributed, entirely uncovering some fields and burying others, but the moisture will more than repay.

Ford.—Alfalfa fine; ground in fine condition from the abundant rains, and farmers greatly encouraged.

Finney.—Wheat not improving as wished for, but prospects are good.

Kearney.—Very favorable to all crops; plowing and seeding being pushed.

Hamilton.—Dry yet, nothing but wind last week.

Grant.—Soil in better condition than last week; snow and wind storm of 5th and 6th severe and unusual.

Johnson.—Too dry to plow; wheat suffering for rain; grass in fair condition; many horses and cattle perished in storm of 5th and 6th, also three children, aged 8, 10 and 13 years.

Clark.—Wheat all killed; severe sand, rain and snow storm, bad on stock; irrigated oats and barley look well.

Meade.—Oats and barley mostly up and growing nicely; wheat is promising; alfalfa never was better; growing crops in splendid condition; plum and apricots in full bloom.

Morton.—Severe storm last week; cattle and horses driven off by the score and perished in the snow drifts in the draws and along the Cimarron.

Horticulture.

SPRAY CALENDAR.

[The following is from a calendar prepared by E. G. Lodeman, Assistant Horticulturist, Cornell University Experiment Station, Ithaca, N. Y.]

Although much has been written on the subject of spraying, the informa-

tion is so scattered that it cannot readily be brought together. In the preparation of this calendar the most important points regarding sprays have been selected and arranged in such a manner that the grower can see at a glance what to apply and when to make the applications. The more important insect and fungous enemies are also mentioned, so that a fairly clear

understanding of the work can be obtained by examining the table below. When making the application advised, other enemies than those mentioned are also kept under control, for only the most serious ones could be named in so brief an outline. The directions given have been carefully compiled from the latest results obtained by leading horticulturists and entomologists, and they may be followed with safety.

NOTICE.—In this calendar it will be seen that some applications are italicized and these are the ones which are most important. The number of applications given in each case has particular reference to localities in which fungous and insect enemies are most abundant. If your crops are not troubled when some applications are advised, it is unnecessary to make any.

FOR APHIDES OR PLANT LICE USE KEROSENE EMULSION ON ALL PLANTS.

PLANT.	First Application.	Second Application.	Third Application.	Fourth Application.	Fifth Application.	Sixth Application.
APPLE. (Scab, codlin moth, bud moth.)	When buds are swelling, copper sulphate solution.	Just before blossoms open, Bordeaux. For bud moth, arsenites when leaf buds open.	When blossoms have fallen, Bordeaux and arsenites.	8-12 days later, Bordeaux and arsenites.	10-14 days later, Bordeaux.	10-14 days later, Bordeaux.
BEAN. (Anthracnose.)	When third leaf expands, Bordeaux.	10 days later, Bordeaux.	14 days later, Bordeaux.	14 days later, Bordeaux.		
CABBAGE. (Worms, aphids.)	When worms or aphids are first seen, kerosene emulsion.	7-10 days later, if not heading, renew emulsion.	7-10 days later, if heading, hot water 130° F.	Repeat third in 10-14 days if necessary.		
CHERRY. (Rot, aphids, slug.)	As buds are breaking, Bordeaux; when aphids appear, kerosene emulsion.	When fruit has set, Bordeaux. If slugs appear, dust leaves with air-slaked lime. Hellebore.	10-14 days, if rot appears, Bordeaux.	10-14 days later, ammoniacal copper carbonate.		
CURRENT. (Mildew, worms.)	At first sign of worms, arsenites.	10 days later, hellebore. If leaves mildew, Bordeaux.	If worms persist, Hellebore.			
GOOSEBERRY. (Mildew.)	When leaves expand, Bordeaux.	10-14 days later, Bordeaux.	10-14 days later, ammoniacal copper carbonate.	10-14 days later, repeat third.		
GRAPE. (Fungous diseases.)	In spring, when buds swell, copper sulphate solution.	When leaves are 1-1½ inches in diameter, Bordeaux.	When flowers are open, Bordeaux.	10-14 days later, Bordeaux.	10-14 days later, if any disease appears, Bordeaux.	10-14 days, ammoniacal copper carbonate. Make later applications of this if necessary.
NURSERY STOCK. (Fungous diseases.)	When first leaves appear, Bordeaux.	10-14 days, repeat first.	10-14 days repeat first.	10-14 days repeat first.	10-14 days repeat first.	10-14 days repeat first.
PEACH, NECTARINE (Rot, mildew.)	Before buds swell, copper sulphate solution.	Before flowers open, Bordeaux.	When fruit is nearly grown, Bordeaux.	5-7 days later, Ammoniacal copper carbonate.	5-7 days later, repeat fourth.	5-7 days later, repeat fourth if necessary.
PEAR. (Leaf blight, scab, psylla, codlin moth.)	As buds are swelling, copper sulphate solution.	Just before blossoms open, Bordeaux. Kerosene emulsion when leaves open, for psylla.	After blossoms have fallen, Bordeaux and arsenites. Kerosene emulsion if necessary.	8-12 days later, repeat third.	10-14 days later, Bordeaux.	10-14 days later, Bordeaux if necessary.
PLUM. (Fungous diseases, curculio.)	When buds are swelling, copper sulphate solution.	When blossoms have fallen, Bordeaux. Begin to jar trees for curculio.	10-14 days later, Bordeaux.	10-20 days later, Bordeaux.	10-20 days later, ammoniacal copper carbonate.	2-3 weeks before plums ripen, Bordeaux, or ammoniacal copper carbonate.
POTATO. (Blight, beetles.)	When beetles first appear, arsenites.	When vines are two-thirds grown, Bordeaux and arsenites.	5-15 days later, Bordeaux.			
QUINCE. (Leaf and fruit spot.)	When blossom buds appear, Bordeaux.	When fruit has set, Bordeaux.	10-20 days later, Bordeaux.	10-20 days later, Bordeaux.	10-20 days later, Bordeaux.	
RASPBERRY. BLACKBERRY. DEWBERRY. (Anthracnose.)	Before buds break, copper sulphate solution.	During summer, if rust appears on leaves, Bordeaux.	(Orange or red rust is treated best by destroying the plants.)			
STRAWBERRY. (Rust.)	As first fruits are setting, Bordeaux.	As first fruits are ripening, ammoniacal copper carbonate.	When last fruits are harvested, Bordeaux.	Repeat third if foliage rusts.		
TOMATO. (Rot, blight.)	At first appearance of blight or rot, Bordeaux.	Repeat first if diseases are not checked.	Repeat first when necessary.			

BLACK KNOTS ON PLUMS OR CHERRIES SHOULD BE CUT OUT AND BURNED AS SOON AS DISCOVERED.

FORMULAS:

Bordeaux Mixture.
Copper sulphate..... 6 pounds.
Quicklime..... 4 pounds.
Water..... 40 gallons.

Dissolve the copper sulphate by putting it in a bag of coarse cloth and hanging this in a vessel holding at least four gallons, so that it is just covered by the water. Use an earthen or wooden vessel. Slake the lime in an equal amount of water. Then mix the two and add enough water to make forty gallons. It is then ready for immediate use. For rots, moulds, mildews, and all fungous diseases.

Ammoniacal Copper Carbonate.
Copper carbonate..... 1 ounce.
Ammonia, enough to dissolve the copper.....
Water..... 9 gallons

The copper carbonate is best dissolved in large bottles, where it will keep indefinitely, and it should be

diluted with water as required. For same purpose as Bordeaux.

Copper Sulphate Solution.
Copper sulphate..... 1 pound.
Water..... 15 gallons.

Dissolve the copper sulphate in the water, when it is ready for use. This should never be applied to foliage, but must be used before the buds break. For peaches and nectarines use twenty-five gallons of water. For fungous diseases.

Paris Green.*
Paris green..... 1 pound.
Water..... 250 gallons.

If this mixture is to be used upon peach trees, one pound of quicklime should be added. Repeated applications will injure most foliage unless lime is added. Paris green and Bordeaux can be applied together with perfect safety. The action of neither is weakened, and the Paris green loses all

caustic properties. For insects which chew.

London Purple.*

This is used in the same proportion as Paris green, but as it is more caustic it should be applied with the lime, or with the Bordeaux mixture. Do not use it on peach or plum trees. For insects which chew.

Hellebore.

Fresh white hellebore..... 1 ounce.
Water..... 3 gallons.
Apply when thoroughly mixed. For insects which chew.

Kerosene Emulsion.

Hard soap..... ½ pound.
Boiling water..... 1 gallon.
Kerosene..... 2 gallons.
Dissolve the soap in the water, add the kerosene, and churn with a pump for five to ten minutes. Dilute ten to fifteen times before applying. For

insects which suck, cabbage worms, and all insects which have soft bodies,

*Paris green and London purple are often referred to as arsenites.

A Few Left.

The spray calendar, presented on this page, is so valuable that in order to have it in convenient form we had a large number printed on heavy paper in suitable form to hang up for convenient reference. We have sent many of these to applicants, but have still in stock a limited number, which will be sent to any address on receipt of 2 cents to pay for postage and mailing.

Henry Ward Beecher once informed a man who came to him complaining of gloomy and despondent feelings, that what he most needed was a good cathartic, meaning, of course, such a medicine as Ayer's Cathartic Pills, every dose being effective.

Interesting circulars sent to farmers. Send name to Bureau of Immigration, Spokane, Wash.

In the Dairy.

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

Anti-Oleo Law in Wisconsin.

"No man can claim a right to perpetrate a fraud." The dairymen of Wisconsin, under the magnetic leadership of Governor Upham, who made the above phrase their "battle cry," have scattered the defenders of imitation dairy goods and enacted the following law:

AN ACT, for the protection of the public health and to prevent adulteration, deception or fraud in the manufacture and sale of dairy products.

The people of the State of Wisconsin, represented in Senate and Assembly, do enact as follows:

SECTION 1. No person, by himself or by his agents or servants, shall manufacture or shall buy, sell, offer, ship, consign, expose or have in his possession for sale any cheese manufactured from or by the use of skimmed milk to which there has been added any fat which is foreign to such milk.

SEC. 2. No person, by himself or by his agents or servants, shall manufacture or shall buy, sell, offer, ship, consign, expose or have in his possession for sale, within this State, any skimmed-milk cheese, or cheese manufactured from milk from which any of the fat originally contained therein has been removed, except such cheese is ten inches in diameter and nine inches in height.

SEC. 3. No person, by himself or by his agents or servants, shall render or manufacture, sell, ship, consign, offer for sale, expose for sale or have in his possession with intent to sell, any article, product or compound made wholly or partly out of any fat, oil or oleaginous substance or compound thereof, not produced from unadulterated milk or cream from the same, and without the admixture or addition of any fat foreign to said milk or cream, which shall be in imitation of yellow butter produced from pure unadulterated milk or cream of the same, with or without coloring matter; provided, that nothing in this act shall be construed to prohibit the manufacture or sale of oleomargarine in a separate and distinct form and in such manner as will advise the consumer of its real character free from coloration or ingredient that causes it to look like butter.

SEC. 4. It shall be unlawful for any person to sell or offer for sale to any person who asks, sends or inquires for butter, any oleomargarine, butterine or any substance made in imitation or semblance of pure butter not made entirely from the milk of cows, with or without coloring matter.

SEC. 5. It shall be unlawful for any person to expose for sale any oleomargarine, butterine or any similar substance not marked and distinguished on the outside of each tub, package or parcel thereof by a placard with the word "oleomargarine," and not having also upon every open tub, package or parcel thereof a placard with the word "oleomargarine," such placard in each case to be printed in plain, uncondensed gothic letters, not less than one inch long, and such placard shall not contain any other words thereon.

SEC. 6. It shall be the duty of every person who sells oleomargarine, butterine or any similar substance, from any dwelling, store, office or public mart, to have conspicuously posted thereon the placard or sign, in letters not less than four inches in length, "oleomargarine sold here," or "butterine sold here." Such placard shall be approved by the Dairy and Food Commissioner of the State of Wisconsin.

SEC. 7. It shall be unlawful for any person to peddle, sell or deliver from any cart, wagon or other vehicle, upon the public streets or ways, oleomargarine, butterine or any similar substance, not having on the outside of both sides of said cart, wagon or other vehicle the placard in uncondensed gothic letters, not less than three inches in length, "licensed to sell oleomargarine."

SEC. 8. It shall be unlawful for any person to furnish or cause to be fur-

nished in any hotel, boarding house, restaurant or at any lunch counter, oleomargarine, butterine or any similar substance to any guest or patron of said hotel, boarding house, restaurant or lunch counter, without first notifying such guest or patron that the substance so furnished is not butter.

SEC. 9. Any person who shall violate any of the provisions of this act shall be guilty of a misdemeanor, and upon conviction thereof shall be punished for the first offense by a fine of not less than \$50 nor more than \$500; and upon conviction of any subsequent offense, shall be punished by a fine of not less than \$100 nor more than \$500, or by imprisonment in the county jail of not less than ten days nor more than sixty days, or by both such fine and imprisonment, at the discretion of the court.

SEC. 10. It shall be the duty of the District Attorney in any county of the State, when called upon by the Dairy and Food Commissioner of this State, or any of his assistants, to render any legal assistance in his power to execute and to prosecute the cases arising under the provisions of this act; and the Dairy and Food Commissioner shall have power to appoint, with the approval of the Governor, special counsel to prosecute or to assist in the prosecution of any case arising under the provisions of this act.

SEC. 11. All acts and parts of acts inconsistent or conflicting with this act are hereby repealed.

SEC. 12. This act shall take effect and be in force from and after its passage and publication.

Approved March 12, 1895.

In his appeal to the Legislature of Missouri, as the representative of the dairymen of that State, for the enactment of a law to prevent oleomargarine putting on the garments of pure butter, Mr. Geo. B. Lamm, of Sedalia, strikes the true key-note of the question in the following words: "I personally ask you, in behalf of the tolling dairymen I represent, and in justice to all our common people, that you should do right for the sake of right, in this matter, and thus give fair treatment to all parties interested." And later a telegram comes to hand with the good news that Missouri has joined the procession and decreed that henceforth the fat of bulls and boars shall neither be sold nor served as butter.—*Hoar's Dairyman*.

Cream-Selling vs. Butter-Making.

In Horace Greeley's advice to young men to go West he does not refer to butter-makers. In order to follow their calling they may be obliged to, if what has been said by an authority on the butter and milk question is true. He predicts that in a few years the creamery butter-makers' occupation will be "done for" in New England, the reason given being that the cream trade in Eastern cities is increasing in a much larger ratio than the supply. He thinks our butter must eventually come from the West. From our observation last summer it looks as if that was not so imaginary as it first appeared. In one creamery, making an average of 2,000 pounds of butter a week, the amount has been reduced one-half by the cream being shipped to the nearest city, the price being much larger than when made into butter.—*Practical Dairyman*.

Homes for the Homeless.

The opening of two Indian reservations in northeastern Utah to settlers opens up over three and one-half million acres of fine agricultural and stock-raising land for home-seekers.

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[Mention KANSAS FARMER.]

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The Veterinarian.

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

BROOD SOWS AILING.—I have two sows that each have six pigs four weeks old. The sows are well fed but cannot walk. J. L. F. Thayer, Kas.

Answer.—While your description of the cases is good, yet I am not able to make a satisfactory diagnosis of the cases. Try Dr. D. E. Salmon's prescription as given in last issue of the KANSAS FARMER, and at the same time give each one 20 grains of powdered nuxvomica night and morning for a week or two.

DECREASE OF MILK.—My cow, due to calve in June, had caked udder in the winter. She usually gives milk to within a few days of calving, but now she gives less than a quart and will not gain on grass, though she has udder enough for two or three gallons. * * Eureka, Kas. J. F. W.

Answer.—If grass will not increase the flow of milk nothing else will. The balance of your inquiry is written with a lead pencil crosswise of the first part and is illegible. Write with pen and ink and only one way on the paper. We have no time to study out puzzles.

LUMP ON PIG.—A pig, last fall, had a swelling the size of an egg on its back a little behind the hip joint; it is as big as a tea saucer now but does not hurt her, only I can't sell her. Tevis, Kas. A. O.

Answer.—I cannot advise in regard to the pig without knowing more of the case. The probability is that there is a deep abscess from an injury and it will have to be opened, but this can only be determined by an examination.

FISTULOUS WITHERS.—I have a mare that has had the muscles on the left side of the neck much swollen for six months; it is a little feverish and soft. I must keep her in the harness or buy another. How can I open it and not injure the muscle? What would you advise? C. W. S. Rose Hill, Kas.

Answer.—Give your mare complete rest and go to a veterinarian if you have one near you. If not, then with a sharp knife cut down to the pus on each side of the mane, cutting lengthwise; clean out the cavity and fill it with blue vitriol. In a week clean it out and fill with vitriol again. When you think all diseased tissue has been removed dissolve a tablespoonful of blue vitriol in one quart of water and inject a little of it into the sore once a day after washing out with warm water. Pass a seton in at the top and out through the side of each cavity at the bottom to furnish drainage for the pus. It would be cruel to work the mare in the condition you describe.

WIRE CUTS.—I have a yearling colt, which was worried by a dog some six weeks ago. I have applied a mixture of lard, kerosene and crude carbolic acid without success. The skin has come off from the knee down to the ankle (hind leg) and while burnt alum has removed the proud flesh, still the wound does not heal up. Will you give me instructions for proper treatment of such a wound on a horse, or for barbed wire cut, from the very first moment that it can be got at, as I have never met with any one who seems to know just what to do. Some use axle

grease, some calomel, some one thing and another, but there seems to be no knowledge beyond "old wives" remedies and I have had such good results in following your advice, and these wire cuts are so common, that I would be very grateful if I could find out just what you would advise me to do, from the very first. R. F. S. Rock Falls, Okla.

Answer.—When a cut is fresh something should be applied to start the flow of healthy pus as soon as possible. This can be done by applying, twice a day, a mixture of one part turpentine and four to six parts sweet oil; or lard will do as well. Then take sugar of lead, 1 ounce; sulphate of zinc, 1 ounce; carbolic acid, 2 drachms; water, 1 quart; mix and apply twice a day. Many other remedies are equally as good to heal but the sore must be kept in a healthy condition. Proud flesh is best removed by dusting the sore with powdered blue vitriol. One ounce of camphor gum dissolved in four ounces of turpentine and applied twice daily will stimulate an indolent wound.

"The Farmer's Ready Reference, or Hand-Book of Diseases of Horses and Cattle." Descriptive circular free. Address S. C. Orr, V. S., Manhattan, Kas.

WHAT WE SAY WE DO WE DO DO

The things we forget!

What untold mischief these do cause us all!

Perhaps you have a half-formed notion of buying a binder, reaper or mower—and it's not a McCormick.

You decide upon a machine which, you remember, showed up very favorably in a draft test—but you forget what sort of a "test" it was.

You remember the agent said his machine "is just as good as the McCormick."

You remember the McCormick is a little higher in price—But you forget that the

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was on hand ready to meet any and all competition in the World's Fair field tests—tests in which all American machines were urged to take part.

You forget that the machine you think of buying did not obtain its draft figures in these tests with the McCormick—in the same field and under the same conditions.

You forget that the McCormick is higher priced only because of its higher quality.

Write the McCormick Harvesting Machine Co., Chicago, or call on their local agent.

WHAT WE SAY WE DO WE DO DO

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Refer to the best breeders in the West, for whom I do business. Prices reasonable and correspondence solicited.

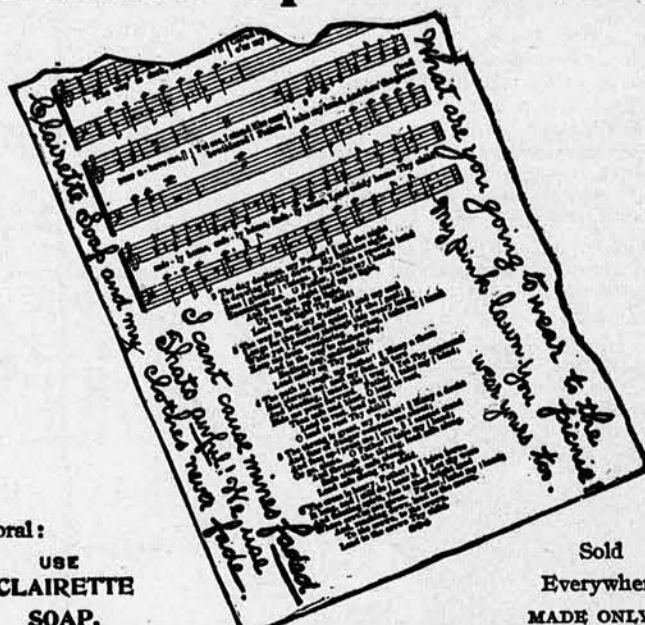
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Sales made everywhere. Reference to the best breeders in the West, for whom I have made sales. Catalogues compiled and printed. Terms reasonable.

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Pedigreed and registered live stock a specialty. Write for dates. Sales conducted anywhere in the country. Best of references and satisfaction guaranteed.

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

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Sold
Everywhere.

MADE ONLY BY
THE N. K. FAIRBANK COMPANY, St. Louis.

MARKET REPORTS.

Kansas City Live Stock.
KANSAS CITY, April 15.—Cattle Receipts 5,065; calves, 40; shipped Saturday, 2,963 cattle. The market was steady all around. The following are representative sales:

DRESSED BEEF AND SHIPPING STEERS.

34.....1,497 \$5.90	72.....1,317 \$5.75
40.....1,285 5.75	102.....1,467 5.75
20.....1,418 5.60	20.....1,457 5.50
41.....1,213 5.55	24.....1,010 5.03
21.....1,200 4.90	28.....884 5.00
19.....1,045 4.60	17.....914 4.50
42.....926 4.35	29 mix.....520 4.05
13.....670 4.00	

TEXAS AND INDIAN STEERS.

64 c.m.f....1,194 \$4.80	47 c.m.f....1,122 \$4.70
94 c.m.f....1,211 4.80	44 c.m.f....1,033 4.50
88 c.m.f....1,084 3.50	22 mix....1,037 3.50
55 c.m.f....740 3.00	22 mix....1,043 3.25

COLORADO STEERS.

43 fd.....1,318 \$4.50	1 fed.....1,100 \$4.00
------------------------	------------------------

TEXAS AND INDIAN COWS.

1 c.m.f....830 \$3.25	1 c.m.f....850 \$3.25
1 c.m.f....1,100 3.25	1 c.m.f....610 3.01
1 c.m.f....1,120 2.30	11 c.m.f....1,145 2.33
30 c.m.f....678 2.25	2.....765 2.00

COWS AND HEIFERS.

17 mix.....857 \$4.50	25 mix.....588 \$4.33
1.....830 4.25	1.....810 4.00
1.....1,330 4.00	7.....771 4.00
41 mix.....520 4.00	3.....1,123 3.93
1.....870 3.75	2.....1,135 3.75
1.....550 2.60	6.....813 2.50
3.....407 2.45	1.....560 2.45
1.....580 2.41	1.....880 2.25
4.....1,030 2.00	7.....905 1.85
1.....930 1.75	

STOCKERS AND FEEDERS.

81.....879 \$4.15	27.....791 \$3.50
40.....551 3.37 1/2	3 yr.....498 3.20
42.....393 3.20	41.....333 2.81

Hogs—Receipts since Saturday, 3,705; shipped Saturday, 702. The market opened steady and closed weak. The following are representative sales:

21.....253 \$4.90	72.....202 \$4.85	143.....258 \$4.85
13.....140 4.85	69.....273 4.85	76.....230 4.81
66.....231 4.80	76.....242 4.80	12.....322 4.80
19.....267 4.80	38.....163 4.81	78.....214 4.80
10.....217 4.80	89.....202 4.81	70.....225 4.77 1/2
36.....201 4.77 1/2	33.....231 4.77 1/2	69.....213 4.75
12.....343 4.75	61.....181 4.75	60.....300 4.75
42.....212 4.75	91.....202 4.72 1/2	50.....173 4.70
55.....172 4.70	97.....186 4.70	99.....173 4.67 1/2

Sheep—Receipts since Saturday, 5,631; shipped Saturday, 3,030. The market was active and strong. The following are representative sales:

214 mut.....83 \$3.85	80.....101 \$4.25
-----------------------	-------------------

Horses—Receipts since Saturday, 174; shipped Saturday, 32. To-day was a quiet day in the horse and mule market. A supply of good horses and mules are accumulating for the regular auction sales which open to-morrow. On Wednesday a string of blooded horses will be on sale. Horsemen generally are taking some interest in this event and there will be a large attendance from all over the country.

Chicago Live Stock.
CHICAGO, April 15.—Hogs—Receipts, 23,000; official Saturday, 6,157; shipments Saturday, 4,318; average weight for the past week, 225 lbs.; average weight for the previous week, 221 lbs.; left over, about 3,000; quality fair; market slow and steady; prices without special change. Sales ranged: Light, \$4.60@5.00; rough packing, \$4.65@4.80; mixed, \$4.75@5.10; heavy packing and shipping lots, \$1.85@5.15; pigs, \$3.85@4.80.

Cattle—Receipts, 8,000; official Saturday, 168; shipments Saturday, 1,124; market steady.

Sheep—Receipts, 14,000; official Saturday, 2,645; shipments Saturday, 3,149; market dull and weak.

St. Louis Live Stock.
ST. LOUIS, April 15.—Cattle—Receipts, 2,100; shipments, 330; market firm and about 10c higher and active; export steers worth \$5.75 @6.00; good to choice, \$4.80@5.50; fair to medium, \$4.25@4.65; light, \$3.50@4.00; fed Texas steers, \$3.75@4.75; grass fed Texas steers, \$2.75 @3.75; cows, \$2.00@3.50; native stockers and feeders, \$2.50@4.00.

Hogs—Receipts, 3,600; shipments, 3,900; market steady and firm; heavy, \$4.90@5.05; mixed, \$4.60@5.00; light, \$4.05 @5.00. Sheep—Receipts, 4,500; shipments, 900; market weak and slow; southwest mixed sold at \$4.00@6.00; natives, \$1.00@4.75; spring lambs, \$4.00@5.00.

Chicago Grain and Provisions.

April 15.	Opened	High'st	Low'st	Closing
Wht-April....	56 1/4	56 1/4	56 1/4	56 1/4
May	55 1/4	57	56 1/4	56 1/4
July	56 1/4	57 1/4	56 1/4	57 1/4
Corn-April....	45 1/4	45 1/4	45 1/4	45 1/4
May	45 1/4	46	45 1/4	45 1/4
July	45 1/4	46 1/4	45 1/4	46 1/4
Oats-April....	28	28	28	28
May	28 1/2	28 1/2	28 1/2	28 1/2
July	27 1/2	27 1/2	27 1/2	27 1/2
Pork-April....	12 40	12 40	12 40	12 40
May	12 40	12 45	12 35	12 45
July	12 55	12 65	12 55	12 65
Lard-April....	7 02 1/2	7 02 1/2	7 02 1/2	7 02 1/2
May	7 05	7 07 1/2	7 05	7 05
July	7 17 1/2	7 23 1/2	7 17 1/2	7 20
Ribs-April....	6 32 1/2	6 32 1/2	6 32 1/2	6 32 1/2
May	6 32 1/2	6 35	6 32 1/2	6 35
July	6 47 1/2	6 50	6 47 1/2	6 47 1/2

Kansas City Grain.
KANSAS CITY, April 15.—A number of samples of hard wheat were offered on 'change this morning, but there was not much demand for them. Soft wheat sold a little more readily. Both were about half a cent higher. There was no business reported in round lots out of store.

Receipts of wheat to-day, 11 cars; a year ago, 45 cars.

Sales of car lots by sample on track, Kansas City: No. 2 hard wheat, 2 cars 55c, 1 car 54 1/2c; No. 3 hard, nominally, 54c; No. 2 red, 3 cars 56 1/2c; No. 3 red, nominally, 55c; No. 4 red, nominally, 53c; rejected, nominally, 52c.

The few samples of corn offered for sale were held a cent higher than yesterday. One car of white corn sold at 44c. There was considerable inquiry for mixed, but no one appeared to want it enough to pay the prices asked.

Receipts of corn to-day 11 cars; a year ago, 68 cars.

Sales by sample on track, Kansas City: No. 2 mixed corn, 43 1/2@44c; No. 3 mixed, nominally, 43c; No. 4 mixed, nominally, 42c; No. 2 white, 1 car 44c; No. 3 white, nominally, 43c.

Oats were in rather good demand and were firmly held.

Receipts of oats to-day, 9 cars; a year ago, 13 cars.

Sales by sample on track, Kansas City: No. 2 mixed oats, 3 cars 29 1/2c, 2 cars 29 1/4c; No. 3, nominally, 28c; No. 4, nominally, 27c; No. 2 white oats, 1 car 32 1/2c; No. 3 white oats, nominally, 32c.

Hay—Receipts, to-day, 56 cars; market weak. Timothy, choice, \$8.50@9.00; No. 1, \$7.75@8.25; No. 2, \$7.00@7.50; fancy prairie, \$8.50@9.00; choice, \$7.00@8.00; No. 1, \$6.00@6.50; No. 2, \$5.00@6.00; packing hay, \$3.50@4.50.

St. Louis Grain.
ST. LOUIS, April 15.—Receipts, wheat, 2,900 bu.; last year, 16,000 bu.; corn, 3,800 bu.; last year, 140,800 bu.; oats, 36,300 bu.; last year, 45,000 bu.; flour, 5,125 bbls.; shipments, wheat, 79,000 bu.; corn, 57,800 bu.; oats, 4,700 bu.; rye, 550 bu.; flour, 14,150 bbls. Wheat—Cash, 56c; April, 55 1/2c; May, 55 1/2c; July, 53 1/2c. Corn—Cash, 42 1/2c; April, 42 1/2c; May, 42 1/2c; July, 43 1/2c. Oats—Cash, 30c; April, 30c; May, 29 1/2c; July, 28c.

Kansas City Produce.
KANSAS CITY, April 15.—Eggs—Receipts light; strictly fresh are quoted at 9 1/2c per doz. Poultry—The receipts were extremely light to-day and market firm. Hens, 6 1/2c; springs, \$3.00@3.50 per doz.; roosters, 1c. Turkeys are scarce; gobblers, 7 1/2c; hens, 8 1/2c. Ducks, steady, 7c. Geese, slow, alive, 4 1/2@5 1/2c. Pigeons, dull, 75c per doz.

Butter—The market is firm on all good table butter and the demand is good. Extra fancy separator, 19c; fair 15c; dairy, fancy, firm, 15c; fair, 11@12c; store packed, 13@14c; fair, packed, 8@9c; packing, weak, 5@6c; old, 4c.

Fruit—Apples, supply moderate; market barely steady on good apples; standard packed ranged from \$3.30@4.00 per bbl.; others, \$2.00 @3.00; best fancy stand, \$1.00@1.50; Ben Davis, \$4.00@5.00; common varieties, \$1.25.

Vegetables—Potatoes, the market is firm; ordinary kinds, common, 40@50c per bushel; sweet potatoes, red, scarce, 21@33c per bu.; yellow, 25@30c per bu.; Utah and Colorado, market fair, choice mammoth pearl, white, best, 70@75c; No. 2, 60@65c.

Horse Owners! Try



GOMBAULT'S
**Caustic
Balsam**

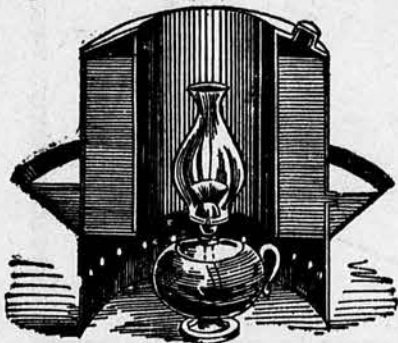
A Safe Speedy and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland O.

The Poultry Yard

DRINKING FOUNTAIN.

Supplies Warm Water Automatically After It Is Filled.

The drinking fountain illustrated in this issue supplies water automatically after it is filled, and a large number of fowls can drink at the same time. The water is always warm, and the lamp also warms the poultry house to a certain extent. The wattles of the birds do not get wet, and as the water is eight inches above the ground it does not become filthy. It holds about nine gallons, and will consequently last a long time, though a smaller fountain



WARM-WATER DRINKING FOUNTAIN.

may be made upon the same plan if preferred. The material above the hoop is of zinc and will last for years, the lower portion being of galvanized iron. The estimated cost of such a large fountain is two dollars. It can also be made for a less sum if the heat is no object. The water will not overflow if the fountain is level and the screw cap air tight. When filling it insert a cork in the feed hole and screw down the screw cap; then withdraw the cork. The feed hole is at the water line. The fountain may be round or square. The illustration shows it cut in half. Water surrounds the lamp, and, while kept warm, is not hot. No water is over the top of the lamp. The scale of the illustration is one-eighth of an inch for one inch. The galvanized hoop is to let air into the lamp near the bottom. There is no patent on the lamp. It was sent to Farm and Fireside by Mr. Robert Mair, Ohio.

Ground Grain for Poultry.

A mixture of bran, middlings, ground oats and corn meal is better than corn meal alone, for the reason that the bran and middlings contain more protein and mineral matter than corn meal and also better serve to provide material from which to produce eggs. Occasionally a proportion of linseed meal may be added, by way of variety, but cotton-seed meal has not been found as serviceable for poultry as for cattle. Nearly all kinds of ground food may be used, and the greater the variety the better; but no single kind should be used exclusively.

Poultry Notes.

Good care is better than trusting to good luck with chickens.

ALLOW four square feet of floor room for each fowl in your poultry house.

CLOVERHEADS or cut clover for the fowls should be placed where they will not be fouled or wasted.

A PIECE of burlap sacking tacked over the roosts and kept soaked with kerosene will keep the lice away.

CABBAGE and turnips make a good feed for the fowls during the winter season. The fowls like a variety.

GIVE ducks plenty of litter—straw, hay or leaves to "roost" upon, and do not compel them to get their bed under the hen's roosts.

DRY-PICKED poultry sells the best. When picked let it lie till the animal heat is all out then pack firmly in clean barrels or boxes.

CLEAR out all cockerels that are not needed for breeding purposes; they are better in the potpie than the hen yard at this season of the year.

FOR winter eggs keep pullets or young hens, give them a warm house, exercise, plenty of green food, meat and grit in addition to grain and pure water.

WITH a daily demand for 45,000,000 eggs in the United States, and an importation of over 50,000 dozens from Europe each week, it will certainly pay to give the poultry a little extra care.

The ever-increasing popularity of CLIMAX PLUG can only be attributed to its high quality, delicious flavor, and satisfying substance—three features which all judges of Chewing Tobacco know to be essential.

Many men ask for a certain brand of tobacco through force of habit, without stopping to think whether there is anything better to be had for the same price. If you want the best, ask for CLIMAX PLUG.

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NEW CATALOGUE 1895 Printed in colors. The finest and best Poultry Book ever published. Illustrates and describes all the leading varieties of Poultry. Gives prices of Poultry and Eggs. Plans for Poultry Houses and Remedies for Diseases. If you raise Poultry, you can not afford to be without it. Sent for 10c. in silver or stamps. Address: **The J. W. MILLER CO.** Box No. 152 FREEPORT, ILL.

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GUARANTEED absolutely self-regulating and to hatch 90 per cent. of the fertile eggs. Self-regulating Brooders. Most perfect machines, best material and workmanship. Prices reasonable. Send 4c for large illus. catalogue, testimonials, etc. High Class Poultry & Eggs. Full stock Poultry Supplies. **Victor Incubator & Brooder Co., Quincy, Ill.**

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THE IMPROVED VICTOR INCUBATOR Hatches Chickens by Steam. Absolutely self-regulating. The simplest, most reliable, and cheapest first-class hatcher in the market. Circulars free, 4 cents. **GEO. ERTTEL & CO., Quincy, Ill.**

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JONES' PIG FORCEPS.

By mail, postpaid, \$1.50. Agents wanted. Send for circular and terms. **D. M. Jones, Wichita, Kas.**

RAW HIDE ROOFING \$1.25 Per 100 Sq. Ft. [COVERS 10x10 Ft.] Complete with nails and caps. Ready to put on. Anyone can lay it. Absolutely water-proof. Strong and durable. Put up in rolls of 250 and 500 square feet each.

KEEP YOUR CHICKENS WARM. Free from lice and vermin, by lining your buildings with CARBONIZED TARRIED FELT. \$1.50 per roll, 400 Sq. Ft. each. For Wood and Shingle Roofs, Barns, Out-Houses, Etc., Etc. In barrels, 45c.; 1/2 barrels, 50c.; 5 and 10 gallon cans, 60c. **CREOSOTE PAINT.** Use this paint inside to freshen your poultry houses. The Creosote in it will rid your fowls of vermin. Write for circulars and samples, and mention this paper. **WE PAY THE FREIGHT! CAMPE'S SUPPLY CO., Kansas City, Mo.**

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For a Crop if you do not Subsoil this Season.

Subsoiling will secure a crop where other methods fail. The drought of '94 makes subsoiling necessary where before it has been thought superfluous. Many farmers will

Subsoil in '95 or Starve in '96.

Don't buy a subsoil plow of inferior make when you can have the best at about the same price.

For sale by one dealer in town. Write us for illustrated circular. **DEERE & CO. MOLINE, ILL.**

THE UNION STOCK YARDS, CHICAGO.

(Consolidated in 1865.) The largest live stock market in the world. The center of the business system from which the food products and manufactures of every department of the live stock industry is distributed.

Accommodating capacity: 50,000 cattle, 200,000 hogs, 30,000 sheep, 5,000 horses. The entire railway system of Middle and Western America center here, rendering the Union Stock Yards the most accessible point in the country. The capacity of the yards, the facilities for unloading, feeding and reshipping are unlimited. Packing houses located here, together with a large bank capital and some one hundred different commission firms, who have had years of experience in the business also an army of Eastern buyers, insure this to be the best market in the whole country. This is strictly a cash market. Each shipper or owner is furnished with a separate yard or pen for the safe keeping, feeding and watering of his stock, with but one charge of yardage during the entire time his stock remains on the market. Buyers from all parts of the country are continually in this market for the purchase of stock cattle, stock hogs and sheep. Shipper should ask commission firms for direct information concerning Chicago markets.

The Greatest Horse Market in America, the Dexter Park Horse Exchange.

N. THAYER, President. **JOHN B. SHERMAN,** Vice President and Gen. Manager. **J. C. DENISON,** Secretary and Treasurer. **WALTER DOUGHTY,** Ass't Secretary and Ass't Treasurer. **JAS. H. ASHBY,** General Superintendent. **D. G. GRAY,** Ass't Superintendent.

The Kansas City Stock Yards

are the most complete and commodious in the West, and second largest in the world! The entire railroad system of the West and Southwest centering at Kansas City has direct rail connection with these yards, with ample facilities for receiving and reshipping stock.

	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts, 1894.....	1,772,545	2,547,077	589,555	44,237	107,494
Slaughtered in Kansas City.....	959,649	2,050,784	387,570		
Sold to feeders.....	308,181	11,496	69,816		
Sold to shippers.....	409,965	468,616	45,780		
Total sold in Kansas City, 1894.....	1,677,792	2,530,896	503,116	28,903	

CHARGES: YARDAGE, Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head. HAY, \$1 per 100 lbs.; BRAN, \$1 per 100 lbs.; CORN, \$1 per bushel.

NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED.

C. F. MORSE, General Manager. **E. E. RICHARDSON,** Secretary and Treasurer. **H. P. CHILD,** Assistant Gen. Manager. **EUGENE RUST,** Gen. Superintendent.

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GENTLEMEN: We bought and put up Aermotor No. 2, and out of the first fifty which you made we had thirteen. Since that time we have sold about

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In our small territory is represented the history of the Aermotor and the Aermotor Company from the beginning to the present hour. That history is one of unbroken triumph. Aside from the Aermotor there have been but few other windmills put up enough with which to show the infinite superiority of the Aermotor in design, finish (all galvanized), and ability to run when all others stand still. We should have sold more, supplied with wind power, but this region was well peopled, it being only 66 miles from the battle ground largest, best known and prairie, all being located MUCH OF OUR BUSINESS PLACING WOODEN AND TORY WHEELS WITH you have during the past year's record by you expect to double your coming year. Count on us for the Aermotor never stood farther above all competitors in reputation and in fact than to-day. SMITH & BAISOR, Marengo, Ill., February 25, 1895.

The next Aermotor ad. will be of pumps. We shall offer for \$7.50 A \$15

three way force pump. All dealers should have it or can get it to sell at that price. All Aermotor men will have it. The week following will appear our advertisement of galvanized steel tanks at 2 1/2 cents per gallon. They neither shrink, leak, rust, nor make water taste bad. Aermotor Co., Chicago.



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Mechanically constructed and simple. Awarded World's Fair Diploma and Medal. Galvanized Steel Tanks Flour Mills Regulators and Grinders.



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"A MONEY MAKER AND SAVER."

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I have excellent farms in Rooks county, Kansas, for sale, way down below their value. Will sell on contract for one-tenth down and one-tenth yearly, or will give deed if one-fourth or more is paid down. Write for particulars and state how much you can pay down and how you want the balance of payments. I also have several unimproved farms in central Nebraska and one large body of over 7,000 acres. I have a finely improved ranch of 1,440 acres in Rooks county, Kas. Any or all of above will be sold very low, or might exchange part or all of it for good improved property in Chicago or vicinity. Address

B. J. KENDALL, 601 Masonic Temple, CHICAGO, ILL.

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Embodies all the best features found in other GOOD cook books, and in addition contains much valuable matter not found in others, and all eminently practical for the average housekeeper; being especially designed for those homes that love good cooking at a moderate expense. It will at once be noticed that there is an entire absence of those technical terms which render the vast majority of cook books of no practical value.

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Extra Early, Eclipse, Early
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CANE 1400-2 Union Avenue,
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BREEDERS' DIRECTORY.

(Continued from page 1.)

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MARTIN MEISENHEIMER,
Registered Poland-China Swine.
Hiawatha, Brown Co., Kas.

20 brood sows, headed by Tecumseh Free Trade
1933 S., assisted by a son of Benton's Last 827 S.
Some of best females bred to Butler's Darkness,
Black U. S. Nemo (Vol. 9) and Victor M. Jr. (Vol. 9)
Correspondence and inspection invited.

J. R. KILLOUGH & SONS,
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Breeder of
POLAND-CHINA SWINE
The very best strains. Nothing but first-class stock
will be shipped to any. Come and see us or write.

**TOWER HILL HERD
PEDIGREED POLAND-CHINAS.**
B. R. ADAMSON, Prop., Ft. Scott, Kas.
25 highly-bred brood sows of best strains, headed
by Black Dandy 1289 S., Black Stop 10650 S. and
Joker Wilkes 1289 S. About 100 selected indi-
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now for choice. Write or come and visit my herd.

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POLAND-CHINA SWINE
All ages for sale. Herd headed by Dandy Jim Jr.
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ELI ZIMMERMAN, Hiawatha, Kas.
46 brood sows in herd, headed by Black U. S. Nemo
(Vol. 9), Model Wilkes (Vol. 9), Sunset Chip (Vol. 9)
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Wichita, Kas.,
Breeder of
POLAND-CHINAS.
Won seven prizes at
World's Fair—more than any single breeder west of
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HOLSTEIN-FRIESIANS
Carmen 2d's Jacob Prince of Twist 404 heads herd,
backed with butter record of over 35 lbs. in 7 days.
Young bulls for sale. Red pigs in pairs, heavy bone,
good color, dams often farrowing 14 pigs. Males
DURCO JERSEY REDS
ready for service. Poland-China males ready for
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gilts, either bred, bred if desired. Pigs shipped at
my risk. Pedigrees furnished. M. H. ALBERTY,
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stud. Dogs boarded and treated for all diseases;
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Street, Topeka, Kas.

THE STRAY LIST.

FOR WEEK ENDING MARCH 27, 1895.
Phillips county—I. D. Thornton, clerk.

TWO PONIES—Taken up by J. Den Hollander, in
Beaver tp., March 8, 1895, two bay ponies, mare
about fifteen hands high, each has white strip in
forehead and white hind feet from ankles down;
valued at \$5 each.

FOR WEEK ENDING APRIL 3, 1895.
Cherokee county—P. M. Humphrey, clerk.

PONY—Taken up by W. R. Glazebrook, in Garden
tp., one roan pony mare, thirteen and a half hands
high, left hind foot white, white spot in forehead;
valued at \$15.

FOR WEEK ENDING APRIL 10, 1895.
Greenwood county—J. F. Hoffman, clerk.

MULE—Taken up by A. B. Doward, in Fall River
tp., P. O. Eureka, December 10, 1893, one bay mare
mule, no marks or brands; valued at \$15.

Brown county—J. V. McNamar, clerk.
MARE—Taken up by R. A. Henry, in Walnut tp.,
March 25, 1895, one four-year-old bay mare, slit in
right ear, no other marks or brands.

Gove county—W. J. Heiney, clerk.
TWO MARES—Taken up by W. J. Heiney, P. O.
Gove City, January 31, 1895, two mares—one dark
bay and one sorrel; sorrel mare branded somewhat
similar to on right hip; bay mare hind feet white;
valued at \$35.

Pratt county—M. C. Briggs, clerk.
BROOD SOW—Taken up by C. Decker, in Spring-
vale tp., P. O. Springvale, March 8, 1895, one black
brood sow, 18 months old; valued at \$5.

SIX SGOATS—By same, six black goats, five
males and one female, 6 months old; valued at \$9.

FOR WEEK ENDING APRIL 17, 1895.
Cherokee county—P. M. Humphrey, clerk.

HORSE—Taken up by C. R. Bates, three and a
half miles south of Cherokee, Kansas, one bay
horse, fifteen hands high, harness and saddle marks,
shed all round, branded 9 on shoulder, 10 years old;
valued at \$20.

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THE ZIMMERMAN
The Standard Machine
Different sizes and prices. Illustrated Catalogue free.
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advertisements for short time, will be charged two cents
per word for each insertion. Initials or a number
counted as one word. Cash with the order.
Special!—All orders received for this column from
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half the above rates, cash with order. It will pay. Try it!

LANGSHANS, LEGHORNS AND BRAHMAS.—
Eggs from prize stock. James Burton, James-
town, Kas.

PURE SCOTCH SHEPHERD PUPS FOR SALE.
Females \$2, males \$3.50. Very choice. G. W.
Sherman, Garnett, Kas.

EGGS—Buff Cochins eggs for sale. Price \$1 for
thirteen. Call on or address Peter Gray, Ben-
dena, Kas.

DOUGLAS COUNTY NURSERY—Still has in stock
100,000 extra No. 1 two-year hedge; on car, \$1 per
1,000. 15,000 Kansas raspberry, \$5 per 1,000. 25,000
Nemaha, Mammoth Cluster, Queen of the West,
Souhegan, Palmer and Gregg, \$3.50 per 1,000. Boxed
free. Wm. Plasket & Son, Lawrence, Kas.

FOR SALE—Red Polled bull calf, eligible to reg-
istry. Highly bred. Price \$50. Chester White
and Poland-China hogs. Rose-combed Brown Leg-
horn chickens, \$2.50 per trio. Wilkie Blair, Beulah,
Crawford Co., Kas.

EGGS FOR SETTING.—Barred Plymouth Rock,
50 cents per fifteen. Mrs. D. Enoch, Box 179,
Salina, Kas.

EGGS FOR HATCHING.—From Light Brahmas,
Buff and Partridge Cochins, White and Black
Langshans, B. P. Rocks and S. C. Brown Leghorns,
from birds scoring from 91½ to 95 points, none in
any yard scoring less than 91½ points. Every pen
won first prizes at several fairs last fall. Eggs \$1.50
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PARTRIDGE COCHINS ARE BEST.—Eggs \$1.25
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ONE HUNDRED AND FIFTY (150) BUSHELS
Orange cane seed for sale, at 75 cents, sacked,
with cost of sacks added. Z. Poffey, El Dorado, Kas.

STRAWBERRY AND RASPBERRY PLANTS.—
Twenty-five cents per hundred. J. C. Banta,
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county, Kansas. Suitable for irrigation. Will
sell cheap. Address John O'Connor, 1428 Santa Fe
St., Atchison, Kas.

FOR SALE OR EXCHANGE—Two imported Shire
stallions, draft mares, jennets and young jack
stock. Also thoroughbred Galloway bull and heifer
calves. Address Chas. E. Musick, Hughesville, Mo.

FOR SALE CHEAP—Or will trade for cattle, one
fine imported French Coach stallion and several
young registered French Draft stallions. E. J. Small,
North Topeka, Kas.

CHAMPION WHITE PEARL SEED CORN.—Never
er fails to give satisfaction. Stands drought
well, yields 100 bushels per acre, matures quick,
no chance for the worm to get in. Price \$1 per bushel,
sacked. Also full-blooded Bronze turkey eggs, \$2
per eleven. Order soon. A. Osterag & Bro., Tevis,
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I HAVE A LIMITED QUANTITY OF SEED CORN
of the White Frolic variety, which I will put on
the cars at Shenandoah, Iowa, for one dollar per
measured bushel, sacks included. Address B. Frank
Gordon, Shenandoah, Page Co., Iowa.

WANTED—Sale bills, horse bills, catalogues and
other printing. A specialty at the Mail Job
printing rooms, 900 North Kansas Ave., North Topeka.

FOR SALE OR TRADE—STANDARD STAL-
lions. Will sell or trade two standard trotting
stallions, Hoke 22905 and Lennox 7250. Address
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PEKIN DUCKS.—Pure-bred eggs for sale at 50
cents a setting. Mrs. E. L. Jones, Box 224, To-
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EGGS FOR SETTING.—From Light Brahmas,
pure Felch strain, \$1.25 for thirteen. J. E. George,
Burlingame, Kas.

LIGHT BRAHMAS AND S. L. WYANDOTTES.—
Eggs from pure Felch strain Light Brahmas and
selected S. L. Wyandottes at \$1 per fifteen or \$1.75
per thirty. Wm. Plummer, Osaage City, Kas.

3,000 BUSHELS SEED SWEET POTATOES!
for sale. Ten best kinds. Also plants in
their season, at bed-rock prices. Inquire of N. U.
Pixley, Wamego, Kas.

THE FINEST HONEY—Is gathered from alfalfa
and clover blossoms. You can buy it of the
bee-keeper, cheap and in any quantity, by freight,
and know it is genuine. Address Oliver Foster, Las
Animas, Colo.

BERKSHIRE SOWS—Safe in pig to imported
Lord Comely. Individually and breeding the
best. Wm. B. Sutton & Son, Russell, Kas.

LISHED CORN CULTIVATOR.—We have for sale
fifty listed corn cultivators at \$5 each. Former
price \$10. Only fifty will be sold. Blue Valley
Foundry Company, Manhattan, Kas.

FOR SALE—The tried and grand breeding boar,
Kansan King 891 S., sired by Dandy Jim 6442 S.
and out of Broadback (1918). Weighs 700 pounds.
He is a desirably-bred hog, extra good in conforma-
tion, having broad back and extra good ham. Sunny
Slope Farm, Emporia, Kas.

EGGS FOR HATCHING.—Light Brahma, Buff
Cochin, Barred P. Rocks, \$1 for fifteen. Buff
Leghorn, \$1.50 for fifteen. Toulouse goose eggs, 10
cents each. Mrs. E. E. Bernard, Dunlap, Morris
Co., Kas.

VALLEY FALLS POULTRY YARD—Light Brah-
mas, Buff Cochins, Partridge Cochins, Black
Langshans, White and Barred Plymouth Rocks, S.
and R. C. Brown Leghorns, White and Black Mi-
norcas, Silver-spangled Hamburgs, Choice birds,
\$1 each. Eggs, \$1 per fifteen. W. B. McCoy, Valley
Falls, Kas.

JERSEY FOR SALE—A fine yearling heifer, solid
fawn, of excellent breeding, bred to Torquil 24
24808, is for sale. Address Prof. Georgeson, Man-
hattan, Kas.

EGGS—For setting, from Black Langshan prize-
winners, \$1.50 per thirteen. T. V. Codrington,
1701 Huntoon St., Topeka, Kas.

WHITE PLYMOUTH ROCK ONLY—At Nottawa
farm. Eggs fifteen for \$1. Mrs. W. P. Popenoe,
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THREE HOLSTEIN BULLS—A two-year-old, a
yearling and one 6 months old. Registered and
belong to the Korndyke family. For further par-
ticulars write H. L. Liebfried, Emporia, Kas.

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By S. H. DOWNS,
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All kinds of Garden, Field and Flower Seeds, Flowering Bulbs, Plants, Fruit Trees and Grape Vines.
Also supply GARDEN TOOLS. Address
Send for Catalogue. **S. H. DOWNS, Topeka, Kansas.**

SEEDS. ALFALFA SEED A SPECIALTY.
Cane and Millet Seeds, Kafir Corn and Jerusalem Corn.
Seed Wheat and Oats. All crops of 1894. Write for "How
to Sow Alfalfa," and prices on seeds.
Garden City, Kansas.

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EVERYTHING IN THE SEED LINE.
Our Specialties: Seed Corn, Tree Seeds, Onion Seeds and Sets, Alfalfa, Sacaline, Lathyrus Silves-
tris, Sandvetches, Spurry, Kafir and Jerusalem Corn, and other new forage plants for dry and arid coun-
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F. BARTELDES & CO., Lawrence, Kas.

CHERRY + ORCHARD + HERD
Has for
Sale Now
Sows in Pig and Sows with Litters
That are rich in the blood of Chief Tecumseh 2d 9115, One Price, Free Trade 4420 S. and
other high-class boars. The youngsters here now and to come are accredited to Corwin White Face
9924 and Wren's Medium 12387. A grand lot of fall pigs by Royal Short Stop 10887. Mrs.
Wren offers PLYMOUTH ROCK COCKERELS at \$1 each; eggs at \$1 per thirteen. Also choice
M. B. TURKEY eggs at \$3 per thirteen. Write, or better, come and see stock.

W. H. WREN, Marion, Marion Co., Kansas.

TWO-CENT COLUMN—CONTINUED.

FOR ALFALFA SEED, DIRECT FROM THE
grower, address E. G. Jones, Syracuse, Kas.

BERDEEN-ANGUS BULLS—Sired by the \$850
Erica Boy and out of imported cows. Two and
three-year-olds. Individually very choice. Wm. B.
Sutton & Son, Russell, Kas.

FOR SALE—Seven head of extra good Poland-
China boars ready for service. Address H. W.
McAfee, Topeka, Kas.

A SKILLED ENGINEER, MACHINIST AND BUT-
ter-maker, with years of experience, whose busi-
ness always brings him to 1 cent above Western extra,
will be open to engagement March 1. Best testi-
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FOR SALE—Hereford bulls sired by a son of Mr
Funkhouser's celebrated Hesiod. Apply to
Peter Sim, Wakarusa, Kas.

40 POLAND-CHINA FALL OF 1894 PIGS—Both
sexes, for sale, sired by Riley Medium 12306
and Tecumseh J. Corwin 10744. Cannot well use the
latter boar longer, hence will sell him. E. T. Warner,
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GALLOWAY BULLS—We have four thorough-
bred Galloway bulls, 1 year old, for sale. Geo.
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SUB-IRRIGATION PIPE.—Do not be disappointed
for not ordering 100 feet of 2-inch galvanized
sheet-iron pipe. Cost, \$1.25. Address Alex Richter,
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WANTED—Buyers for Large English Berkshires.
One hundred pure-bred pigs, farrowed in March
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each. Farm two miles west of city. Riverside
Stock Farm, North Topeka, Kas.

MAMMOTH YELLOW DENT—And Hill's Large
White corn, \$1.25 per bushel; five bushels \$6;
sacks free. James Bottom, Osaage, Kas.

WE MAKE A GOOD FARMER'S SPRING WAG-
on, two lazy backs and let-down end-gate, for
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WHITE W. H. WILLIAMS, TORONTO, KAS.
for Comet Sprayer, a triple air-chamber force
pump. Throws continuous stream. Agents wanted.

FOR PURE GARDEN AND FIELD SEEDS—Go
to Edison & Beck, 212 East Sixth Ave., Topeka,
Kas. Mention the KANSAS FARMER.

SWEET POTATOES FOR SEED—All leading var-
ieties. Plants in their season. Lowest prices.
Correspondence solicited. B. F. Jacobs, P. O. Box
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FARMERS WHO WANT FARM AND GARDEN
seeds suited to southern Kansas should write to
Rosa Bros., Wichita, Kas., for catalogue. Their
seeds grow.

WANTED—For cash or exchange, farms, ranches,
real estate or merchandise of all kinds. We
control large amount of valuable properties for sale
or exchange at 1895 prices, for property in Missouri,
Kansas, Texas and other States. Send full descrip-
tion of what you have and what you want, but do
not indicate values and thereby prevent sale or ex-
change. Jno. M. Phillips & Co., 330-331 New York
Life Building, Kansas City, Mo.

STRAWBERRIES—I have tested many varieties
in my eight years experience, but for earliness,
lateness and productiveness have had none to equal
Barton's Eclipse, Princess and Parker Earle. Twelve
plants of either, by mail, 25 cents; 100, \$1. By ex-
press, 1,000 \$5, not prepaid. Have Timbrell, Robin-
son and others. Wm. Brown, Lawrence, Kas.

CHOICE SEED POTATOES FOR SALE—Yielded
225 bushels per acre last year. Address J. C.
Randell, Hamburg, Iowa.

IRRIGATION PUMPS—For prices of irrigation
pumps used by the editor of KANSAS FARMER
write to Prescott & Co., Topeka, Kas.

STRAYS—Strayed from the Wallace Dennis
farm, two miles northeast of Kelly, Kas, one
white horse, 16 years old, seventeen hands high,
weight 1,400 pounds; also one iron-gray horse, 11
years old, fifteen hands high, weight 1,200 pounds.
Any one having taken up or knowing the where-
abouts of the above described property will receive a
suitable reward for information that will lead to
their discovery. Address Charles Rieschick, Kelly,
Nemaha Co., Kas.

HIGH-CLASS PURE-BRED POULTRY.—Two
hundred and fifty extra good Light Brahmas.
Fifty cockerels, Felch, Upson and Barker strains.
Seventy-five M. B. turkeys—World's Fair and State
show winners. Young toms averaged, last Febru-
ary, thirty-three pounds. One hundred and fifty
Barred Plymouth Rocks, of Conger, Munger, Felch
and Hawkins breeding. Stock and eggs at reason-
able prices. Address the breeder of eighteen years
practical experience, Mrs. Thomas W. Ragsdale,
Paris, Monroe Co., Mo.

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