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Agricultural Matters.

WHAT SHALL BE DONE

With Lands Located in the Sparsely Settled Regions of the West?

The following discussion of this subject from the side of the Eastern mortgagee who has acquired title to land in the region under consideration, is taken from an editorial in the October number of *American Investments*, of Buffalo, N. Y.:

"To attempt to say all that can be said on this subject would involve more space than we have at our disposal at the present time. We have long contemplated an article of this kind, but have been unable to reach it until now. The views we entertain on this exceedingly important subject have been long in the process of formation by reason of years of study, reading, and a voluminous correspondence with experienced minds. Naturally we felt no inclination to express them without some confirmatory evidence, to obtain which we have secured and have now before us eighty-five intelligently written letters upon this subject. These come from men having had from five to thirty-five years experience in the loan and land business, who have written to us freely and candidly the results of their experiences and observations. They are from men whose names are familiar to all having any interest in or knowledge of the loan and real estate business. It is impossible to publish their exceedingly interesting communications in full, greatly as we would desire, hence we are compelled to simply cull out their utterances. These letters are from officers of going concerns in the loan business, from others engaged in liquidating the affairs of defunct concerns, real estate and loan agents, editors, immigration agents, Eastern investors of practical experience, etc.

"Most of our esteemed correspondents admit that it is much easier, especially at the present time in our political history, to ask questions of this kind than to reply to them. Perhaps conditions after the election will be such that the task will not be so difficult.

"Our readers need to be excused from having all the causes of their misfortunes in investments in these lands paraded before their eyes in detail. It is mighty interesting history and needs to be well committed to memory that its valuable lessons may not be lost. These causes involve three parties—the farmer, intermediate and lender. All are more or less to blame for the present situation. The farmer because he undertook to carry on an occupation in an untried field; the middle party or agent because sometimes he had a greater concern for his commission than he had for the interests of the borrower or lender, and the investor because he lost his head. Many times the agent, borrower and lender all acted in the very best of faith. But the investors have themselves to blame for falling under the delusive spell of the boom and failing to exercise proper intelligence at the right time. Excessive valuations; booming towns; dishonest appraisers; desire for high interest rates; unnatural development of territory; reliance too much upon guaranties; bad crops connected with low prices; going into insufficiently tried and tested territory; dealing with corporations founded chiefly on wind, and many other factors, have led to the cause of the investor's present predicament. A small book could be written on each one.

"The questions staring the hesitating holder of abandoned farms and lands, are: (1) In view of heavy taxation, receding population, unprofitable farming, mixed politics, and other negative influences, how long will it be before a demand will set in for farms so as to create a fair market price for them? (2) What would naturally be the first favorable indication of a turn in the tide? (3) Do you see any present indication of an improvement?

"First let us briefly consider some of the elements entering into a decision,

or even an opinion on these questions.

IRRIGATION.

"What these lands require, and must have, is water, and this water must come from streams in sight or be brought to the surface by power. Vast schemes of irrigation are already in use in Kansas, Nebraska, Colorado and other States; and they are building up fine farming communities, but irrigation has its limitations. Only so much surface water is available and the supply will not increase, but rather diminish. Windmills pumping water not deeper than thirty feet are being extensively and profitably used, and supply the demand for cheap irrigation. No amount of free and unlimited coinage of either silver or gold will give these farms water or show the soil tillers how to apply it intelligently and safely. Land that cannot have a sufficient quantity of water at the right season of the year, to mature crops, is of questionable value.

RAINFALL.

"A disregard of the important bearing this has upon a loaning field has brought many investors to grief. They have learned to their sorrow that the record of a few years is not enough to fix permanently the character of a loaning field. They now know that a survey of a record of from thirty to fifty years is necessary, and that not only the quantity of rainfall must be known, but due consideration must be had to the season in which it falls. Good, common sense has failed to be exercised right here, despite the fact that our government has been able to answer every inquiry relating thereto. Settlers, agents, and investors have all been to blame at this point. Crops do not grow, nor rain fall with such a regularity that the experience of a few years should be taken as an index for our investments. A country must be tried and tested for many years, before it is worthy to be called a safe loaning field.

"But here comes in another recently discovered factor which may give quite a different turn to affairs of this kind. Attention is now being directed to what is known as the Campbell method of conserving moisture. When we plowed corn we turned as much of the ground as we could, now the new innovation consists in turning but a slight quantity of the surface soil, thereby preventing evaporation. Extensive experiments are being now conducted on the line of the Northern Pacific railroad which are highly promising. It has been shown that the difficulty is not so much in the deficiency in quantity of rainfall, as in its excessive evaporation. This may offer a solution to many a perplexed community and multitudes of anxious investors. But it has also been shown that alfalfa and beets can be grown where wheat and corn cannot, hence attention is now being largely directed to their cultivation, as they require much less water than many other crops. It has been declared that Holt county, Nebraska, where some of our best, wisest and even oldest loan companies have met disaster, is capable of complete redemption by alfalfa and beets. No country should be abandoned wholly upon the record of a few years, and until after a test of every known crop.

TAXATION.

"It is our conviction that in well, or even fairly watered localities, there are few farms that should be abandoned because of excessive taxation. But when it comes to sections insufficiently watered, the combination is too strong to be overcome by the ordinary products of the soil that now prevail in such places. There are many counties in western Kansas that offer no encouragement whatever to the non-resident land owner. They, and perhaps other counties in adjoining States, are overburdened with debts incurred when booms were holding full sway, and there is positively no great encouragement to the land owner. Taxes there are way out of proportion to actual value as determined by possible income. County, town and school district debts loom up so high that some counties are hopelessly insolvent. Only a very material and permanent appreciation of land values, by reason of natural causes, and a compromise of existing

indebtedness can offer any hope to the permanent land owner. These two things, unfortunately, are not likely to occur from present indications. It has been suggested that where it is possible to get some income from the land, to let the taxes go by default, and when they have accumulated for a number of years, effect a compromise for a consideration much less than their face and penalties. This has many times been quite successfully done, as the counties do not want to carry land under tax sales longer than is absolutely necessary. The non-resident land owner, unless he has a conscionable and honorable agent to look after his interests, suffers in taxation, compared to the resident owner. 'Out of sight, out of mind' governs the assessor. Frequently one section of land will be assessed three times as high as one immediately adjoining it, simply because the owner is a non-resident. Where excessive taxation prevails by reason of a debt-burdened community, the land itself of doubtful value, and Populism and anarchistic ideas prevail, there is little or no hope open to the suffering investor—he may as well 'lie down' and save his good money. This excessive taxation kills a desire and inquiry for land. No one can afford to pay from \$10 to \$20 annual taxes on a quarter section worth from \$50 to \$100, and when it comes to land fit only for ranch purposes, 1 cent per acre should be the limit. In respect to this subject, it is obvious that the investor cannot dispense with a certain amount of investigation if he hopes to handle his holdings with intelligence and good judgment. He should know the precise financial condition of every community that holds any relationship to his property, which, of course, includes the extent of indebtedness, assessed values and the basis upon which they are made, rate of taxation, and whether economy or waste prevails. Some communities take the low ground that if investors will not willingly loan their funds they will force them to send on some by way of high taxation.

IMMIGRATION.

"The first run of settlers in a new country usually proves more of a detriment than a benefit to a locality. Especially is this true where they are of a mixed and an indifferent quality. Coming, as they do, with a limited knowledge of the requirements of the new country, they invite failure at the start by striving to adapt means and methods of an older and entirely different section of the country to the new. Of course they fail, mortgagees move (which generally means to sell out) and experiment elsewhere at the lender's expense. A farmer who will not learn should not be permitted to borrow. Investors should remember that it is not always the best farmers that go from the Eastern to the Western States. Then the foreigner, the Swedes, Norwegians, Swiss, Bohemians and other nationalities make the best farmers and borrowers, because they attend strictly to their business. Farmers that have no capital frequently have no energy, and have to be coddled and nursed by free transportation and other inducements. On the other hand the prudent farmer can make larger profits from good, cheap land than he can from good high-priced lands. This sends many worthy farmers from Ohio, Indiana and Illinois out West, where they ought to and will succeed if susceptible to adapting themselves to their environment. Immigration agencies are doing good work, and we must not fail to note that from 1870 to 1890 the land area of our country that was cultivated was nearly doubled. The limitations of our domain will not permit this to be repeated.

"The process of settling a new country is an interesting study. Like the waves of the ocean it moves forward and recedes as time travels on. It must therefore be evident that the land-owner ought not to sell when the ebb tide is on, but that he should wait until the tide goes the other way. Kansas, which is capable of giving us a fairly good example in most everything, can illustrate this point. For years the population of her western

"Saved My Life"

A VETERAN'S STORY.

"Several years ago, while in Fort Snelling, Minn., I caught a severe cold, attended with a terrible cough, that allowed me no rest day or night. The doctors after exhausting their remedies, pronounced my case hopeless, saying they could do no more for me. At this time a bottle of



AYER'S

Cherry Pectoral was sent to me by a friend who urged me to take it, which

I did, and soon after I was greatly relieved, and in a short time was completely cured. I have never had much of a cough since that time, and I firmly believe Ayer's Cherry Pectoral saved my life."—W. H. WARD, 8 Quimby Av., Lowell, Mass.

AYER'S

Cherry Pectoral

Highest Awards at World's Fair.

AYER'S PILLS cure Indigestion and Headache

counties has been flying east, north and south, until the census returns were sick enough. There is now an indication that the exodus has ceased and that another period of the coming in of new settlers has set in in the eastern part and that it will gradually work its way and influence westward. The process will necessarily be slow, and just to what extent it will pervade the region beyond the 100th line is entirely conjectural. It must have some influence, however.

RANCHES.

"Here we have the only known solution to the question, how to handle vacant, unfarmable lands. Small tracts in the dry sections must consolidate with others contiguous and be rented or sold for ranching. Those investors having well-watered tracts have the key to the situation, and should be on the lookout for a neat little trick which consists in giving such a piece of land the reputation of the worst sections adjoining, buy it at a miserably low price and proceed to use the whole surrounding country for grazing without cost or expense. If the Eastern owner wants things different let him come out and keep the stock off. When these ranch thieves are watched they will pay something, but it is a job to watch and collect. Many of these ranchers, realizing that a turn has come in their business, are leasing lands for periods of five and ten years at merely nominal sums, wherever they can. These great tracts are not likely to find any other use than that of grazing for the next five or ten years. Of course there are isolated sections and quarters that will work out better. Stock-raising promises well for the future, and the land available for such purposes must adapt itself in the matter of price to the uses to which it will be put. Grazing land at grazing prices is the rule, and it means certainly nothing more than the government price, and many times much less. So long as it is an easy matter to use government land free for grazing purposes higher prices cannot reasonably be expected, but should the government conclude to make these marauding grazers on its own land pay up, by means of a law with a penalty attached, it is barely possible land-owners would fare better. There is now a demand for ranch land, and investors owning choice watered tracts need not be surprised if they are sought out and bargained with. It may be policy not to accept the first offer that is made. Various estimates are given as to the period of time required for conditions to so change that better than ranch prices can be ex-

pected. They run all the way from five to ten years.

INTELLIGENCE REQUISITE.

"Whatever excuses the investor may be able to offer for making his loans in these arid sections, there can be now no excuse for acting in any other manner than intelligently. He should study the country, its history and present conditions, remembering that all rules have their exceptions, and that while everything may appear against him he really may be better off than he thinks. As a rule, when he secures an offer for a piece of land it is not because some stranger wants to benefit him, but because the intending buyer is seeking a bargain.

"Each particular case must stand on its own merits, hence the difficulty in laying down a general rule that will apply to all. It cannot be done. In some cases where land is remotely located from the markets or railroads, in a thinly populated country, overburdened with debt, people of anarchistic notions, and all other favorable conditions absent, it is doubtless best to let unwatered tracts slide, but where contrary conditions exist, they should be held with many possibilities and even strong probabilities that in a few years they will 'pan out' the original investment, and also return a fair interest rate. The investor must investigate and decide for himself. It is proper that it should be so. We should not lose sight of the fact that nearly all the land in our country, subject to a natural cultivation, is taken up, and as our population increases, it would seem reasonable to expect that more would be required. Many of the well-to-do farmers of the Middle States are increasing their holdings, which has a tendency to drive off and scatter tenants.

CHANGED CONDITIONS NECESSARY.

"We must have less corn and wheat raised and more hogs and small grains. Diversified and intense farming must supplant broad and great cultivation. Farming must be adapted to climatic conditions, not striving to create the climatic conditions for farming. Crops like alfalfa and Kaffir corn, and others requiring little moisture, must supplant those requiring more. Cattle-raising will largely prevail in coming years. Indebtedness must be cleared away by liquidation or compromise of some kind, and taxes reduced to a normal rate. Diversified farming, dairying and poultry-raising will grow rapidly, as they have now well started. Honest men are needed as well as honest dollars. No tinkering for twenty-five years with our tariff or monetary laws. Foreign capital to some extent must come in. Increased rentals will surely prevail soon. Water must be in hand. Small tracts must be consolidated into larger ones and combinations made so lands can be handled efficiently and economically. Good crops and good prices. We are now in our sixth year of low values, a change for the better seems certain soon to come. A few successive good crops would enable the owners to 'get out' in good shape."

YOU CAN BE WELL when your blood is rich, pure and nourishing. Hood's Sarsaparilla makes the blood rich and pure and cures all blood diseases, restoring health and vigor.

HOOD'S PILLS are easy to take, easy to operate. Cure indigestion, headache. 25 cents.

Kalamazoo, Mich., is famous for celery—also as the home of Thos. Slater, whose advertisement appears on page 15.

Ho! for Cripple Creek.

Remember that the Chicago, Rock Island & Pacific is the only line running directly from the East to Colorado Springs, the natural gateway to the Cripple Creek District. Colorado Springs lies at the foot of Pike's Peak at its eastern base, and Cripple Creek is part way down the southwest slope of Pike's Peak and near its western base.

Two all rail routes from Colorado Springs are offered you. One by the Midland railway up Ute Pass, via Summit, to Cripple Creek. Another over the Denver & Rio Grande, via Pueblo and Florence, to Cripple Creek. Take the great Rock Island Route to this wonderful gold mining camp. Maps, folders and rates on application. Address

JNO. SEBASTIAN, Gen'l. Pass. Ag't., Chicago.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

OCTOBER 23—Gudgell & Simpson and J. A. Funkhouser, Herefords, Independence, Mo.
OCTOBER 27—H. Davidson, Poland-Chinas, Princeton, Kas.
OCTOBER 30—J. R. Killough & Sons, Poland-Chinas, Richmond, Kas.
NOVEMBER 10—J. M. Kirkpatrick, swine, Ottawa, Kas.
NOVEMBER 12—J. H. Taylor, Poland-Chinas, Pearl, Kas.
NOVEMBER 13—Chas. A. Cannon, Poland-Chinas, Harrisonville, Cass Co., Mo.
NOVEMBER 19—B. R. Adamson, Fort Scott, Kas., J. M. Turley, Statesbury, Mo., and G. Hornaday & Co., Fort Scott, Kas., combination sale of Poland-Chinas.

STEER-FEEDING EXPERIMENTS.

(Continued from last week.)

LOT II.

The feed of this lot, as already stated, consisted of corn meal and cut corn stover. They were tied up alongside of lot I, and were subjected to the same conditions in all respects except that of feed.

As in the former case, some steers made better gains than others. Those that ate the most did not always make the best gains. The average daily gain of the lot was 1.97 pounds. Three of the steers exceeded that gain slightly and two fell slightly below. But as a whole they went along together with remarkable uniformity. The cheapest gain was made by steer No. 20, whose feed cost but 3.22 cents for each pound of gain. The costliest gain was that of steer No. 10, namely, 3.71 cents per pound of gain. This is the thoroughbred steer in this lot, and the remark made concerning No. 8, in lot I, applies also here. He was much heavier and in better condition than the others when the experiment began, which is sufficient to account for his gaining less rapidly than some of the others. The general principle of decreasing gains as the feeding progresses is illustrated in the case of every steer of this lot also.

The lot, as a whole, ate less than lot I, but also gained less, at slightly less cost per pound of gain. The feed used was cheaper than that of lot I, which, of course, is the cause of this slightly cheaper gain.

LOT III.

This lot was tied up alongside of lot II, and in the same row of stalls. Their treatment differed from that of the others only in that they were fed ear corn. The roughness consisted of cut corn stover, as in the previous case.

This lot made a total gain of 1,149 pounds, or an average of 1.56 pounds daily per head. The table* shows the customary fluctuation in the gain of individual steers, but, aside from the smaller gains, presents no essential difference in this respect from the facts shown in the previous tables*.

The poorest gain in this lot was made by steer No. 19, the scrub steer in that lot. He gained a total of only 186 pounds, or a daily average of 1.26 pounds. The best gain was made by steer No. 11, 264 pounds, with a daily average of 1.79 pounds. The other three fell between these extremes. Steer No. 19 started out with a delicate appetite, and never was a heavy feeder. He ate and drank somewhat irregularly, showing occasional large gains and frequent loss in weight. Steer No. 7, the pure-bred steer in the lot, had somewhat the same characteristics but to a less degree. He was remarkable for eating more than twice as much corn fodder as any of the others and less grain. So, while the total food eaten per pound of gain is greater than that of the three others a less proportion of that food was grain. Nos. 1, 11 and 15 are fairly comparable in the amount eaten and gains made.

The lot as a whole shows the same peculiarities in regard to the rate of gain and the cost of gain which have been prominent in the two preceding lots. It is noticeable that the lot consumed a greater weight of grain than lot II. This is, of course, due to the fact that they were fed on ear corn while lot II was fed on corn meal. The ears were chopped in pieces somewhat with a spade at the time of feeding, to facilitate mastication. A large proportion of the cobs were eaten, espe-

cially in the beginning, but as they gained in weight they became more particular, and toward the last they ate comparatively little of the cobs. The cobs left uneaten were not weighed back, however. It was thought best to give the weights of the ear corn fed and the gains resulting therefrom, as it would afford a more serviceable guide to the large number of feeders of ear corn who do not weigh the feed than it would if the cobs not eaten had been deducted from the amount fed.

It is noticeable, also, that this lot drank only 1.88 pounds of water for each pound of food consumed, while lots II and I drank 2.14 pounds and 2.56 pounds respectively for each pound of food eaten.

LOT IV.

As already stated, this lot was fed in the yard but had access to a shed open to the south. They were fed on ear corn and cut corn stover, like lot III. They ran together and could, therefore, not be fed individually.

The table* shows greater fluctuation in gain, and especially more frequent losses in weight, than was the case with any of the other lots. This, as already pointed out, however, may be due to the fact that, having access to water at all times, they would sometimes drink before they were weighed, as the others did not. But these fluctuations are also due in part to the fact that this lot scoured more than the others. There was only one steer in the lot, No. 18, that did not scour at some time or other during the experiment. This scouring may be due to two causes, viz., overeating and exposure. Being fed in bulk, so to speak, where each had access to more than his share, some were more greedy than others, and would eat more than was good for them, and as a result suffer from indigestion for one or more days, during which time they would lose in weight, and if it happened that a cold storm occurred when the steer was in such condition it doubtless aggravated the effect. But it must be noted that, as a whole, the season was very favorable for outdoor feeding. The temperature was at no time very low, and snow and sleet storms were not numerous.

MEAN DAILY TEMPERATURE IN BARN AND IN YARD.

A table shows the mean daily readings in the barn and yard. It is noticeable on two points: First, the little cold weather the past winter, and, second, the slight difference in temperature between the barn and the yard. The mean readings, however, given here, fail to show one feature of considerable importance, namely, the daily fluctuations. It frequently happened that the thermometer would stand several degrees higher in the yard at noon than it did in the barn, and still it might be 15° lower at the morning observation in the yard than it was in the barn. The temperature in the barn was not subject to any such fluctuations. It rarely fell below freezing, and only on one whole day during the feeding period was the temperature in the barn below freezing, while it was below freezing thirty-six days during the period in the yard. On the other hand, it stood higher in the yard than in the barn at noon on thirty-eight days during the period.

It is not, however, the low temperature that tells disastrously upon cattle not sheltered, as much as wet and stormy weather. It was too wet and stormy on fifteen days during the period to turn the indoor steers out for their usual exercise. The steers in the yard were, of course, compelled to take this as it came, except when they sought shelter in the open shed, which they did in the severest of the weather. But even if the weather did not have any influence on the gain of the outdoor steers, it had a decided influence on their appearance, which was noticed at once by the buyer at the stockyards. Their coats were rough, and they had not shed at all, whereas the indoor steers, in comparison, were smooth, slick and short-haired, and, as there was comparatively little difference in the weights of lots III and IV, it is fair to assume that the difference in price which the buyer made in favor of lot

Woman's Work

Is never done, and it is especially wearing and wearisome to those whose blood is impure and unfit properly to tone, sustain and renew the wasting of nerve, muscle and tissue. The only remedy for tired, weak, nervous women is in building up by taking a good nerve tonic, blood purifier and vitalizer like Hood's Sarsaparilla. For troubles Peculiar to Women at change of season, climate or life, great cures are made by

Hood's Sarsaparilla

The One True Blood Purifier. All druggists. \$1. Prepared only by C. I. Hood & Co., Lowell, Mass.

Hood's Pills do not cause pain or gripe. All druggists. 25c.

III was due chiefly to their better appearance.

RELATION OF WATER TO GAIN AND FEED.

The facts in regard to the amount of water drank, and the relation it bears to each pound of gain and to each pound of food consumed, are given in the several tables for the three lots fed indoors, and it is here only necessary to call attention to them. In the case of lot I, the amount of water drank from week to week remained reasonably constant throughout the experiment. In the beginning, when they gained rapidly, they gained twice as much for the water consumed as they did at the close of the experiment, but the gain is the only factor that varies much. Comparing the amount of water with the food consumed, it appears that they drank a little more for each pound of food in the beginning than they did later, and there is a gradual decrease, though but slight, in the ratio of water to food consumed, as the feeding progresses. The lot as a whole drank 25.5 pounds of water for each pound of gain made, and 2.56 pound of water for each pound of food consumed.

In the case of lot II we find that they drank more at the beginning of the experiment than they did later on. Like the others, they gained fast during the first few weeks, and, therefore, the amount of water to the gain is less than it is later on. As a whole, the lot consumed 24 pounds of water to each pound of gain, and 2.14 pounds for each pound of food eaten. In this case, also, they drank relatively more for each pound of food consumed at the beginning of the experiment, with a gradual decrease until the close.

The same remarks apply also to lot III. They drank more in the beginning of the experiment than they did later on, and more for each pound of food consumed, with a gradual decrease to the close. As a whole, the lot drank 30.8 pounds of water for each pound of gain made, and 1.80 pounds for each pound of food eaten.

The amount of water drank is almost the same for lots II and III, but lot I drank very much more than either.

*Tables are omitted. Those interested in the details should write to the Kansas Experiment Station, Manhattan, and procure the complete bulletin.

(To be continued.)

Human life is held too cheaply when the individual who needs a tonic for his system, seeks to cover his wants by purchasing every new mixture that is recommended to him. Remember that Ayer's Sarsaparilla has a well-earned reputation of fifty years' standing.

Did You Ever See an Indian?

Expect not, so send a 2-cent stamp to the General Passenger Agent Colorado Midland Railroad, Denver, and he will send you a fine colored picture of one.

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Through Pullman Sleepers, Pullman Dining Cars and Free Reclining Chair Cars leave Denver Daily. The Union Pacific is the great through car line of the West. Ask your nearest ticket agent for tickets via this line.

E. L. LOMAX,
Gen. Pass. and Ticket Agent,
Omaha, Neb.

Irrigation.

ARTESIAN WATER.

By Grove Karl Gilbert, in Seventeenth Annual Report of United States Geological Survey.

Underground water falls into two general classes. It may flow through a porous bed which is continuous to the surface of the ground, in which case the position of its upper surface varies with the supply; or it may flow through a porous stratum confined between impervious strata, in which case it usually occupies the entire stratum and presses not only downward on the limiting impervious rock beneath, but upward against the impervious cover. When water of the first class is reached by a well it retains its natural level within the well. When a well is put down to water of the second class the water rises somewhat within the opening; the height to which it rises being determined by its original pressure against the covering rock. If the conditions are favorable it may rise to the surface of the ground and flow out. Water which does not rise in the well is called "ground water." For the class of underground waters which do rise usage is divided. By some writers all such waters are called "artesian;" by others the term is limited to such waters as have sufficient head to outflow at the surface. It will be convenient in this paper to conform to the first mentioned usage, defining artesian water as that which presses upward as well as downward on the walls of its conduit, so as to rise toward the surface, or perhaps above the surface, when a way for it is opened. The wells which draw water from such a source are ordinarily described as "flowing" when the water is naturally discharged at the surface, and as "pumping" when the head is not sufficient for a natural discharge.

GENERAL CONDITIONS.

That underground water may be artesian, two things are essential. First that the porous bed receive its supply at a point or in a region where it lies comparatively high; second, that it be inclosed by comparatively impervious beds. If the inclosing beds permit no water to escape, and completely surround the reservoir except in the region of supply, then wherever the reservoir is tapped by a boring the water will rise to the height of the lowest point of supply. This ideal condition is never realized. The rocks called impervious are not absolutely water-tight, but only relatively so; and few water-bearing rocks are completely inclosed by rocks of the impervious class. The head of artesian water is therefore somewhat lower than the region of supply, and it may be much lower.

Usually there is a slow but continuous movement of water through pervious strata from the district of supply downward to points of natural discharge; and the pressure on the covering rocks is largely regulated by variations in the resistance to the water's movement, depending on the texture and thickness of the porous bed. In places where the bed is relatively thin or its texture relatively fine the resistance to flow is relatively great, and this resistance operates to increase the head at points nearer the source.

The practical value of a body of artesian water also depends on the quantity which can be continuously supplied to wells, and this, in turn, on the size and character of the conduit, on the freedom with which water is received in the region of imbibition, and in some cases on the rainfall. The value depends in part also on the quality of the water, on its depth beneath the surface, and on various other factors affecting the cost of securing it. The natural circumstances affecting the availability of artesian water are ably and comprehensively treated in the Fifth Annual Report of the United States Geological Survey, in a paper on "The requisite and qualifying conditions of artesian wells," by Thomas C. Chamberlin.

WATER OF THE DAKOTA SANDSTONE.

In the district under consideration the only artesian water of demonstrated

value is that contained in the Dakota sandstone. It is probable that there is no other formation from which water can be profitably obtained, and it may be asserted with confidence that no other compares in importance with the Dakota sandstone.

Some Remarks on Irrigation in Colorado.

(By F. H. Newell, in Census Report.)

The success of the earlier settlers in rendering valuable the hitherto desert lands stimulated speculators and owners of fertile though arid tracts to attempt to reclaim these from their worthless condition in order that they might be made sources of revenue, and from about 1887 almost innumerable projects for the construction of large irrigation works have been suggested, some being brought to completion. Many of these involved the expenditure of hundreds of thousands and even millions of dollars, the primary object being either to sell shares of stock or to realize in some manner upon the increased value of the land. In some cases stock has been sold to investors having no interest in the land, but in the majority of instances shares of stock entitling the owner to a certain proportion of the water have been disposed of to farmers having land under the canal. Sometimes the canal company has owned a large part if not all of the land, and has sought to colonize this, selling the land with water rights, generally on long time and partial payments.

The multiplication of small irrigation systems by the farmers and their enlargement from time to time continued, as previously intimated, until the demand for water, along the smaller streams at least, far exceeded the easily available supply. Added to this has been the construction of great canals, the capacity of any one or two of which, if ever brought into full operation, would exceed the amount in the principal rivers. This has brought about a condition of affairs in which in many counties the rights of the farmers to the use and employment of the waters are in a most precarious and unsatisfactory state, emphasized by the fact that the water supply of summer varies greatly in quantity from year to year. In the plan for construction of the larger irrigating canals, little if any attention has been or is now being paid to the question of water supply, and large sums have been recklessly expended, especially in eastern Colorado, in digging long lines of canals for which it seems improbable there will be sufficient water during summer.

Who Can Answer?

EDITOR KANSAS FARMER:—I would like the experience of those who have made a success of putting up woven wire hog fence. I am fencing twelve acres with McMullen's two-foot netting, and it will sag and twist in spite of all my efforts. One wire will be tight and another loose, and to stretch the loose one is what I can't do. It won't tighten. T. E. WHITLOW. Moran, Kas.

TO LIVE WELL AND HAPPILY Use "Garland" Stoves and Ranges.

Smoking Meats Without a Fire.

It is possible to give to cured meats a delicious, smoky flavor without a smoke-house or a fire. Krauser's Liquid Extract of Smoke, obtained from the smoke of hickory wood, is strongly recommended by those who have used it as a practical article for effectually, conveniently and economically preserving all kinds of cured meats. It makes the meat solid, keeps it moist and free from insects, skippers and mold and gives it a much better flavor than can be obtained by smoking the old way. Besides saving time and bother, it obviates all danger from fire and the risk of having the meats stolen, as they can be kept in a secure place instead of a detached smoke-house. Every one who cures meats, no matter how much or how little, should give Extract of Smoke a trial. It is perfectly healthful and wholesome. The manufacturers, E. Krauser & Bro., Milton, Pa., will send circulars and particulars to any one who writes for them.

It is too bad to spend half of a short life distressed with neuralgia, when a 25-cent bottle of Salvation Oil will cure it quickly.

Young men or old should not fail to read Thos. Slater's advertisement on page 15.

Shredding Corn Fodder.

A bulletin of Purdue University Agricultural Experiment Station says: "During the past few years unusual interest has been taken by farmers in the subject of shredding fodder. Many have hesitated to shred, thinking that the shredded corn would not keep well in the mow or stack. When shredding was first practiced, more or less fodder was shredded in a somewhat damp condition. When such corn was used, it invariably heated in the mow, became musty and gave unsatisfactory results. A knowledge of such unsatisfactory preservation has restrained some people from shredding their fodder, although had the crop been properly handled, there is little doubt but what these same persons would have become endorsers of the process.

"Fodder that is shredded, should not be run through the machine until it is entirely dry and well cured. It would be better over-dry than not dry enough. Last season at the Indiana Experiment Station we shredded all of our corn fodder (stover) and with the most satisfactory results. It kept well in the mow, and was free from mustiness. The cattle and sheep ate it freely, and it was used well into the spring with the stock. This fall we will shred nearly all of our 1896 crop.

"Shredded fodder presents several important points in its favor. (1) It is more economical to feed than the uncut corn. (2) It is eaten up cleaner by the stock than most cut fodder is, there being less waste, due to the absence of the hard, sharp-edged, short butt pieces of stalks usually found in cut fodder. (3) The refuse makes better material for bedding than does whole stalks or cut pieces, being finer and softer. (4) It handles far better in the manure pile than does the entire stalk. (5) It does not make the mouths of cattle sore, while that of coarsely cut fodder oftentimes does. (6) It packs more economically in the mow than does uncut fodder.

"The feeding value of shredded and cut fodder is practically the same.

"Shredding is coming more and more into practice, and many farmers are making use of the process. Shredders and huskers combined are made, or the shredders may be bought separately. Baled shredded corn hay may now be found in the hay markets and it furnishes a valuable class of coarse food for horses, cattle and sheep. A ton of shredded fodder contains over three-fourths of a ton of digestible food for the animal body. In these times of low prices, the farmers of the country cannot afford to allow their fodder corn crop to go to waste, so long as it can be used instead of other rough stuff. Shredded, it may be handled and fed to the greatest advantage."

Sir Charles Corwin 33095.

Messrs. Irwin & Duncan, Wichita, Kas., have at the head of their breeding herd of twenty-five Poland-China sows the famous boar, Sir Charles Corwin 33095, that at the Sunny Slope farm bore the reputation of being one of their very best breeders. Mr. Lou Burke, the famous live stock artist, who has an international reputation as an expert judge and critic, after spending several weeks at Sunny Slope farm preparing sketches of their best stock, upon learning that the herd was to be sold, wrote Mr. Cross a personal letter, and in speaking of Sir Charles Corwin said: "I want to say a few words in behalf of your great boar, Sir Charles Corwin, as that blood is now recognized as the best in existence and I believe this hog to be as good if not the best breeder in this country to-day. In all my travels in this country I have never seen in the get of any boar such uniform excellence, in short, so perfect in make-up as can be seen on your farm to-day." As evidence that Mr. Burke spoke advisedly we only need refer to the fact, in order to secure Esmerelda, a gilt by him, Mr. Irwin had to pay \$265. Sir Charles Corwin is an ultra-fashionably bred fellow. His sire was Latest Fashion, a grandson of Black U. S. and a full brother to Hadley 27105, dam Josie Wilkes 1st, she by Corwin U. S., the sire of J. H. Sanders, second dam Josie Wilkes by Adam.



"I do know this much, I would have been in my grave to-day if I had not taken Dr. Pierce's Medicines," writes Mrs. N. B. Umphries, of Valdosta, Lowndes Co., Ga. "Nothing I took from other doctors ever helped me any."

The reason Death is shaken off and left behind by Doctor Pierce's Golden Medical Discovery is because it

makes new vitalized blood, which is the source of all life. It makes the life-giving red corpuscles which nourish every vital organ and build up fresh healthy lung-tissue and solid muscular flesh.

As chief consulting physician of the Invalids' Hotel and Surgical Institute, Buffalo, N. Y., for nearly thirty years, Dr. Pierce's marvelous success in treating chronic diseases, has made his preparations recognized as standard remedies throughout the world. His "Favorite Prescription" is the most perfect cure ever invented for diseases of the feminine organs, and for imparting strength and endurance to prospective mothers.

Mrs. Umphries' letter continues:

"I have taken two bottles of Dr. Pierce's Golden Medical Discovery. When I began the use of it I was suffering a great deal with a bad lung affection. The two bottles almost entirely relieved me of a bad cough which worried me all day and night. I also took three bottles of Dr. Pierce's Favorite Prescription before confinement last summer, and I have the healthiest and finest as well as the prettiest baby I ever had."

Pierce's For sick headache, biliousness and constipation, Dr. Pierce's Pleasant Pellets are the most rational cure known. They are mild but thorough and effective. No other pill is like them. **Pellets.**

Five Little Books.

All interesting and profitable reading. Books about "Texas," "Homes in the Southwest," "Glimpses of Arkansas," "Truth About Arkansas" and "Lands for Sale Along the Cotton Belt Route." If you are seeking to better your location, send 10 cents to pay postage on any or all of these books, to E. W. La Beaume, Gen. Pass. Agent, Cotton Belt Route, St. Louis, Mo.

To St. Paul and Minneapolis via Burlington Route.

Two splendid through trains each day from Missouri river points to the north via the old established Burlington Route and Sioux City line. Day train has handsome observation vestibuled sleepers, free chair cars, and dining cars (north of Council Bluffs). Night train has handsome sleepers to Omaha, Council Bluffs and Sioux City, and parlor cars Sioux City north. Consult ticket agent.

L. W. WAKELEY, Gen. Pass. Agt., St. Louis, Mo.

To Chicago, St. Louis and the East via Burlington Route.

The traveling public is sure to find the best fast vestibuled trains to the East via the Burlington Route.

Handsome new compartment sleepers (same rate as standard sleepers), chair cars (seats free), Kansas City and St. Joseph to St. Louis; standard sleepers, chair cars and dining cars—"pay for what you order"—to Chicago. Take the "Vestibuled Elit" to Chicago and the "Vestibuled Limited" to St. Louis.

Ask agent for tickets via the Burlington Route.

L. W. WAKELEY, Gen. Pass. Agt., St. Louis, Mo.

Popular Low-Price California Excursions.

The Santa Fe Route personally conducted weekly excursions to California are deservedly popular. About one-third saved in price of railroad and sleeper tickets as compared with first-class passage.

The improved Pullmans occupied by these parties are of 1896 pattern and afford every necessary convenience. A porter goes with each car and an experienced agent of the company is in charge.

The Santa Fe's California line is remarkably picturesque, and its middle course across the continent avoids the discomforts of extreme heat or cold.

Daily service, same as above, except as regards agent in charge.

For descriptive literature and other information address G. T. Nicholson, G. P. A., A., T. & S. F. Ry., Chicago.

POWER FROM GASOLINE? YES.

Its Very Economical, Simple, Safe and Reliable, and Weber Gasoline Engines require no engineer. His salary goes in your pocket.

For information address Weber Gas & Gasoline Engine Co., 459 Southwest Boulevard, Kansas City, Mo.



The Linn County Fair.

The Linn County Fair Association held its thirty-first meeting, last week, commencing Tuesday and closing Friday, at Mound City, Kas. As usual in the years gone by, the association made every effort to have the meeting a success, and notwithstanding the lack of spirit in business circles and that of agricultural pursuits, the fair was a success. The exhibit of farm products was a most excellent one and reflected credit on the progress of the farmers of Linn county. The exhibit of live stock—horses, both roadster and draft, was the equal of any county and ranked in many respects the equal of that made at the State fair. The cattle show consisted of Short-horns, Red Polls and Holsteins.

D. K. Kellerman & Son were out with a draft of fifteen head from their very excellent herd, known as the Vinewood herd of Short-horns, and won all in class offered by the association and sweepstakes on aged cow. Their herd consists of "reds and roans," and among them are seven young bulls and ten heifers that will be priced that are three-quarters Crulckshank tops, sired by Lavender King 4th, a bull of great size, finish and substance. The farm is one and a half miles north of the Missouri Pacific railroad depot, hence easily reached by visitors and intending buyers.

F. A. Shoemaker, of Centerville, Linn county, was out with a draft of four head from his thirty Red Polls and won first in class and sweepstakes all breeds and ages on the very excellent two-year-old bull, McKinley, by Duke of Mapieton and out of Surprise by Peter Piper. Won first also on bull calf and first on two-year-old cow and same on heifer calf. The bull, McKinley, weighs 1915 pounds, and his son, the eight-months calf, weighs 750. All four animals are splendid specimens of the breed and worthy a place in any State fair show ring. Six young things, two bulls and four heifers, are for sale.

William Tricker, of Mound City, came out with ten head of highly-bred Holsteins, but when the writer strolled around for pointers concerning the herd the owner was off to the races until milking time, hence the information desired was not obtained.

The swine show aggregated seventy-seven head and consisted of Poland-Chinas, Berkshires, Duroc-Jerseys and Chester Whites.

In the Poland division A. M. Markley, of Mound City, proprietor of the Linn County herd, exhibited seventeen Polands and three Chester Whites that were selected from his herds, aggregating fifty head. He won first on aged boar, same on two-year-old sow, first on yearling sow, first on litter of pigs and first on best display. In the Chester class he took first on aged sow and first and second on yearling sows. He lately sold a yearling show sow for \$60, that went to reinforce the Clover Leaf herd, at Fort Scott, Kas.

C. O. Hoag, of Blue Mound, Kas., entered sixteen of his herd of Polands and won first and second on pigs under 6 months, second on boar 6 months and under 12, first on sow pig and first and second on sows under 12 months, and won second on best display. Mr. Hoag made no entries in the older classes. His foundation stock is composed of Tecumseh, Guy Wilkes and Black U. S. blood.

Allen Thomas, owner of the herd in western Linn county known as the Blue Mound herd, made the principal exhibit in the Berkshire division, showing twenty-six head, and won about all the money offered as premiums by the fair association. His herd aggregates about eighty-five head and is located on the farm, two and a half miles northeast of Blue Mound. Later more will be given in the KANSAS FARMER concerning the breeding, both of the foundation stock and the youngsters coming on for ownership in the hands of new masters.

The "red-coated hog," known as the Duroc-Jersey, was exhibited by A. D. and H. L. Perrin, of Prescott, Linn county. They showed five head, a young herd selected from the home herd of forty-five, and won first and second on boars 6 and under 12 months and same on sows. The individuals shown belonged to the improved type of the Duroc-Jersey. Among others that are for sale are the two premium boars and ten gilts. Six litters are coming on for the spring trade. All the youngsters are by Sunflower Chief, a boar of great quality and bred by one of the most successful Duroc breeders in the United States, J. M. Stonebraker, of Illinois.

F. A. Shoemaker showed eight of his forty Chester Whites and won first on boar 2 years old, first on litter of pigs and second on litter of pigs. The foundation stock and the breeding boars were bred by the noted American breeder of improved Chester Whites, Silver, of Ohio. Such has been the improvement made in the type and general conformation of the "white hog" in the past few years that the breeder of the "black coats will have to look well to the standard of excellence, else honors will have to be more equally divided than they have been in the past.

John Park, of Mound City, knows a good

thing in the way of a Poland-China when he sees it, and showed a boar under 12 months, sired by Markley's boar, U. S. Forward 12845 S., and won first premium.

The poultry exhibit was the best shown on the grounds for years and about all the breeds were represented.

The speed ring came in for its share of attention and a good field of horses entertained the visitor for three successive days.

The Superintendents of the several departments all exerted themselves to make the exhibits in their respective departments a success, and Secretary Ed. R. Smith attended strictly to every detail to make the fair a success, which it was. Every one seemed to be out on a tour of inspection at sight-seeing, renewing old acquaintances and of having a good time generally.

Davidson's Poland-China Sale.

The attention of our readers is called to the sale announcement elsewhere in this issue of H. Davidson & Son, of Princeton, Franklin county, Kansas, which will take place on Tuesday, October 27, 1896, on the farm, adjoining Princeton ten miles south of Ottawa, on the A., T. & S. F. railroad.

The offerings will consist of twenty-five boars and thirty-five sows. Among them will be the two-year-old boar, Ely Tecumseh, a son of Tecumseh J. Corwin 10744 S., and out of Warner's Gold Drop 14443 S., she by the noted \$800 boar, Free Trade 4420 S. He is a producer of extra good pigs and goes into the sale as a retired harem master from the herd. The fall of 1895 young boar, Mont Ida Chip 2d by Lord Chip 11151 S., a first premium and sweepstake winner in 1895, and out of Bertie May 38940 S., has been catalogued as No. 2, and will prove an attractive offering. There will be twelve one and two-year-old sows that belong to the Black U. S., Wilkes, Tecumseh, J. H. Sanders and other strains that have been bred to Princeton Chief 14545 S., a son of Chief Tecumseh 2d 9115 S. A part of these will have young litters at side, and if the breeder that is after Chief Tecumseh 2d blood wants something just way up, here will be his opportunity to get it at his own price. The sows are all strongly bred and are away above the average as individuals. Among the spring offerings will be four March boars and one sow by Princeton Chief 14545 S. and out of Bonnie U. S. 42018 S. that are sure good ones. Then comes two boars and a sow of a March farrow by Business 11637 S. and out of Dolly K. 5th 38290 S. that are a combination of Corwin and Tecumseh blood. If big bone, great length and the making of roomy brood sows is your aim, then this breeding ought to catch you. If broad, thick, deep-hammed individuals on short legs and well up on toe is your ideal, April 7th litter of six, one boar and five sows by Riley Medium 12306 S. and out of Princeton Girl 42020 S., a Corwin Tecumseh strain, should not fail to suit. The March 24th litter of four, two of each sex, by Dictator 2d 14065 S., a grandson of Guy Wilkes 2d, and out of Daisy Dean 7th 34216 S., a granddaughter of Black U. S., ought to fill the bill—at least aristocratic enough to please any up-to-date breeder. There has been catalogued an April 9th litter of six, four sons and two daughters of Upright Wilkes 13246 S., a son of the noted George Wilkes 9550 S. and out of Airline U. S. 2d 42016 S., that is a granddaughter of Corwin U. S. 13461 and King Kleyer 2d 74288. Then follows five daughters of Princeton Chief 14545 S. and out of Warner's Model 28946 S., a granddaughter of One Price 4207 S. Business 11637 S., a class and sweepstake winner of 1895, will send in two sons and two daughters out of Black Daisy 4th 38292, a granddaughter of One Price and out of Black Daisy 72454 O. This breeding is sure rich enough to attract attention on sale day. Then comes a son and two daughters by Dictator 2d 14065 S. and out of Betsy McWilkes 32162. Here is a combination of Guy Wilkes 2d, Lambing Choice, Woodburn Medium, Allerton's Tecumseh, Dandy Wilkes, Lady Osgood, Joe Wanamaker and Betsy A. Out of this grand combination of blood something extra good is to be expected. Princeton Chief 14545 S. will again send in two boars and two April 27th sows out of O. K. sow by O. K. 11731 and out of White Ears 32506 S., a daughter of Royalty 1666 S., the sire of Free Trade 4420 S. The pigs are typical ones and are the kind that every breeder hopes to have but just don't always "get 'em." Among the more mature offerings will be Miss Gold Drop by Seldom 14251 S., a grandson of King Butler 620 S., and out of Belle's Gold Drop 41480. She is in expectancy by Princeton Chief and due October 24. Another yearling harem queen, Lady Fanchion by Telegram 14268 S. and out of Fanchion 16th 33391 S., a daughter of Wanamaker Jr., will be due October 27 to the credit of Princeton Chief. A word concerning Princeton, and that is, he is a modern Poland-China, well balanced and an extra good breeder. Such has been his success that he will be retained another year in the herd. One of the extra well two-year-olds in the sale is Axie Sanders by J. H. Sanders 27210 O., the World's Fair

champion, and out of Axie E. 71862 O., she by Corwin U. S. 2d 28981 O. She was bred by the noted Ohio breeders, S. E. Shellenberger & Co. Space forbids that full and detailed notes that this herd of the Messrs. Davison merits, save to say, that it has for several years held its own in the front ranks with the herds of Franklin, Anderson and Miami counties, and only lacks a greater notoriety through the use of more printer's ink and State fair achievements to place it beside the better known herds in the State.

W. P. BRUSH.

Pointers on the Coming Hereford Sale at Independence, Mo.

That the reader interested in high-class Hereford cattle may gain some idea of the merits concerning the draft of seventy-five head from the noted herds belonging to Messrs. Gudgeon & Simpson and Mr. Jas. A. Funkhouser, that have been selected out of the aggregation of over six hundred head, and will be sold to the highest bidder on Friday, October 23, 1896, the writer takes pleasure in giving some pointers pertaining thereto, based on observations lately made when on a visit at the homes of the respective herds.

The Independence herd was founded by its present owners, Gudgeon & Simpson, in 1877, with American-bred and imported animals, and in 1881 the first direct importation, followed by two succeeding annual importations, aggregating two hundred and fifty-four head. Since then imported animals from the best herds in England have been added, and by judicious crossing and the commingling of blood for improvement, at this time it is safe to state that the Independence herd has no superior either in this country or England. After years of successful show ring achievements, down to the greatest of American live stock exhibits, that of the World's Fair, in 1893, the herd has been permitted to enjoy its brilliant victories gained at the Columbian and has not since been out for further honors.

The history of the Plattsburg herd begins with its founding in 1882, after Mr. Funkhouser had been twenty years actively and extensively engaged in feeding and shipping live stock, and the white-face cattle selected because of their superior grazing, feeding and ever ready maturing qualities. It is perhaps not saying too much to state, based on the show yard history at our command, that no American herd has a better show ring history than has the herd founded and developed by Mr. Funkhouser, in any corresponding period of time.

That the merits of these herds may become more extensively known by a personal visit, the owners concluded to offer the aforementioned number at public sale and invite all, especially those who have undertaken or are about to embark in the breeding of Herefords, to see the living and actual results that have been attained and share with their friends the merits of their most excellent cattle. The offerings will consist of twenty-five males and fifty females. In the bull division there will be two aged animals, the imported Chesterfield 56697 and Roseland 51840. The former was bred by A. P. Turner, Pembroke, England. His sire was the noted Statesman 57962, a grandson of Lord Wilton 4057. His dam, Venus 3d 21197, was by The Grove 3d 2490 and out of Venus 15798 by Spartan 3978. Space forbids that extended description that he merits and his worth as a sire will be best exemplified on sales day, when two of his sons and eight of his daughters will be, like him, offered. To better understand the value of both sire and progeny, as to breeding, procure a free copy of the sale catalogue, wherein one finds an extended tabulated pedigree of each animal that will be offered. The second aged harem master is the four-year-old Roseland 51840, bred by his present owners, sired by Earl of Shadeland 47th 36644 by Garfield 7015 and out of Lady Wilton 14th 21415 having in both his paternal lines the blood of Regulus 3849, Challenge 1561, Lord Wilton 4057, and The Grove 3d 2490. The dam of Roseland was Rosette 3d 31106 by Anxiety 4th 9904, the greatest Hereford bull of his time, the sire supreme, the one white-face individual that produced in his progeny that remarkable long, full, deep, thick, well down to flank and hock quarter, known as the improved American Hereford. The dam of Roseland was Rose of the Teme 4487, three removes from the noted Conqueror 3599. He will have, as well as himself, three daughters in the sale out of line-bred Anxiety dams. Of the twenty-three younger bulls, fifteen are long yearling and eight will average about twelve months on day of sale. Don Carlos 33734—that won second in class, bull 3 years old or over; second, four animals of either sex under 4 years old, get of one sire, and third, herd graded by ages—will send in a son out of Bright Duchess 12th 46818 a line-bred Anxiety, and a daughter out of Pretty Lady 3d 27451 by North Pole 8946 and out of a granddaughter of Sir Thomas 20. The great breeding and show ring winner, Lamplighter 51834, that won at the World's Fair first in class, bull 1 year and under 2, and headed herd, young herd all under 2

prize, will have three sons and six daughters in the sale. And to briefly write it, they are all extra good ones. He was sired by Don Carlos and out of a daughter of North Pole 8946, and why should not his progeny be found in the final leet in any white-face ring in any country? The largest leet of females in the offering by one sire are the seventeen head by Druid 46838, a son of Don Carlos and out of Dainty 11041 by North Pole 8946. The reader will find on a careful looking over and a study of their several extended pedigrees that there is not an objectionable one among them, but all are very desirable. The great breeder, Beau Brummel 51817, that stood fifth in rank and was highly commended at the World's Fair when in his two-year-old form, has come out since and has, in the opinion of some leading white-face judges, succeeded in obtaining the premier's position in the Independence herd. He will have two sons in holiday dress on sale day that are out of Blight 37167, a daughter of North Pole, and the well-bred Bernice 4th 46809, whose grandsires were Don Carlos 33734 and Anxiety 4th 9904. Spartacus 51842 by Don Carlos 33734 and out of Sprite 2d 26477 by Anxiety 4th 9904, will honor the sale's block master of ceremonies with five daughters that are the equal of anybody's best. Don Quixote 37205, a son of Anxiety 4th 9904 and out of Dowager 6th 6982, will send in three daughters that are sure to attract the attention of the intending buyer. Fifteen of the draft from the Plattsburg herd, seven bulls and eight heifers, were sired by the noted show and breeding bull, Hesiod 2d, by Imp. Hesiod 11975, he by The Grove 3d 2490 by Horace 2492. His dam, Anita 33955, was by Harold 21141, a grandson of Horatius 7168. Anita was out of Queen of the Lilies 3d 16102, a granddaughter of Success 2. In conformation, character and finish Hesiod 2d has no superior and but few equals to-day in any country. Such is the out-and-out all-over character of his deep-fleshed sappy and furry-coated sons that they all go readily before or when of breeding age. One very notable characteristic of his is that he gets both bulls and heifers that are good ones. Up to this time but few of his daughters have been permitted to go away from the farm and the seven that will be offered are among the choicest plums of the sale. Another interesting feature of the Funkhouser draft will be the seven young bulls by the State fair circuit winner during 1895, Free Lance 51626, a son of the greatest son of Anxiety 4th 9904, Beau Real 11055, that during the years of 1885-86-87-88 practically swept the field over all beef breeds at Bismarck, St. Joe, Des Moines, Lincoln and Topeka. His long list of show ring victories and the high character of his get places him in the star gallery of American Hereford history. The dam of Free Lance, Lady Wilton 19493, is by the noted Lord Wilton 4057, a grandson of Sir Thomas 20. As inheritance adds to the value of the living descendant and gives promise of further future achievements, then the sons of this richly-bred sire ought to attract the attention of all progressive white-face breeders from all quarters. Among those in the Funkhouser offerings will be two young fellows—Hesiod 29th (Vol. XIV.) by Hesiod 2d 40679 and out of May Day 46420, the dam of Dew Drop, that wins wherever shown, and Hesiod 30th, a half brother, and out of Fern 51625 by Don Carlos 33734. The dam of Fern, Petunia 3d 27417, is by Anxiety 4th 9904. Both of these youngsters are show ring winners, the former winning this year at the Nebraska and Iowa State fairs. While there is some little difference as to conformation characteristics, the final choice usually is determined by the personal fancy of the umpire in the case. Space forbids further mention of the individual make-up of the get of Hesiod and Free Lance. Two of the heifers in the last mentioned draft are by Cephas 37607 by Royal 16th 6459 and out of Lady Leinthal 9845 and Hesiod 7th 51623 by Hesiod 2d 40679 and out of Miss Simpson 41549, a granddaughter of Anxiety 4th 9904.

The reader will have, if he be interested in Herefords, gained through this brief review some idea of the complexion of the cattle that will be offered, and if he visit both herds before sale day and carefully note the breeding more extendedly as given in the sale catalogue, he must be a very phlegmatic person if he does not catch some inspiration and determine to grow better beef cattle, the kind that tops the markets at the great centers in this country and is the prime favorite of the grazer, the feeding finisher, the butcher and the greatest of the world's beef-eaters, the Englishmen of old England.

W. P. BRUSH.



ROTARY GRINDER!

Operated by any Pumping Windmill. Steady motion; speed 130 to 175 per minute. Grinds Feed, 10 to 15 bushels per day. Runs Churn or Grindstone. Agents wanted. Dealers' prices where we have no agent. Write for prices and state what kind of windmill you have.

ROTARY GRINDER CO., St. Charles, Ill.

The Home Circle.

"I HAVE ENOUGH."

Who ever had enough in this wide world?
Who ever saw Want's banner closely furled,
Or man, with downcast eyes and folded hands,
Tired of his gold, his money, or his lands?

Who ever had enough of God's good gifts,
The ripening sunshine, and the snowy drifts;
The noble forests, with their ancient trees,
The skies of beauty, or the boundless seas?

Who ever had enough of grateful sound,
Of glorious music with its sweet rebound;
Of form and color, elegance and grace
That find in Art a fit abiding place?

Who ever had enough of friendship true,
Of answering love, that thrilled the being through;
Of dear home comfort, daily giving birth
To sweeter comforts, round the social hearth?

Who ever had enough of rest from care,
Enough of time, and time enough to spare,
Enough of learning and enough of skill—
Enough of mercies from the Master will?

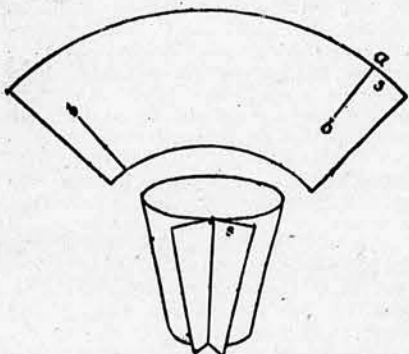
Who ever had enough in this wide world?
Who ever saw Want's banner closely furled,
Or man, with downcast eyes and folded hands,
Tired of his gold, his money, or his lands?

—Mrs. M. A. Kidder.

PAPER FLOWER POTS.

They Can Be Used to Great Advantage in the Garden.

A serviceable and yet inexpensive device, so simple that children can make it, is the paper flower pot, especially designed for seedlings. On a piece of stiff paper draw two concentric circles of six and three inches radius respectively and cut out a portion of the ring thus formed, about eight inches long and of the shape of the upper diagram in the illustration. Using this as a pattern cut as many like forms from stiff manilla paper as may be desired. On



MAKING PAPER FLOWER POTS.

opposite margins, and about five-eighths of an inch from each end, cut radially half way across the strips, as shown by the lines a b in the diagram. Now coil the strips and slip the ends together along the cut lines and the flower pot is complete, as shown down in the lower sketch. When the seedlings or cuttings have been placed in these pots, they should be plunged into sand or soil until ready to be shifted to larger pots or to be transplanted. The plant may then be readily removed without disturbing the roots, by simply tearing off the projecting slip, and the paper unwrapped from the soil. These paper pots can also be used to great advantage in starting young strawberry plants.—Orange Judd Farmer.

How to Make Crab Croquettes.

In giving a little dinner, crab croquettes make an excellent entree. To prepare them take one pound of crab meat, gently press out the juice and put it in a bowl with a tablespoonful of fine crumbs, half a teaspoonful of salt, half a saltspoonful of pepper, a dash of anchovy essence, the yolks of two eggs and a very little cold water. If the eggs are enough to make it the proper consistency bind the ingredients together and place on ice until wanted. Then work into cone-shaped forms, dip them in beaten eggs, then in crumbs and fry in best fat.

When Calling on Acquaintances.

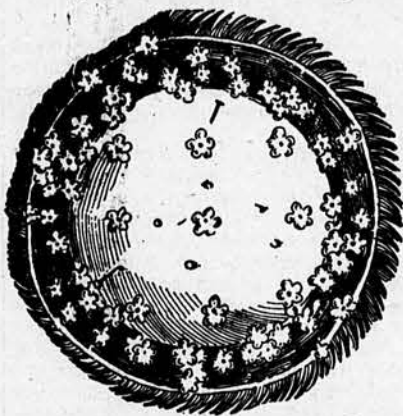
By the way, one should never say "making calls;" one should call it "paying visits." That seems rather a misleading phrase, as it might imply a stay of several days' duration. But it is good form to say it, nevertheless. Another dictum of the smart set is that more than two people should never pay visits together. If there are, for instance, three unmarried sisters in society, or a mother has two unmarried daughters, the three must divide their forces in some way, but they must not descend upon a friend's drawing-room at once.

FLOWER PINCUSHION.

An Elaborate Affair, But by No Means Difficult to Copy.

In recalling some of the pretty and tasteful knick-knacks seen, the flower pincushion appears an elaborate affair, by no means difficult to copy. The materials required are two dozen sprays of artificial forget-me-nots, two circles of stiff cardboard six inches across, and some gray silk with which to cover them; one circle of cardboard $4\frac{1}{2}$ inches and one of white satin 6 inches across; also some tiny gilt spangles and three-quarters of a yard of narrow tinsel fringe. First cover the two large cards, each with gray silk, interlined, if the silk is poor in quality, with muslin.

Interline the white satin also, and to the very center of it sew a forget-me-



NOVELTY IN PINCUSHIONS.

not flower snipped from one of the sprays. This should have a spangle for the center and be caught down very neatly with fine blue silk. Sprinkle eight other flowers over the white satin, putting them on in the same and leaving plenty of room for pins between them. Run a gathering thread round the edge of the satin. Lay the latter right side downward and fill generously with bran or cotton wool, lastly laying the small circle of card on the top and round this gathering in the draw thread very tightly.

Glue or stitch this white cushion in the center of one of the gray-covered centers, fixing it quite firmly and concealing the outer rim of the cushion with sprays of forget-me-nots. These are sewed down so that each slightly overlaps the former one until a perfect wreath is made. Sew on the second gray-covered circle, which forms the bottom of the cushion, and edge with a fringe. Raise the forget-me-nots so that these stand up slightly instead of lying quite flat round the cushion.—Chicago Chronicle.

THE SUNSHINY WOMAN.

She Is Always Welcomed and Blessed as the Flowers in May.

When we come to count over the qualities that endear our friends to us, almost all of us think first of cheerfulness, says a writer in the New Orleans Picayune. Sunshiny men or women, who bring a bright thought or word or even a glad smile with them, are always welcome as the first flowers in May. Each heart knoweth its own bitterness, each soul has its own troubles and trials and vexations, and so we turn to the one who can lighten our sadness with the radiance of a cheerful spirit.

Sunshine of the soul is largely a matter of cultivation, for there are few so fortunate as not to have some grief. The selfish sit down and brood over their sorrows. They give themselves up to fits of despondency and moodiness, and are a kind of moral wet blanket on the pleasure of all with whom they come in contact. They tell you their sorrows and bedew you with their tears until it seems there must be a kind of luxury of woe in which they rejoice.

After all, the cheerful spirit is but an example of "that brave attitude toward life" of which Stevenson wrote. It is the courageous bearing of inevitable burdens; a determination not to fret and not to add to the sorrows of the world the griefs of one's own heart.

A woman who had many sorrows and heavy burdens to bear, but who was noted for her cheerful spirits, once said in explanation: "You know I have had no money. I had nothing I could give but myself, and so I made the resolution that I would never sadden anyone else with my troubles. I have laughed

SCOTT'S EMULSION is Cod-liver Oil in condition to be of the most immediate use in the body, and to be of the greatest use. It is tasteless; at least it has no fish-fat taste. It has a little flavoring in it. Hypophosphites of Lime and Soda are in it. They are always wanted in the body when Cod-liver Oil is wanted.

50c. and \$1.00 at all druggists.

and told jokes when I could have wept. I have always smiled in the face of every misfortune. I have tried never to let anyone go from my presence without a happy word or a bright thought to carry with them. And happiness makes happiness. I myself am happier than I would have been had I sat down and bemoaned my fate."

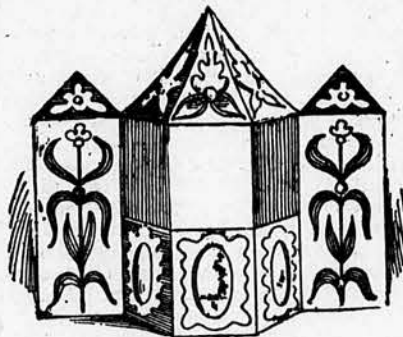
This gospel of happiness is one that every woman should lay to heart. What it means to a man to come home at night to a cheerful wife no one but he who has had to fight the hard battle of life knows. If he is prosperous it is an added joy, but it is in misfortune that it shines like a star in the darkness. A complaining wife can kill the last bit of hope and courage in a sorely troubled heart, while a cheerful one gives new courage to begin the fight over again.

The mother who lets her children grow up to be moody and discontented, subject to blues and sulks, is failing in her first duty. She is handicapping them in the race of life. Cheerfulness is one of the prime requisites to success and happiness. The sunshiny man or woman has everyone for a friend, for this sad old earth must borrow its mirth; it has sorrows enough of its own.

TINY GLASS CABINETS.

An Adaptation of the Popular Glass and Ribbon Box Idea.

Those who admire the glass and ribbon boxes much in vogue a few years ago will be ready to attempt some new things in that line which are now seen. These are glass cabinets. They are made of ground glass and clear glass, the panels joined by ribbons or by the



GLASS CABINET.

better and not more expensive way of having an intelligent carpenter join them with wood. Either ground or clear glass or both combined may be used. The ground glass can be decorated (the rough side being out in every case) with conventional scrolls and simple landscapes in gold and aluminum paint.

Photographs may be tacked behind the clear glass, or the glass left to disclose the contents of the cabinet.

Several shelves may be placed inside these cabinets, the height of these little houses or pagodas varying from 13 to 25 inches.

By cementing cut-glass jewels in the scroll work designs and gilding the woodwork a rich effect is secured.

Indian Summer Time in Kansas.

The very air is invigorant; fragrant from the harvest, spiced with wood smoke, bracing from the first frosts, scintillant with the glorious sunshine that fills the shortening autumn days with splendor and makes thin and luminous the attendant shadow. "Bob White" shrills of "more wet, more wet;" his Quakerish little wife, with half-grown brood, trimly speeds across the roadway into the ripened corn, or, with musical "whir-r-r-r," rises, to dive into the distant sea of undulating brown. Prairie larks trill and carol in the ecstasy of exquisite day; swinging on the rusty wire or perched on the infrequent posts that hold the cattle from the ripened field. Hawks fly low; frightened sparrows flutter into tree and hedge row; rabbits scurry from bare pastures to grassy covert, or sit erect and watch with distended eye, quivering nostril and rigid ear, the impending danger. The murmur of voices, the morning cock crow, the lowing of cattle, are as distant music, carried softly to the ear by the voluptuous air. Corn shocks dot the field—tents of an army that stands near by in whispering ranks; a multitude of peace and plenty; no arms, no equipment but a haversack of golden grain on hip or shoulder. Save a weary few, they stand expectant, awaiting to deliver their garnered wealth, be mustered out, and with empty pockets, light hearts and fluttering banners retrace their steps via a mouldering way to the place from whence they came, and rest. In rusty velvet fields, big dusky hay stacks stand in herds, or gather in about the barn, shouldering one another in ponderous good humor. From the inspiration of the caressing air, the peaceful, plenteous view, satisfied achievement of a summer's work, of goodly store from nature's plenty, we look with brightened eye, bounding blood and defiant head, to the north, undaunted by the icy breath that tells of coming snow.

Do not wear impermeable and tight-fitting hats that constrict the blood-vessels of the scalp. Use Hall's Hair Renewer occasionally, and you will not be bald.

FREE TO ALL WOMEN.

I have learned of a very simple home treatment which will readily cure all female disorders. It is nature's own remedy and I will gladly send it free to every suffering woman. Address MABEL E. RUSH, Joliet, Ill.

ORGANS FREE on trial. High-grade, popular priced Organs, such as never were offered before. Unequalled for sweetness of tone and beauty of design. We have a large assortment at lowest prices. Send for Our Mammoth Catalogue. H. R. EAGLE & CO., 68 and 70 Wabash Ave., Chicago, Ill.

NASAL CATARRH is a LOCAL DISEASE and is the result of colds and sudden climatic changes. This remedy does not contain mercury or any other injurious drug.

ELY'S CREAM BALM CURES COLD CATARRH OF THE HEAD. It restores the Senses of Taste and Smell. It is quickly absorbed. Gives relief at once. 50 cents at Druggists or by mail: samples 10 cents by mail. ELY BROTHERS, 56 Warren Street, New York.

ALL THE WORLD Knows that the Peerless Remedy for Diseases of the Liver, Kidneys and Bladder is

Dr. J. H. McLEAN'S LIVER AND KIDNEY BALM

It has Cured Thousands of Desperate Cases. Try It

AT ALL DRUGGISTS. PRICE, \$1.00 PER BOTTLE

THE DR. J. H. McLEAN MEDICINE CO., ST. LOUIS, MO.

The Young Folks.

WHEN THE TEACHER GETS CROSS.

When the teacher gets cross and her brown eyes get black,
And her pencil comes down on the desk with a whack,
We chilluns in class sits up straight in a line,
As if we had rulers, instead of a spine.
It's scary to cough, and it's not safe to grin—
When the teacher gets cross and the dimples goes in.

When the teacher gets cross the tables all mix,
And the ones and the sevens begin playing tricks,
The pluses and minus is just little smears,
Where the cry-babies cry all their slates up with tears.
The figures won't add, and they act up like sin—
When the teacher gets cross and the dimples goes in.

When the teacher gets cross the readers gets bad,
The lines jingle round till the chilluns is sad,
And Billyboy puffs and gets red in the face,
As if he and the lesson were running a race,
Till she hollows out "Next!" as sharp as a pin—
When the teacher gets cross and the dimples goes in.

When the teacher gets good, her smile is so bright,
The tables get straight and the readers gets right,
The pluses and minus come trooping along,
And figures add up and stops being wrong,
And we chilluns would like (but we dassent) to shout.
When the teacher gets good and the dimples come out.

FEATHERED CRIMINAL.

How a Thieving Swallow Was Punished by His Mates.

"I suppose," said the man who has spent much of his life in the woods, "that if we knew more of wild animals we should find in them most of the qualities that characterize human beings. I went up to Aroostook county, Me., early last year to get the first of the spring fishing. When the birds began to return I was glad to see that eight or ten pairs of barn swallows which had built under the eaves of my cabin the year before were going to repair the old nests.

"They went at once to a little spring about half a mile away, where there was some very sticky and tenacious mud. They would fill their mouths at the spring, fly back to the cabin, and plaster the little wad of mud on the nest. They worked very industriously, flying back and forth from dawn till sunset.

"But by and by I noticed that one of the swallows did not go with the rest to the spring. He sat on his nest, hung his head and acted as if sick. The others wheeled around him a little while and then flew away.

"The moment they were out of sight he raised his head, flew to one of the



THE PUNISHMENT.

nests, and began to pull off the fresh mud which the owner had just left. When he had a good mouthful he went back to his own nest and plastered it on.

"By the time the other birds came back with more clay he was drooping in his nest again, looking as if he were in the last stages of consumption. Now and then, when the rest of the birds were near, he would 'peep' a little as if to say: 'Oh, how sick I am! If you only knew how bad I feel!' and the other birds fluttered about him as if they were trying to sympathize with him, or advising him what to take. But the minute they were gone he was out, pulling mud off their nests to build his own with.

"This lasted nearly all the forenoon, and the thief was getting on finely. He had his nest almost done; for he did not have to go a distance for materials, and could put on two or three mouthfuls of mud while the others were getting one,

He had too much intelligence to steal all his mud from one nest, so the loss was not noticed for some time.

"But his sins found him out at last. One of the other swallows got back before he was expected, and found the robber plundering his house. He pitched upon the thief at once, and they fell to fighting. Then the rest of the flock began to return. I suppose the first one screamed, in swallow language: 'Come here! Come here! This lazy rascal has been stealing our mud!'

"In an instant there was a tremendous chattering. The whole flock began to peck at the thief and to beat him with their wings. They drove him out of his nest and away across the stream. Then they all fell to and pulled from his nest all the mud that was fresh enough to use on their own.

"I don't think the thief came back at all. I noticed that his nest was not finished that summer. What became of his mate? I don't know. One of the sad things in life is the fact that a man's wife has to share the consequences of his wrong-doing."—Youth's Companion.

SOME QUEER TRICKS.

Odd Ways in Which French Youngsters Amuse Themselves.

To balance a cup of coffee on the point of a knife is a feat not many of us would undertake with any hope of success; but with the aid of a few accessories which are readily at hand the trick may be made comparatively simple. A cork, a fork—these are all the implements necessary, only do not forget to have on hand a little adroitness.

Put a cork of proper size into the handle of a cup of coffee so that it will fit securely and solidly, though not so tightly as to run any risk of breaking the handle. Stick a fork in the cork, two prongs on one side of the handle, and two on the other, inclining the end of the fork toward the under side of the cup.

The center of gravity being thus lowered, place your cup upon the point of a knife, and you will find by experimenting the exact point where it will hold itself in equilibrium. The underside of the cup usually being glazed, you must keep the hand that holds the knife steady. In the beginning you would do better to keep your other hand near the handle of the fork, so that you could seize it quickly in case of the danger of a fall.

Perhaps if you want to be entirely sure of your morning coffee you would better drink it before making your first experiment.

One of the little domestic details that surprised me most when I was first in Paris was a glass of water doing duty as a candlestick. But in spite of its simplicity, it perfectly supported the candle, and was in all points of usefulness quite the equal of any candlestick going. Only you must know the little dodge of preparing the candle.

You have only to pierce the end of a candle with a nail, but you must take great care that your nail is of just the right weight to carry the candle entirely under water; that is to say the water must be just even with the top of the candle without wetting the base of the wick.

Then light the wick and you may safely wager that in spite of the unfavorable element into which it is plunged, your candle will burn to the very end.

This seems extraordinary at first, but a little reflection will make the reason of it clear. You see, if the burning shortens the candle and so seems likely to bring the wick in contact with the water, on the other hand the weight of the candle is diminished in just the same proportion and so ascends little by little.

Moreover, the circumference of the candle chilled by the water melts much more slowly than it does in the air, so that the top of the candle becomes gradually hollowed out in such a way that the flame has a little well for itself, as represented in the corner of the design.

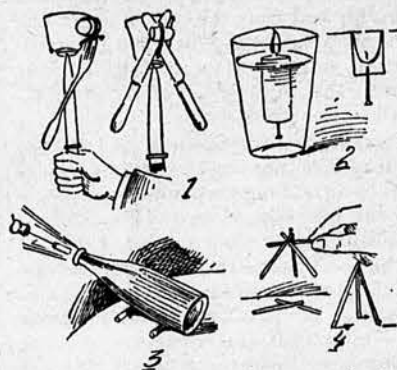
You need not have the slightest fear therefore in announcing that you can make a lighted candle burn to the very end in a glass of water.

I have often vainly tried to analyze, especially on the Fourth of July, why it is that boys find a big noise more amusing than all other sports combined. I only know that they do that

to touch off a cannon, to hear the roar which frightens nervous people, to see a ball spin into the air with the rapidity of lightning, and to watch the consequent recoil is the greatest fun alive. So I am going to tell you how to produce these effects in the most innocent manner possible.

First produce at any drug store the two little packages of powder that are used in making seltzer water. Then take an empty bottle of thick glass like the one indicated in the illustration, and fill it about a third full of water. Dissolve in this water the bicarbonate of soda contained in one of the little packages, and put the powder of the other (tartaric acid) into a card rolled up into the form of a cylinder. Plug up one end of this little cylinder with a wad of blotting paper, and suspend your cartridge thus made to the cork of the bottle by means of a pin to which a thread is attached; only be careful to have your thread of such a length that the bottom of your cylinder does not touch the liquid.

Force this cork with its little attachment well into the bottle, and behold your artillery charged. All that remains to be done is to fire it off. To do this it is only necessary to place the bottle horizontally on two lead pencils placed parallel upon the table. The



1. The Terror of Housekeepers. 2. A Peculiar Candlestick. 3. The Cannon Shot. 4. The Problem of the Three Matches.

water at once penetrates the tube of pasteboard, dissolves the tartaric acid, and the carbonic acid gas suddenly produced forces the cork out with a violent explosion, while by the effect of reaction the bottle rolls back upon the lead pencils, imitating exactly the recoil of a piece of artillery.

Some time when you want to entertain your friends after dinner, propose to them the problem of the three matches. Make a slit in the end of one match and after slightly sloping with a knife the end of a second match introduce it into the opening of the first in such a way as to form an acute angle. Now stand them up on the table and lean a third against them as indicated in the design. Hand a fourth match to anyone present and ask him to lift in the air with its aid the three others all together.

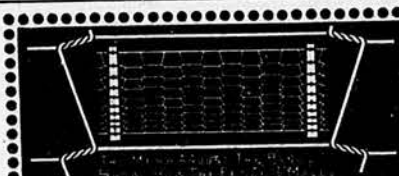
Like all the little games of combination this is very simple—after you know how but I have seen it tire the patience of an eminent architect and even a great civil engineer.

The solution of it is indicated in the illustration:

Just lean the fourth match lightly against the first in order to let the third fall under the one which you hold. Then lower the hand so that the third may pass into the angle formed by the first two. Now lift into the air the match which you hold in your hand and the others will come with it two on one side and one on the other.—Chicago Inter Ocean.

Hunter Attacked by Cranes.

While an Indiana man was out hunting he had a desperate fight with a flock of cranes. He had shot and wounded one crane and attempted to capture it alive. The wounded bird



Keystone Woven Wire Fence

IS THE BEST FOR FARM USE.

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IN LARGE OR SMALL BOTTLES.



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is not only a scientific vegetable preparation and does all that is claimed for it, but it is the only Kidney and Liver medicine used by the best people of four continents. A medicine that bears the stamp of the world's approval, and maintains its position for a fifth of a century, must necessarily possess peculiar merit.

fought furiously, striking him repeatedly with its beak and trying to peck out his eyes. In addition it made such an outcry that the rest of the flock returned to its assistance, and all surrounded the now frightened hunter. He actually had to fight for his life, and it was not until he had killed or disabled 11 of them with his clubbed gun that the rest left him. Then he was completely exhausted, his clothing in fragments, and his face bleeding in a score of places.

Horse Knows Where to Go.

There is a horse in Philadelphia whose business it is to draw a collection wagon over a post office route in the middle of the city, where the boxes are short distances apart. This horse has learned the location of the letter boxes as well as its driver, and as soon as the postman alights at the first box at Broad and Chestnut streets the horse walks off to the second box and patiently waits for his master. When the boxes are further apart, a square or more, the horse knows that and allows himself to be driven from one to the other. He is never known to make a mistake as to the location of a box.

Ayer's Hair Vigor, which has outlived and superseded hundreds of similar preparations, is undoubtedly the most fashionable as well as economical hair-dressing in the market. By its use the poorest head of hair soon becomes luxuriant and beautiful.

SALESMEN to sell Cigars to dealers; \$25 weekly and expenses; experience unnecessary. Reply with 2c. stamp. National Consolidated Co. Chicago.

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GEO. M. HERRICK, President.

KANSAS FARMER.

ESTABLISHED IN 1863.

Published every Thursday 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.

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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.

Electrons 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.

The New York Journal, which claims to be the only New York daily for the Democratic national ticket, offers a rate which enables us to furnish the KANSAS FARMER one year and the New York Sunday Journal three months, both for \$1.25.

The first car-load of peaches shipped from Oklahoma was made up of the Alexander and Damsen varieties and was collected by J. C. White and E. A. McNath and three other members of the Oklahoma County Fruit Growers' Association. The shipment was made on June 23, 1896, to Omaha, Neb., and netted the growers 90 cents per bushel.

Labette county has had a great fruit crop this year, and a vast amount of fruit of all kinds has been shipped out this season. The only drawback to the business of shipping was the general hot wave early in August. Lewis Williams, of Parsons, Kas., recently sold a car lot of Duchess pears. He got fifty-three bushels from eight trees.

It is claimed that the recent disturbance and consequent readjustment of freight rates on grain have added 3 cents per bushel to the value of Kansas grain. What would corn have been worth then but for the readjustment? Another disturbance or two, if attended with further additions to grain prices, would harmonize with Kansas farmers' feelings.

It is stated that with the latest milking machine, reported to be now in practical use in England, a boy or a man can milk sixty cows in half an hour, or ten cows in a little over ten minutes, doing a good job in every respect. It gets all of the milk, is not objected to by the cow, and there is no possible chance for the milk to be other than clean.

Receipts of live stock at the Union stock yards, Chicago, for the month of September, 1896, were: Cattle, 248,244 against 270,795 for the same month last year; calves 10,220, against 10,882 last year; hogs 664,095, against 448,284 last year; sheep 377,058, against 339,242 last year; horses 7,577, against 8,598 last year. Receipts of cattle decreased 22,551, calves decreased 662, hogs increased 215,811, sheep increased 37,816, horses decreased 1,018.

HOW DO YOU MAKE FARMING PAY?

The KANSAS FARMER desires papers on this subject from practical farmers in every county in Kansas, and, in order to secure the best, makes the following offer: For the best paper from each county we will give one year's subscription to the KANSAS FARMER; for the second best, six months' subscription. In this way two persons in each county can get the FARMER free.

The papers are not to be longer than 1,000 words each. It is desired to hear from the successful farmers, but mere brag has no merit and is not desired.

This offer is open for all papers received at this office before Christmas.

THE WORLD'S WHEAT SITUATION.

"The Liverpool Corn Trade News," says the Cincinnati Price Current, "having published statements in detail of the probable requirements of wheat importing countries the current year, putting the total at about 50,000,000 quarters as needed to be moved from surplus countries, follows in its issue of September 22 with a review of the evidence as to sources of supply for meeting such requirements, from which the following are extracts:

"America.—Last season the States exported 16,300,000 quarters in the British cereal year. This season with a crop about 4,000,000 quarters smaller there would be only 12,000,000 quarters to spare; but if prices should be sufficiently attractive their reserves would probably be drawn upon, and as these comprise between 12,000,000 and 13,000,000 quarters, we shall not be straining the point if we allow 4,000,000 to 5,000,000 quarters to be drawn from this source, say a total of new and old wheat of over 16,000,000 quarters, or 130,000,000 bushels. This estimate, we are aware, is far larger than many are looking forward to, but we would point out that already in seven weeks nearly 3,000,000 quarters have been shipped. or at the rate of over 22,000,000 quarters annually, and that the whole of Pacific coast crop is bound to come forward, together with the never-failing flour exports, the equivalent of over 7,000,000 quarters wheat.

"Canada, with a crop about 1,500,000 quarters less than last year, but nearly equal to an average, carried over good reserves, and should be credited with a surplus of rather more than 1,000,000 quarters. Taking the whole of North America together we will reckon on procuring during the British cereal year almost 18,000,000 quarters.

"Russia.—Last year Russia exported 16,000,000 quarters during the British cereal year, according to the St. Petersburg Journal of Industry and Finance, but this total will probably be raised to 16,500,000 quarters when the final figures of the Journal of Finance are published next month, which would compare with former seasons, ending July 31, as follows: 1895-96, 16,500,000 quarters; 1894-95, 18,000,000; 1893-94, 13,500,000. During the past three seasons the exports have averaged 16,000,000 quarters, the crop having averaged during the same three years 52,000,000 quarters, seeming to show that the annual consumption is now in the neighborhood of 36,000,000 quarters, assuming that stocks were the same in July, 1896, as they were in July, 1893. This season, with a crop variously estimated at from 26,000,000 quarters to 43,000,000 quarters, it would appear as if there would be no surplus available for exportation; but the assumption, that stocks last July were as small as they were in July, 1893, is probably not well founded for, notwithstanding that they are so small at the ports, yet they are very generally believed to be liberal at interior points, our Keff correspondent going as far as to call them very large. At present we purpose reckoning on a total Russian crop of 40,000,000 quarters compared with 50,000,000 quarters in 1895, 52,000,000 in 1894, and 58,000,000 quarters in 1893. It will be some months before the Russian government issues its annual estimate, but as announced yesterday, the editor of the Journal of Finance, of St. Petersburg, has published a forecast of his own, viz.: 43,000,000 quarters. It is more difficult than usual to get an idea of what Russia will actually export this season, opinions differing so widely as to the outturn of the recent harvest and the size of the reserves, so small a proportion of these latter being visible. So far this season exports have been at the rate of about 200,000 quarters per week, from which we might infer a total exportation during the season of about 11,000,000 quarters. At present prices we shall look for Russia supplying about 11,000,000 to 12,000,000 quarters.

"Southeastern Europe.—All these territories have been favored with fine crops this season, and as the crops of the previous season were also abundant, we look for a continuance of the very free movement that has characterized the trade of these parts for the past

fifteen months. Last season the seaports of Roumania, Bulgaria, Roumelia and Turkey shipped nearly 8,000,000 quarters, and this season they have begun to export at a great rate, viz., 1,760,000 quarters in seven weeks. We should not be surprised if by the end of the current season these ports have shipped fully 10,000,000 quarters.

"India so far has shipped only some 70,000 quarters in seven weeks, and before the new crop comes in appears able to spare but very little more, say perhaps another 200,000 quarters. From the 1st of April until the end of July the shipments will be from the new Bombay and Bengal crop, and in the last month from the Kurrachee. Under ordinary circumstances during these eighteen weeks, we should look for a shipment of about 1,000,000 quarters, but of course it will all depend upon the outturn and earliness of the new crop; last season only 370,000 quarters were shipped in these eighteen weeks, but in 1893 2,600,000 quarters were shipped in that short period, so there is plenty of latitude. We shall select 1,000,000 quarters as the likely figure.

"Argentina.—This country presents similar difficulties as India to any one trying to make an estimate of the exportable surplus during the remainder of the British cereal year, as a commencement of the harvest will not be made for another seven or eight weeks. So far there is a fair promise of a large yield; perhaps not equal to that of 1893, but yet a bigger outturn, allowing for the increased area, than in any season but that 'banner' year. If the crop gets through the next ten weeks without a serious set-back we would look for a yield of about 10,000,000 quarters, which would compare with former years as follows: 1895, 5,200,000; 1894, 7,500,000; 1893, 11,000,000. With regard to the exportation that can take place in the seven months intervening between the Argentine harvest and the end of the British cereal year, we would refer to the recorded shipments of previous seasons in the period in question, they have been as follows: 1896, 2,100,000 quarters; 1895, 4,400,000; 1894, 5,700,000. For the seven months, 1st January to 31st July, 1897, we will reckon upon 4,000,000 quarters as the likely exports, inclusive of Uruguay.

"Chili.—There is nothing known about this crop yet; we will therefore reckon it at an average outturn and estimate the surplus accordingly, say 300,000 quarters available by the 1st August, 1897.

"Australasia.—This is another dark horse; so far the crop promises well and we therefore reckon it at an average, and the shipments between 1st of December, 1896, and 31st of July, 1897, at an average—say, about 800,000 quarters.

"North Africa.—The crops, where reaped, have turned out poorly, and we do not believe the combined exports of Algeria, Tunis and Egypt will exceed 400,000 quarters. The Cape, we are reckoning, will harvest an average crop next November.

"Austria-Hungary will ship much less than last year, as the crops are smaller, and the bonded export trade has been stopped. In place of over 1,000,000 quarters as in 1895-96, we expect hardly 500,000 quarters will be shipped in the current season.

"Sundry countries, such as Persia, Turkey in Asia, etc., we will allow may ship 500,000 quarters.

"Summarizing the foregoing items, we have the following statement of surpluses of exporting countries, for shipments to be made by 31st July, 1897, in quarters:

	Estimates for 1896-97.	Actual shipment, 1895-96.
United States of America and Canada.....	18,000,000	17,600,000
Russia, Roumania, Bulgaria, Turkey and Servia.....	21,300,000	23,000,000
India.....	1,000,000	1,350,000
Argentina and Uruguay.....	4,000,000	2,400,000
Chili.....	300,000	330,000
Australasia.....	800,000
Austria-Hungary, North Africa, and sundries....	2,100,000	2,660,000
Total, quarters.....	47,500,000	47,400,000

*Minus 700,000 quarters to be exported to France, Spain, etc., in bond.
*Plus an assumed shipment of 700,000 quarters in bond from France, Spain, etc.

"From a summary of the world's crops it will be seen that we reckon

the crop with which we shall deal in the current season as 11,000,000 quarters smaller than that with which we have just finished. To procure a supply of practically the same quantity therefrom would imply a further reduction in the reserves of such countries as America and Russia of 11,000,000 quarters. This, we believe, will be the result of the present season's trading.

"The exportable surplus we reckon (as shown above) as 47,500,000 quarters. Last week we showed that the importing countries might get through the season with supplies about 4,000,000 less than in the previous season, but that even then they would require nearly 50,000,000 quarters. Comparing the two estimates—supplies and requirements of the present season—we have: Likely supplies, 47,500,000 quarters; likely requirements, 49,600,000 quarters."

PROTECTION AGAINST RABBITS.

EDITOR KANSAS FARMER:—Will you please answer, in your paper, how to apply or what to apply to the trunks of young fruit trees to prevent rabbits eating the bark and gnawing the wood?

Augusta, Kas.

JAMES BROWN.

Our correspondent raises a very important and timely question. Several substances have been recommended. Blood, axle grease, old tallow and several others have their advocates. Painting the trunks of the trees has been reported as good. Some orchardists object to anything calculated to fill up the pores of the bark. Some place a layer of split cornstalks around each tree and tie in place with strings. Others use paper. Building paper, especially tarred paper, is very good for this purpose. A tree-protector of wood, cut very thin, has been on the market. It is moistened and then used in much the same way as building paper. The lower ends of these protectors are treated with coal tar, so that they are said to last as long as the trees need protection. There is considerable advantage in the protection against sun-scauld afforded by the various wrappings. Care must be taken that the trees have plenty of room to grow and to cut the strings if the space becomes too closely filled. Still another advantage of the wooden and the tarred paper tree-protectors when left around the trees during the summer, grows out of the fact that they are almost sure protection against borers. The moths, the mothers of the borers, do not like to get down inside these protectors to lay the eggs which hatch into the destructive pests.

Judge Wellhouse traps his rabbits. His trap has been illustrated and described heretofore in the FARMER, but for the benefit of those not yet familiar with it we herewith repeat both illustration and description:

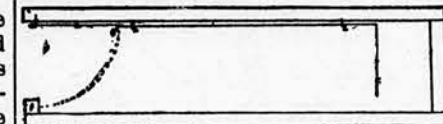


Fig. 1. Longitudinal section of trap.

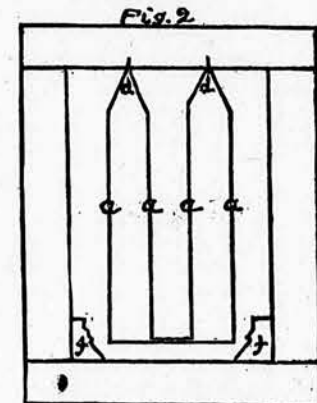


Fig. 2. Front end view of trap. Scale about three times that of the longitudinal section, in order to show details of door.

"This trap consists of a small box twenty-two inches long and six inches wide and eight inches high. This box is made of fence boards, six inches wide and one inch thick. The top and bottom boards lap over the sides, thus leaving a hole inside six inches deep, four inches wide and twenty-one inches long. The door (a) is made of wire bent in shape as shown in figure 2. This door is hung to the top with staples as shown at d. The trigger (b)

is a wire bent as shown in figure 1, and is fastened to the top by two staples at e.

"The trap is operated thus: We put our hand against the door (a) and push it in, and with the forefinger catch the trigger at g and pull it forward under the door, and the trap is set. When the rabbit goes in and gets against the loop of the trigger at c and pushes it back, this loosens the door and it drops down against the shoulder at f and shuts the rabbit in. No bait is needed.

"This trap was invented by Walter Wellhouse, of Fairmount, Kas., but he did not get it patented and it is free to all. Old lumber is best for the traps, but if bright new lumber is used the inside should be stained with some dark coloring matter, as rabbits prefer dark holes."

This trap succeeds admirably for "cotton-tails," but so far no one has been able to successfully trap jack rabbits.

Amos Johnson, a successful orchardist of Barton county, finds greyhounds the best protection against the swift-running jack rabbit. For this purpose he keeps three of the best-bred greyhounds. It has been suggested that Mr. Johnson's love of sport, notwithstanding his advancing years, has something to do with his preference for the greyhound method; but while he evidently enjoys the excitement of the chase, he also has the satisfaction of perfect protection to his orchards.

Among these methods our correspondent should find at least one applicable to his case.

The September quarterly report of Kansas State Board of Agriculture is devoted to the cow. It contains 264 pages, and it is safe to say that no greater amount of practically valuable information could possibly have been crowded into these pages. Every question that the Kansas man desires answered is presented, with replies by the leading practical experts of the country. Every farmer who keeps a cow should have a copy of this report. The edition will be exhausted by the early applicants and we advise those who desire the best and latest on cow culture to write immediately to the Secretary requesting a copy.

"Economic Entomology" is the title of a book of nearly 500 pages, just published by J. B. Lippincott Company, Philadelphia. The descriptions are so plain that one need not be an entomologist to be able to identify almost any insect. The "life histories" are plain and easily understood. In these two respects the book is certainly a success. In the description of agencies for combating insect ravages the standard remedies are, given but with less minuteness of practical detail than could be wished. If this latter branch of the subject were made the subject of another book, giving all the effective remedies approved by experience with such clearness of detail as to enable the farmer and gardener to apply the known and especially the later remedies, an inestimable service would be rendered.

Ouring Kaffir Corn.

EDITOR KANSAS FARMER:—Will Kaffir corn—planted late and not yet ripe—spoil or mold if cut with a binder and bound this time of the year? If cut with a binder and bound in bundles, like wheat, should it be left stand in shocks in the field till fed out, or will it do to place it in stacks or ricks, like wheat or oats, after it has stood for a time in the shock?

Kimball, Kas. THOMAS D. HUBBARD.

This inquiry was referred to Prof. C. C. Georgeson, of the State Agricultural college, who replies as follows:

"Kaffir corn will not mold or spoil if cut with a binder and tied in bundles, as our correspondent proposes. It should be shocked and left in the field until thoroughly dry. When dry it may be stacked in small stacks or ricks. Of course, the field-cured fodder will still contain a large per cent. of moisture, especially in the stalk, and if it is put up in too large stacks this moisture is liable to cause it to heat and spoil, but built in small round stacks with the butt ends out and bundles slanting downwards, so as to shed water, it will keep perfectly. The fodder should not be left in the field after it is dry enough to stack. It loses greatly in its nutritive value by repeated washings by rain."

THE ST. LOUIS FAIR.

The thirty-sixth annual St. Louis fair closed another successful exhibit last week. It was a week of model weather, yet the attendance was much smaller than usual, excepting on Thursday, which was the only big day of the week.

The big prizes offered in the live stock department always bring out a strong exhibit of the leading exhibits of the various State and district fairs. The exhibits of this department were fully up to those of last year, sheep and swine leading the other classes of stock. In beef breeds of cattle the Herefords outnumbered the other breeds. Tom Clark, of Illinois, J. A. Funkhouser and Thos. Sotham, of Missouri, and Mr. Redhead, of Iowa, made the competition very warm. All breeds of dairy and beef cattle were represented.

The department of poultry and pet stock was overflowing with birds of all varieties. Other departments of the fair were equal to those of former years.

One of the great features of the St. Louis fair always is that of agricultural implements, vehicles and windmills of every description. It is one of the most interesting exhibits in this respect made at any fair in the country and usually covers acres of grounds and buildings. The thrasher and harvesting machinery departments were not out to any great extent this year, otherwise the general display was as good as formerly. New machinery is always an attractive feature of the fair and the machines like balers, corn-huskers, grinders and shredders in active operation always attract visitors.

NOTABLE EXHIBITS.

One of the interesting exhibits in the agricultural machinery department was made by the Aspinwall Manufacturing Co., of Jackson, Mich. This company makes a full line of potato machinery, consisting of the Aspinwall potato planter, which for twelve years has been the leading success in that line; the Aspinwall potato cutter; the Aspinwall Paris green sprinkler, with a capacity of fifteen acres per day; the Aspinwall potato sprayer, with a capacity of twenty-five acres daily, also the Aspinwall potato sorter. This company also makes a potato planter provided with a corn planter attachment, also with a fertilizer attachment or disc covers. This exhibit was in charge of C. G. Rowley, Secretary, and C. M. Chaplin, Superintendent, of the Aspinwall Manufacturing Co., who entertained the trade and visitors with the necessary information concerning their splendid display. Every potato-raiser in the West should send for one of their descriptive catalogues.

The St. Albans Foundry Co., of St. Albans, Vt., had a most interesting exhibit of tread power mills of different sizes, ranging from less than one horse to four horsepower. These machines are very durable and adapted for every class of farm work where power is needed. The exhibit that attracted the most attention was their St. Albans fodder shredder, which they had in actual operation, having several tons of corn fodder brought in from the country for the purpose of showing the perfect operation of their shredder, which takes in the fodder as fast as it can be fed and most thoroughly cuts the stalk and leaves into shreds exactly suitable for feeding the entire product, stalk, leaves and corn, or if desired, by a simple change of one roller, the machine will deliver the corn nicely snapped in a different place from the shredded fodder. The machine also has a cleaning attachment which leaves the product entirely clean from dust, etc. Evidently the St. Albans shredder is the most complete stock-feeding machine on the market and the price is sufficiently low to enable any farmer and feeder to own one and its economic features save its cost every season. The FARMER representative met Mr. W. Tracy Smith, President of the St. Albans Foundry Co., who is justly proud of this grand piece of modern machinery, destined to become a valuable and economical adjunct to the prosperity of Western farmers and promises us later an illustration of the shredder for the benefit of Kingman & Moore, of Kansas City, the Western distributing house.

N. H. Gentry, of Sedalia, Mo., was on hand with his famous Berkshires, and in the hot competition succeeded in wresting the following leading premiums: First on aged boar, second on yearling boar, second and third on boar under 1 year, second and third on yearling sow, first, second and third on sow under 1 year, sweepstakes on boar, sweepstakes on sow, first on aged herd, first on aged herd bred by exhibitor, first on young herd, first on young herd

bred by exhibitor, first on boar and his get. In all a big winning for a breeder.

Wallace Estill, of Estill, Mo., had a magnificent exhibit of Aberdeen-Angus cattle, and out of the \$500 offered in premiums for this class of beef cattle he won \$195 in class and \$210 in herd and sweepstakes prizes, also the gold medal for sweepstakes herd over all beef breeds. Mr. Estill will sell no stock at private sale but reserves his stock for public sale in the spring, which will be advertised in the FARMER.

B. F. Dorsey & Sons, of Perry, Ill., made a grand exhibit of twenty Poland-Chinas, and under the strongest competition landed the leading prizes, as follows: First on aged sow, first on boar 6 months, second on boar under 1 year, first, second and third on aged sow, first, second and third on yearling sow, first on sow under 1 year, sweepstakes boar, sweepstakes sow, first on aged herd and first on boar and his get.

Kansas is always a winner and when her breeders go forth in competition with the world they usually land the "most and best" of the prizes offered. Kansas was represented at the St. Louis fair by C. F. Stone, of Peabody, with his celebrated herd of Holstein-Friesian cattle and won \$100 in class and \$110 in herd and sweepstakes—\$210 in all—by far the largest winning of any breeder with dairy cattle. He won first on bull 2 years, bull 6 months, aged cow, heifer 2 years, yearling heifer; second on yearling bull, heifer 2 years and heifer calf; also second herd prizes, first for four animals the get of one sire, first produce of one cow and sweepstakes bull under 2 years.

DAIRYING.

Its Essential Conditions and Conduct, and Their Adaptability to Kansas.

From the Secretary's introductory to the September Quarterly Report of the State Board of Agriculture:

"The object of publishing the information presented in this report is not the inauguration of any creamery or cheese factory boom.

"It is not to lead any one, even for a moment, into the belief that dairying, in any line, presents an easy or short road to wealth, however high the prices that may prevail at a given time.

"On the other hand, it is insisted that most of the work connected with dairying is hard and disagreeable; that it must be performed every day, Sundays as well as week days, and can never be put off until to-morrow; that it requires the strength of a man with the patience of a woman, along with skill, cleanliness and brains.

"Kansas has more than half a million milch cows and could as readily maintain ten times that number, having an average producing capacity 100 per cent. greater for each. Undoubtedly the most of those furnishing milk for factories give a much smaller return than they should, and as a rule only a fraction of those used in private dairying are more than tolerable.

"Upon the milk of such, limited in quantity and quality, farmers' wives, with insufficient, unsuitable equipment, and unfavorable surroundings, expend wearying and wearing labor to make butter that, from being in small, uneven lots and most improperly and unfortunately cared for, is a drug in nearly every market, often handled only under protest, generally graded low, and eventually sold for shortening or to grumbling customers at prices which mean no adequate compensation to any one.

"Such a condition of affairs suggests room for great and much needed improvement. If accomplished, it will mean millions of dollars added to the State's assets through the production of high-class staples, for which our capacity is practically immeasurable. If the counsel and suggestions here brought together from the highest obtainable sources lead to better results through improved methods, and are helpful in permanently advancing the standard of the Kansas cow and cow owner, until they produce two pounds of delicious, best-priced cash butter or cheese in lieu of the one pound of 6- or 8-cent grease offensively and perennially masquerading in rancid jars, discarded underwear and pine shoe-boxes as 'fresh country butter,' a good purpose will have been served, as well as a burden lifted from many housewives, farm husbands, willing and unwilling middlemen, and a multitude of eaters not content to live by bread alone.

"The many well-to-do communities

in this and other lands where dairying is a leading industry indisputably prove that, wisely conducted, it has yielded a higher prosperity than general farming. It not only gives better and more frequent returns in cash, but it enables the farmer to maintain and even to increase the fertility of his land. If it be conceded as a fact that dairying under proper conditions is remunerative, the next question is, 'Do such conditions prevail in Kansas?' To this it may be safely answered, that in most essentials there is no State better adapted to the business. Our soils are productive; we can raise unlimited supplies of feed at incomparably low cost; our winters are shorter and milder than in Wisconsin, Iowa and Minnesota, where they have made such a conspicuous success in dairying; our cattle will require less expensive shelter, they can be at pasture longer, and the cost of labor must therefore be proportionately less. The corn, Kaffir corn and other sorghums, alfalfa, clover and grasses we produce so abundantly, with the brans from our wheat, are in a large measure the ideal cheap raw materials for manufacturing on our farms, by means of the cow, commodities that afford a ready money income every month."

Some of the Sights.

Apropos of the coming of an early Kansas boy to this State with an exhibition of his own and peculiar to his special form of dash and energy, we reproduce from the KANSAS FARMER of September 27, 1893, an account of "Buffalo Bill" and his "Wild West show," written by Rev. J. B. McAfee, of Topeka, in giving an account of some of the wonders he saw at the World's Fair:

"Caesar or some other fellow once wrote, 'I came, I saw, I conquered.' Well, I came, I saw, and continued seeing until my desire to see was fully conquered. Among the many wonderful attractions there is none more so than the 'Wild West show.' No one can afford to miss it. The horsemanship and marksmanship cannot be surpassed, and the whole performance, which consists of eighteen parts, is superlatively grand. Notwithstanding all that has been said and written about it, it may be truthfully said of it, as the Queen of Sheba said of King Solomon's temple and its grandeur, etc., 'the half has not been told.' Pen and tongue are inadequate to describe it. It must be seen to be fully appreciated. I knew the originator, owner and manager, Hon. William F. Cody, thirty-eight years ago, in Leavenworth, when he was a boy only 10 years old. The next year his father died from injuries received in the border warfare, when the boy started out to 'paddle his own canoe,' and with the laudable ambition not only of caring for himself but to assist in caring for mother and the younger members of the family. He was employed by Russell, Majors & Waddell, the largest government freighters on the plains and owners of what was known as 'the pony express,' and mounted on a small mule, he went forth for the discharge of whatever duty might be assigned him, and his determination, energy and perseverance soon commanded the confidence and esteem of his employers and associates. His contact with Indians on the plains acquainted him with their ways and habits to such an extent that he was employed at the close of the rebellion as a government scout with Sherman, Sheridan, Custer and other officers in their Indian warfares, and was equal to every emergency. He is now 48 years old, of commanding personal appearance, a fine specimen of physical manhood, a kind, courteous and affable gentleman, and as seen mounted on his fine steed in his 'Wild West show,' looks every inch a soldier. He holds a Brigadier General's commission in the Nebraska National Guards, and during the Sioux Indian war in 1891, at Pine Ridge Agency, his services were called into requisition. There is no man in our country to-day better acquainted with Indian character and Indian mode of warfare. He is well and favorably known, not only by most of the leading men of our own country, but also by the leading men and crowned heads of Europe, from whom he received the highest honors and most friendly recognition."

Horticulture.

OBSERVATIONS ON THE CARE OF FRUIT TREES.

By Prof. L. H. Bailey, in Bulletin 102, Cornell University Experiment Station.
(Continued from last week.)

It may help the farmer if I enumerate the chief causes which seem to us to be responsible for most of the failures of orchards. These suggestions are meant to apply with particular force to the apple, although they are true in varying degrees of all other fruits.

The farmer wants to get his fruit without earning it. The farmer's frame of mind is likely to be something like this: "How can I secure that crop with the least expenditure of effort?" A more rational attitude is one which asks, "How much labor can I put upon that crop with profit?" In orchard-growing, particularly if the orchard is of apples, there is still much of the old feeling that trees can wait until all other crops of the farm are served. As the orchard is conceived in the mind of the planter, so will the harvest most likely be. A plantation poorly planned, or not planned at all, carries its faults throughout its life. For this reason I think it impossible to make many of the orchards of the State profitable, even if now given the best of care.

There are frequent mistakes in the choice of land and sites for an orchard. There is, in general, accurate practice in western New York in the selection of the proper soil for trees—clay for pears, clay loams for plums and quinces, sands for peaches, and loose loams for apples—but there seems to be less attention given to the choice of the aspect and the "lay of the land." A person who has nearly one hundred acres of unprofitable apple orchard asked me to inspect his place for the purpose of discovering the cause of the unproductiveness of the trees. It required but a glance at the plantation to see that the land was wholly unsuited to apples. It was flat land, with a tenacious and impervious subsoil lying only a foot or two below the surface. In order to carry off the water the owner had left the dead-furrows open and had plowed a series of open ditches about the borders of the plantation. He supposed that if he carried off the surface water all the requirements would be satisfied; but the hard subsoil remained intact, and the roots of the trees lay near the surface, so that when I visited the place in mid-summer, the trees were suffering from drought. The trees had no doubt soon robbed the surface soil of most of its richness and, unable to penetrate the lower levels freely, they were now stunted and unthrifty. The owner had various expedients in mind for the renovation of the orchard, but the very first requisite—a thorough system of tile drains—had not occurred to him. All other treatment will probably be well-nigh useless until these drains are supplied; and even then I doubt if the orchard can ever be made profitable, for such sites are never good orchard lands and the habit of the trees is now probably too thoroughly established to be easily overcome.

This instance is a type of very many orchards in western New York. There are other apple and pear and plum orchards which stand upon dry and leachy hillsides. Good drainage, thorough tillage and fertilizing are capable of correcting some of these fundamental difficulties of site and soil, but these treatments to be most effective, must be begun early in the life of the orchard.

Neglect of tillage is the commonest fault of the orchards of western New York. Apples, and some other fruits, yield so well under neglect that it has come to be a common notion that they do not need tillage. There are many orchards in sod which are profitable, and these have been held to be proof that orchards thrive best in sod. But by far the greater number of orchards in grass, the country over, are unprofitable, and it seems to be a safer generalization to say that these are proofs that fruit trees do not give profitable return in sod. Every orchard is profoundly influenced by the particular

soil and other conditions in which it grows, and it is generally impossible to ascribe its behavior directly either to sodiness or sodlessness. But if one contrasts for a moment the known effects of tillage and neglect upon the soil, he will see at once that good, judicious cultivation must give the better results in orchards; and there is ample proof of it in all annual crops, and even in most fruits, particularly in grapes, berries, peaches and plums. The latter plants are always thought of as cultivable crops, yet they do not differ from apple trees in any fundamental method of living.

Let us recall some of the effects of tillage upon the soil: It sets free plant food; promotes nitrification; supplies air to the soil and roots; makes all the soil available, by fining it; breaks up the hard-pan; makes a reservoir for water; warms and dries the soil; saves the rain by taking it into the soil; prevents evaporation, or conserves moisture; sends the roots of trees downwards, and makes the moisture and fertility of the subsoil available. All these benefits must be as useful to the apple tree as they are to strawberries or currants. Yet, tillage may be a positive damage to the orchard, if injudiciously done. Just what is judicious tillage must be determined for every farm and every season; in fact, just here is the point where the greatest skill is required in farming. A man must know the underlying principles of the operation before he can practice it successfully. Yet two or three points of advice may be noted in passing:

Tillage should be begun early in the season, in orchards. Trees complete most of their growth by the first of July. Early tillage saves the moisture which has accumulated during the winter and the spring; it is capable of putting the soil in fine mechanical condition, and this condition is more important than fertility; it warms up the soil and sets the plant quickly to work; it turns under the herbage when that herbage is soft and moist and when there is moisture in the soil, so that the herbage soon breaks down and decays. All catch crops on the orchard should be plowed under just as soon as the ground is dry enough in the spring, for these crops soon pump the water from the soil and cause it to bake and cement together, and the longer they remain the more difficult it is to cause them to rot when turned under. Hard and woody herbage plowed under late in the season, may remain as a foreign body in the soil all summer, breaking the connection between the upper and the lower soil and thereby preventing the upward movement of the water and causing the top soil to completely dry out. The chief value of crimson clover, rye, or other catch crop in the orchard, lies in its fall growth and its protection of the soil in winter, not in its growth in spring.

(To be continued.)

Seedling Peaches.

EDITOR KANSAS FARMER:—The September meeting of the Missouri Valley Horticultural Society met at Troost Park, Kansas City. The usual routine of papers and reports of special committees was had. The number of membership was not so large as usual, but the feature of greatest interest was the fine show of seedling peaches shown by Maj. Frank Holsinger, of which there were forty-six seedlings, all of Salway blood.

G. L. Holsinger, son of the Major, who has recently resigned from the United States navy to enter the horticultural work, represented the varieties, saying that "there were in all just forty-six trees, all of them seedlings and each being represented by at least a specimen of fruit. That all were of the Salway type, but that the trouble was in the fact that there were too many clings to be profitable, as clings were hard to sell. Of the forty-six, nine were clingstone peaches. All the peaches were of fine size and color, and would indicate that it is safe to plant the seed of our better peaches and thereby improve our list of varieties. When the opportunity to secure budded varieties is impracticable, a splendid line of peaches is assured." Of the forty-six varieties all are

Plant Trees and Orchards in 1896



The old reliable Hart Pioneer Nurseries, of Fort Scott, Kas., have large supplies of choice stock for sale at special prices. 600 acres in nursery, 240 acres in orchard. Extensive growers for the wholesale trade. Write and obtain prices before placing your orders elsewhere. No transfer or exposure of stock. We take up, pack and ship from the same grounds. Send for our

Illustrated Planter's Catalogue and Price List.

We solicit your correspondence and invite inspection of our stock.

Reliable Salesmen Wanted

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HART PIONEER NURSERIES,

FORT SCOTT, KANSAS.

Early Ohio Grape, Six Weeks Earlier Than Concord.

CAMPBELL'S EARLY GRAPE

Best and most valuable. Highest commendation from highest authorities. Hardy, healthy, vigorous, very productive. Early or late. Largest clusters, finest quality, not foxy. Seeds need not be swallowed. Sold by many reputable nurserymen. None genuine without our seals. We guarantee safe arrival by mail. Largest stock of grape vines in the world. Small fruits. Introducer of unrivalled Red Jacket Gooseberry and Fay Currant. Catalogue free. GEO. S. JOSSELYN, Fredonia, New York.

worthy of notice, yet possibly only one is worthy of propagation. True, all were very large and highly colored and prolific in bearing, qualities possessed by the parent Salway, so why increase the list already long of valuable peaches? The exception is in favor of one, that ripens fully two weeks earlier than Salway, and comes in just after Elberta, filling a gap for a large, high-colored peach, and for this cause valuable. As the other seedlings are merely duplicates of the parent, it is superfluous to lengthen the lists where already filled.

The forty-six trees were remunerative, having returned to their owners fully \$5 per tree. Had the Salway been planted instead it would doubtless have done fully as well, so that most gained by this experiment is an object lesson, that while the peach is not absolutely certain to reproduce itself, yet the chances are in its favor and worthy of trial, where the budded sorts are not obtainable. This may apply to the far West or in new sections or when people cannot afford to purchase budded stock. By the planting of seed from the best sorts all may enjoy the luscious peach, in seasons when we are favored with peaches. However, the prudent grower will not fail to secure a list of budded sorts and thereby secure a succession of the best varieties all through the season, which by a reliance upon seedlings is impracticable. S.

Western Garden Insects.

Gardening in the western part of this State is sometimes subject to other drawbacks than those connected with an uncertain water supply. A recent examination in Logan county of some irrigated gardens recalled vividly the observations of years past upon the danger of overwhelming insect attack upon isolated gardens, such as these must be in a sparsely-settled area.

The native herbage is diversified more widely than would be believed at first sight. The various plants support insects of many sorts. When, through drought, or through the inordinate multiplication of the plant-feeders, the natural food supply falls, the hungry pests fall upon the cherished garden with a result easily seen. The superior quality of the garden herbage also

seems to be an attraction to some species, which leave their native food, even in favorable seasons, to attack plants under culture. In addition to the native foes the gardener must contend with some that seem to be immigrants from the Eastern cultivated regions, but these are few and not comparable in importance with those that come from the neighboring vegetation, and which must be met as soon as growth starts in the new garden.

Probably the most troublesome of the native pests are the several species of blister beetles, and the numerous species of grasshoppers. But of very general distribution and of much importance are the various insects, whether native or introduced, that attack garden plants of the squash family. The blister beetles are apparently omnivorous. Feeding at large upon the native chenopods, amaranths, and solanaceae, they are hardly noticed, except by the collector, until they find the native food supply insufficient. Then they travel to the gardens, where they mass first upon the potatoes and beets, but after the consumption of these plants other vegetables go in turn, with scarcely an exception. They frequently enter the garden in armies, and much destruction is often accomplished before the owner is fairly aware of their presence. They are as active as they are voracious, flying and running equally well, and though when beaten off the plants they may run away for a while, they return with equal haste, and nothing short of their early destruction is a profitable measure.

There is perhaps no more immediately successful method of destroying them than by beating them into a broad pan or pan in which there is enough kerosene or gasoline to cover the insects. The use of Paris green sprayed or dusted upon the plants is finally successful, but meantime the insects have done the plants much damage.

Of the grasshoppers, it may be said that their attacks are not limited to the fodder plants. Though less general feeders than the blister beetles, their preferences are sufficiently broad to make them troublesome garden pests. They do not so generally appear in armies, and their attacks are not so commonly immediately destructive, but their persistence at last brings th

same result. These insects usually come into the garden from the immediate borders, and are less likely to be troublesome when the cultivated area is separated by broad belts of plowed land from the surrounding prairie. If the garden be open to poultry, the grasshoppers are not usually destructive.

The various garden cucurbits suffer greatly from the attacks of the same insects that are the foes of these plants in more eastern localities. The squash bug is nowhere more destructive than in these Western gardens, and its great abundance in certain places was notable. There seem to be no checks upon its increase, and where seen, it had entirely prevented the maturity of the fruits upon the vines.

It seems that the baiting and trapping of the adults in early spring might be profitably attempted here. As the gardens are more or less isolated, the presumption is strong that a little effort applied to the destruction of the first bugs of the season—those that have passed the winter as adults in the vicinity—would largely bring immunity from the pest during the early growth of the plant, and the later flyers, from neighboring farms, might be met with less labor.

Evidence is abundant that the Western gardener has not sufficiently adapted to his use the suggestions from the experience of others in applied entomology. But even when he has so done, he will meet with problems peculiar to his locality, which must be met largely by his own energy and ingenuity.—Prof. E. A. Popenoe, in *Industrialist*

In the Dairy.

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

Creamery Experience in Kansas.

Being a firm believer in the idea that the dairy business is the open door by which mortgage-burdened farmers may escape from debt, I recently investigated the Helzer creamery, of Barton county. This association was formed in the fall of 1889, by farmers living in the vicinity of Helzer. Like many other worthy enterprises, it suffered a period of depression, due to a lack of experience in those having control. Within a year the company was in debt for almost all the property was worth, and stock could be bought for 20 to 25 cents on the dollar. At present the stock is held at a premium. The success of the enterprise is due largely to the efforts of Mr. Schwer, the present Secretary and butter-maker of the company, who took charge when everybody was discouraged. His careful management has enabled the company to surmount its difficulties. Mr. Schwer says: "Hardly a day passes that I do not learn something new about my business. The running of a creamery calls for careful management and close figuring, but if properly conducted it is sure to yield good returns on the investment, and the sooner the people of the Western States find it out, the better off they will be financially. There is no reason why this (Kansas) should not be the chief butter-producing State in the Union. We can grow feed in abundance, and more cheaply than in the East. While it takes more land here than in the East to produce the same amount of feed, the quantity does not make much difference, as land is plenty. In fact, many farmers have more than they actually need."

Through the courtesy of the manager I was enabled to follow the process of butter-making from beginning to end. From the weigher the milk runs into a large tank, out of which it is pumped into an elevated tank. From this elevated tank it runs into a separator, which skims it at the rate of 2,000 pounds per hour. From the separator the cream runs over the cooler into a tank, which holds 500 gallons. Then it goes into the churn. When the churning is finished the butter comes out a mass of golden grains, and is worked and salted upon a butter-worker. It is then packed in tubs, or stamped in one-pound rolls, ready for market. The manager, with his two helpers, has

turned out as much as 1,170 pounds of butter in a day. The average monthly output is over 29,000 pounds. Let the farmer who scoffs at the dairy business try to imagine what nearly fifteen tons of butter means. Concerning the profit of the business, the manager stated that he had paid one farmer as high as \$115 per month for milk. Some who had been too poor to buy cows were making most of their living from two or three cows, purchased from money advanced by the creamery.

In view of these facts, why should the farmer in western Kansas, or anywhere else, depend entirely upon the grain crop? The season could hardly be so unfavorable that enough forage could not be raised to winter several cows. Intelligent farmers here maintain that this section can make as good butter as any of the older dairy sections of the Middle or Eastern States. They also claim that they can produce it at a price that will enable them to sell it, in any home or foreign market, in competition with the old creamery centers. It is perhaps just as well for other and older dairy sections to understand the competition that they will have to meet from Kansas in future.—C. R. Heath, in *Orange Judd Farmer*.

Dairy Notes.

Churning is the work of separation and needs to be done at an even and uniform temperature.

Smoking an old pipe where there is milk or butter is first-rate evidence that the smoker ought not to be in the dairy business.

We all know that milking properly is very important. If the boys' milk, take the trouble to impress that fact upon their minds.

If more attention was given to study of the small "ifs" and "ands" of everyday life, and learn to turn into account everything that comes in the way, the less we would hear of the oft-repeated wail of "dairying don't pay."

There is nearly always a demand for cows in the city. A good family cow that can be recommended often sells for a good round price. It pays to raise cows—large, rich and persistent milkers—for the city market.

Professor Long, an English dairy authority, thinks the price of butter will not be lower than at present time. He advises farmers to cut down their food bills and produce those leguminous foods which are of the greatest value to the milking cow and to farm stock in general.

A Western idea for keeping the watering trough cool and clean is to suspend a board cover about four inches above it, hanging the same by ropes from above. The stock will soon learn to push it to one side, and it will keep the water cool and in good condition, it is said. We have never seen the plan in operation.

There has been a marked improvement in the general quality of the butter made in the Northwest and West of recent years, though not quite equal to the increased quantity. This improvement is due almost solely to the missionary work done at farmers' institutes and dairy conventions—object lessons enforced by precept.

Oleomargarine is fearfully and wonderfully made. In England it is called margarine, and is described as made of all sorts of fats—"fat of beasts that have died of disease, fat of oxen, of pigs, of dogs, of horses, of sheep, of rats." It is true the fats are cleaned and colored and made to look like the best creamery butter, but they are none the less nasty and impure inside.

The average dairyman can easily waste more than one-fourth of the feed given to the cows by feeding it in such condition and in such proportion of essential elements that the cow cannot fully utilize it. It also results in a waste of the vital energies and productive power of the cow, spending unnecessary energy in chewing and digestion.

When mating animals for breeding, determine whether the best points of both, when added together, would make the kind of offspring you are looking for. It is unlikely that all of the offspring would inherit all of the best qualities of both parents, but some of them probably will if the strain is well established. If the parents are related the inheritance is more certain.

TWO KINDS OF HOPE.

THE FALSE AND THE TRUE.

How Sick People Delude Themselves With False Hope, When Real Hope is Close at Hand.

People almost never know when they have consumption until it fairly gets the best of them. They may be losing flesh and strength and energy with every passing day, drifting helplessly on the great ocean of disease, yet all the while buoyed up by a false hope, that they will soon be all right again. Now hope is a good thing when it is founded on sense and reason; but too often a consumptive's hope is like the optical illusion of a mirage, or the vision of a distorted fancy, which appears to a man adrift on the ocean, famished and crazed. His imagination conjures up a vain picture of rescue, while at the same time he fails to perceive the genuine rescue which is close at hand.



For there is a real, genuine hope for consumptives; a hope founded on fact and reason; a hope as staunch and substantial and dependable as the solid deck of a great, seaworthy steamship is to the wretched castaway on the open ocean.

Consumption is a curable disease. Not only curable in theory, but actually cured in every-day practice. There is no longer any question of this. It has been proven beyond the shadow of a doubt. Genuine tubercular pulmonary consumption is completely and permanently cured.

There is nothing strange or incredible or miraculous about this except that it is one of the miracles of enlightened medical science. It is the natural and reasonable result of a marvelous medical combination discovered by Dr. R. V. Pierce, of Buffalo, N. Y.

The peculiar power of Dr. Pierce's Golden Medical Discovery is in its extraordinary effect on the blood-making glands. It gives these organs power to produce rich, red, healthy blood. The whole root and foundation-cause of consumption is impoverished and polluted blood. No hereditary taint would ever develop except for a peculiar morbid condition of the nutritive functions which fills the circulation with poisonous elements that attack the lungs simply because that happens to be the weakest point. Dr. Pierce's Golden Medical Discovery strikes directly at this foundation-cause by creating a fresh supply of the life-giving red corpuscles, which vitalize the circulation, drive out impurities, and form new and healthy lung tissue. It stops the wasting process in every part of the body, and builds up sound, healthy flesh and muscular strength. Accord-

ing to actual statistics this remarkable "Discovery" cures 98 per cent. of all lung, throat and bronchial troubles, wherever it is fairly tried.

A large percentage of the cures wrought by this wonderful "Discovery" were cases which had been pronounced hopeless by the attendant physicians, and where all the usual remedies such as cod liver oil emulsions, compound hypo-phosphites and various others had been tried in vain.

No matter how much fat-food is taken into the stomach, if the nutritive functions cannot assimilate it, it is absolutely useless. The "Golden Medical Discovery" contains no fat; but it creates healthy flesh because it gives the digestive and assimilative organs power to take up and appropriate the nourishing elements out of every particle of food and transform them into good blood and healthy tissue. This wonderful action upon the stomach and liver renders the "Golden Medical Discovery" the most perfect remedy ever discovered for bilious and digestive difficulties.

Dr. Pierce has been for thirty years chief consulting physician to the Invalids' Hotel and Surgical Institute, of Buffalo, N. Y. His great thousand-page illustrated book, "The People's Common Sense Medical Adviser," is the most interesting and valuable medical work ever published in one volume. It is a family doctor and a library of valuable information both in one. For a limited time a paper-bound copy will be sent absolutely free on receipt of twenty-one 1-cent stamps to pay the cost of mailing only. Address, World's Dispensary Medical Association, Buffalo, N. Y. If a handsome, cloth-bound copy is preferred, send 10 cents extra (thirty-one stamps in all), to pay the extra expense.

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.

The Uintah and Uncompahgre reservations are reached by the only direct route, the Union Pacific system, via Echo and Park City. E. L. LOMAX, G. P. & T. A., U. P. system, Omaha, Neb.

Tours in the Rocky Mountains.

The "Scenic Line of the World," the Denver & Rio Grande railroad, offers to tourists in Colorado, Utah and New Mexico the choicest resorts, and to the trans-continental traveler the grandest scenery. The direct line to Cripple Creek, the greatest gold camp on earth. Double daily train service with through Pullman sleepers and tourists' cars between Denver and San Francisco and Los Angeles.

Write S. K. Hooper, G. P. & T. A., Denver, Col., for illustrated descriptive pamphlets.

Meals on the "Order" Plan

are now served in the dining cars run by the Great Rock Island Route between Kansas City and Chicago. This change has been made to suit the convenience of the traveling public, and with the belief that such an arrangement will better please our patrons.

All meals will be served a la carte, and at reasonable prices.

While the system of serving meals has been changed, the traveler may still rely upon the excellence of cuisine and perfection of service that have earned for the Rock Island the reputation of maintaining the best dining car service in the world.

JOHN SEBASTIAN, G. P. & T. A., Chicago, Ill.

KANSAS HOME NURSERY now offers choice berries and orchard fruits of all kinds in their season. Fresh shipments daily by express. Prices to applicants. A. H. GRISS, Box 3, Lawrence, Kas.

2,000,000 Strawberry Plants and plenty of all other kinds of small fruits. The William Belt, Brandywine, Paris King, Tennessee, Isabel, B'sell, Splendid, all new strawberries. Egyptian, Bishop, Brandywine, Miller and Columbian, all new raspberries. B. F. SMITH, Box 6, Lawrence, Kas.

Carnahan's Tree Wash and Insect Destroyer

Destroys the bore worm and apple root louse, protects the plum from the sting of the curculio and the fruit trees from rabbits. It fertilizes all fruit trees and vines, greatly increasing the quality and quantity of the fruit. Agents wanted everywhere to sell the manufactured article. Address all orders to John Wiswell, Sole Mfr., Columbus, Kas., and Cleveland, Ohio.

Rose Registered Jersey Cattle and Poland-China Swine

are unrivaled. **JERSEYS** are rich in the blood of Coomassie and Stoke Pogis. Service bull, Calvin S. Price 37820—grandson of Pedro and Marjoram 2d—won first premium New Jersey State fair, 1894, when a calf. Herd boars fashionably bred and high-class individuals. Head herd boar Rosewood Medium 16453 by Woodburn Medium, he by Happy Medium; dam Fantasy by One Price. Assisted by Tecumseh the Great by Chief Tecumseh 2d; dam Moss Wilkes by One Price. Second assistant Domino 16734 by What's Wanted Jr.; dam Bonnie Z. by Gold Coin, he by Short Stop. Domino won first, pig under 6 months. **POLEND-CHINA** are high scorers. We have the best equipped dairy farm and most complete breeding establishment in northern Kansas. Farm in Republic county, near Nebraska State line. Take U. P. or Rock Island railroad to Belleville, or write: **JOHN F. TOLFORD, Manager, Chester, Neb.**

Gossip About Stock.

Col. S. A. Sawyer presides at the block at Mr. Radford's, of El Dorado, to-day.

Kirkpatrick & Son, of Connor, Kas., report a busy time now shipping pigs and clearing up after their recent sale. They are also selling Shropshire rams almost every day, a sure indication that the sheep industry is by no means dead in Kansas.

M. C. Vansell, proprietor of Ashland stock farm, at Muscotah, Kas., offers for the next thirty days special inducements to purchasers of his surplus stock—all thoroughbred and in best of condition. He has some excellent Poland-China boars and B. P. Rock cockerels for sale. Notice his advertisement among breeders' cards and write him for prices.

The Grand Avenue Horse and Mule Market is a new market, located at Twenty-third and Grand Ave., Kansas City, Mo. The Sparks Bros. have removed their business from the stock yards and built new and commodious stables at the new location. The same is true of Cottingham Bros. Notice their advertisement on page 1, this week, and watch for further announcements.

November 10, 1896, at Ottawa, Kas., is the date for the public sale of forty Poland-China swine from the Franklin County herd, owned by J. N. Kirkpatrick, Ottawa. This is a grand opportunity to get some good pigs sired by J. N.'s Victor, and by Telegram, sire Wanamaker, also a number of pigs sired by Tecumseh Short Stop, bred by B. F. Dorsey & Sons, Perry, Ill. Send for a catalogue now and don't miss the sale.

The Executive committee of the Kansas Swine Breeders' Association, having in charge the combination breeders' sale, have had a meeting and appointed the following members as a special committee on pedigrees and compiling catalogue: Col. S. A. Sawyer, Manhattan, Geo. W. Berry, Berryton, and H. A. Heath. It was decided that the expense of the sale should be borne by those contributing, *pro rata* of the total expense. November 15, 1896, is the last date for entries for the sale. Stock will be catalogued in order of receipt of entries by the committee. Col. Sawyer will be the auctioneer.

D. Trott, of Abilene, Kas., proprietor of Ash Grove herd of Poland-Chinas and Duroc-Jersey swine, is feeling in fine humor over numerous sales recently made. One of his customers from Minneapolis, Kas., wrote him under date of September 11, 1896: "I received the pigs last Saturday, as you promised, all right. Saturday is our market day at Minneapolis. A great many of the farmers saw me hauling the pigs through town from the express office and the general expression among them was: 'Oh, such nice pigs! The best we ever saw in the county.' Wishing you success in your business of raising fine full-blood pigs, I remain, very truly yours, George McConkey." Mr. Trott has a large number of just as good pigs still in his pens. Write him for catalogue.

Great Rock Island Route Playing Cards.

Send 12 cents in stamps to John Sebastian, General Passenger Agent C. & R. I. & P. railway, Chicago, for the slickest pack of playing cards you ever handled, and on receipt of such remittance for one or more packs they will be sent you postpaid.

Orders containing 60 cents in stamps or postal note for same amount will secure five packs by express, charges paid.

No Room for Doubt.

When the facts are before you, you must be convinced.

The facts are that the UNION PACIFIC is leading all competitors, is the acknowledged dining car route, and great through car line of the West.

The line via Denver and Kansas City to Chicago in connection with the Chicago & Alton railroad, with its excellent equipment of Free Reclining Chair Cars, Pullman Palace Sleepers and Pullman Dining Cars, demands the attention of every traveler to the East. Ask your nearest agent for tickets via this route.

E. L. LOMAX,
Gen. Pass. and Ticket Agent.

To Colorado, Montana, Hot Springs, Puget Sound and Pacific Coast via Burlington Route.

Take the shortest and most desirable line to the far West; complete trains from the Missouri river. Daily train leaves Kansas City at 10:40 a. m., arrives Billings, Montana, 1,050 miles distant, 6:45 next evening; free chair cars Kansas City to Billings; sleepers Kansas City to Lincoln; through sleepers Lincoln to Billings. Connects with fast train beyond to Montana and Puget Sound. Ten to twenty-five hours shorter than other lines from Kansas City.

Through sleepers and chair cars Missouri river to Denver; Rio Grande scenic line beyond for Colorado, Utah and California. Ask agent for tickets over the established through lines of the Burlington Route.

L. W. WAKELEY, Gen. Pass. Agt.,
St. Louis, Mo.

Publishers' Paragraphs.

Remember that you can get the KANSAS FARMER and the Kansas City Daily Star, both for one year, for \$4, or the KANSAS FARMER and the Kansas City Weekly Star, both for one year, for \$1.20.

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 \$1.65. Send to this office amounts above named.

"Dairying for Profit, or the Poor Man's Cow," is practical, was written by a woman who knows what she is talking about, and is cheap—only 10 cents for a 25-cent book, to subscribers for the KANSAS FARMER. Send to this office.

Special attention is called to the corn crib advertised this week by the Rock Island Implement Company, of Kansas City, Mo. This crib is all right in every particular and the firm advertising it one of the very best at Kansas City.

A Cheap Portable Corn Crib.

That there is an enormous crop of corn on hand this year, both in the field and left over from last year's crop, every farmer knows, but what to do with it is another question, as the present price does not justify selling it. Many farmers have their cribs full and at present prices do not see how they could afford to build new permanent cribs, and yet to dump it on a pile on the ground is a sinful waste.



Some five years ago, W. J. Adam, of Joliet, Ill., brought out a Portable Corn Crib, which met the conditions above mentioned, a cheap portable crib. He has from year to year improved this crib and this year has added a No. 2 Crib, which, while not as good as his No. 1 Crib, is cheaper and will answer the purpose of very many farmers and feeders. His cribs received a medal at the Chicago World's Fair, in 1893, and last year were highly endorsed by the Kansas State Board of Agriculture, as being a practical solution of the corn crib question.

It will pay our readers to investigate these cribs, for when corn can be cribbed for from 1 to 2 cents per bushel, it is a crime to waste it, either, by dumping it on the ground or rushing it into market at the present depressed prices. If your dealer does not have these cribs, Mr. Adam will be glad to give you any information on the subject. See his advertisement on this page.

Churning Done in Two Minutes.

I have tried the Lightning churn you recently described in your paper, and it is certainly a wonder. I can churn in less than two minutes, and the butter is elegant, and you get considerable more butter than when you use a common churn. I took the agency for the churn here and every butter-maker that sees it buys one. I have sold three dozen and they give the best of satisfaction. I know I can sell 100 in this township, as they churn so quickly, make so much more butter than common churns, and are so cheap. Some one in every township can make \$200 or \$300 selling these churns. By writing to W. H. Baird & Co., 140 South Highland avenue, Station A, Pittsburg, Pa., you can get circulars and full information so you can make big money right at home. I have made \$80 in the past two weeks and I never sold anything before in my life. A FARMER.

Thos. Slater has a message for every man on page 15.

"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.

Any boy or girl under sixteen years old who wants to make \$5 in cash before Thanksgiving should write to the KANSAS FARMER CO., Topeka, Kas., for particulars.

ON TIME

to first applicant in each locality, a pair of the FAMOUS O. I. C. hogs.

Two weighed 2806 lbs. Sold for breeders first 1/2 this year.

DESCRIPTION FREE. L. B. SILVER CO., Cleveland, O.

When you write mention Kansas Farmer.

CATTLE.

IDLEWILD HERD SCOTCH SHORT-HORN CATTLE

A choice lot of young bulls and heifers for sale. Also pedigree Poland-China swine. Geo. A. Watkins, Whiting, Jackson Co., Kas.

SHANNON HILL STOCK FARM

G. W. GLICK, ATCHISON, KAS. Breeds and has for sale Bates and Bates-topped SHORT-HORN S. Waterloo, Kirklevington, Filbert, Cragg, Princess, Gwynne, Lady Jane and other fashionable families. The grand Bates bulls Winsome Duke 11th 115137 and Grand Duke of North Oaks 11th 115735 at head of the herd. Choice young bulls for sale now. Visitors welcome. Address W. L. CHAFFEE, Manager.

POULTRY.

Barred Plymouth Rocks.

All the leading strains. Thirty young cockerels and twenty-five pullets for sale. A 93-point bird at head of the flock. Eggs \$2 per setting of thirteen. S. McCullough, Ottawa, Franklin Co., Kas.

1896 Hatch Ready to Ship.

I will continue to sell birds at from 50 cents to \$1 each until my flock is disposed of. Partridge Cochins, S. S. Hamburgs, Brown and White Leghorns, Barred and White P. Rocks, Light Brahmas, and cockerels of Buff Leghorn and Buff P. Rocks. Single birds \$1 each. My fowls have unlimited range and are hardy, well-matured and strictly first-class thoroughbred birds. A. H. DUFF, Larned, Kas.

Round Top Farm PRAIRIE STATE INCUBATORS.

Plymouth Rocks, Light Brahmas, Langshans, Indian Games, Buff Leghorns, Bantams. Eggs \$2 per fifteen; \$3.50 per thirty. Forty-page catalogue, 10 cents, treats on artificial hatching, diseases, etc. Fred B. Glover, Parkville, Mo.

LICE KILLER. Don't pay 50 and 75 cents per gallon for lice killer. I will send you a recipe for 50 cents to make it at a cost of about 25 cents per gallon. For killing lice by painting roosts, boxes, etc. It has no superior. The best disinfectant and disease preventive out. A. H. DUFF, Larned, Kas.

SWINE.

BERKSHIRES. H. R. COWLES Topeka, Kas.

T. A. HUBBARD, Rome, Kansas, Breeder of POLAND-CHINAS and LARGE ENGLISH BERKSHIRES. Two hundred head. All ages 25 boars and 45 sows ready for buyers.

BELMONT STOCK FARM

Geo. Topping, Cedar Point, Kansas. Breeder of English Berkshire and Poland-China swine, S. C. Brown Leghorns, B. Plymouth Rocks, Mammoth Bronze turkeys and Imperial Pekin ducks. Write for prices. Farm six miles south of Cedar Point, Chase county, Kansas.

WYNDALE FARM HERD.

Registered Berkshires and B. P. Rock Chickens. Only the best stock for sale. Eggs in season. Correspondence solicited. M. S. KOHL, Furley, Sedgwick Co., Kansas.

PLEASANT VALLEY HERD REGISTERED POLAND-CHINASWINE

Westphalia, Anderson Co., Kas. Breeder of high-class pedigree Poland-China swine. Herd headed by Guy Wilkes 3d 12131 C. Guy Wilkes is now for sale, also fifty choice April pigs. Write. E. A. BRICKER.

J. T. LAWTON (successor to John Kemp), NORTH TOPEKA, KAS., breeder of Improved Chester White swine. Youngstock for sale. Also Light Brahma fowls.

Kansas City Herd Poland-Chinas

The future villa of Hadley Jr. 13314 O., the greatest boar of his age. I have pigs for sale now by Hadley out of Tecumseh Mortgage Lifter 32640 S. Order quick and orders will be booked as received. Farm nine miles south of Kansas City, on Ft. Scott & Memphis R. R. Postoffice Lenexa, Kas. W. P. GOODE, Proprietor, Lenexa, Kas.

Standard Herd of Poland-Chinas.

L. NATION, Proprietor, Hutchinson, Kansas. The breeding herd consists of the best strains of blood, properly mated to secure individual excellence. Stock for sale. Visitors welcome. Correspondence invited.

TOWER HILL HERD Registered Poland-Chinas.

175 head, 80 brood sows. Herd boars are Black 300 10550 S.; U. S. Butler 18588 S.; George Free Trade 21053 A., and a grandson of J. H. Sanders 27219 O. Young boars ready for service and bred gilts for sale. H. R. Adamson, Fort Scott, Kas.

SWINE.

Thoroughbred Duroc-Jersey Hogs

Registered stock. Send for 44-page catalogue, prices and history, containing much other useful information to young breeders. Will be sent on receipt of stamp and address. J. M. STONEBRAKER, Panaola, Ill.

Farmington Herd Poland-Chinas

Twenty-five spring boars sired by Little Mo. 14902 S., he by Mo. Wilkes 9242 S.; Trinidad 30037 A., and Chief Kacziska by Chief Tecumseh 2d 9115 S. All stock guaranteed as represented. D. A. Kramer, Washington, Kas.

LAWN RIDGE HERD Poland-Chinas.

130 head, all ages. 100 spring pigs, sired by Young Competition 15082 S., Kansas Chip 15083 S. and a grandson of J. H. Sanders. Write or come. J. E. Hoagland, Whiting, Jackson Co., Kas.

J. R. KILLOUGH & SONS, Richmond, Franklin Co., Kansas, POLAND-CHINA SWINE.

Herd headed by Upright Wilkes 13246 S. and J. H. Sanders Jr. 13739 S. 25 brood sows, 100 spring pigs; 10 young boars, 6 Sanders and 4 Wilkes, ready for service. Orders for youngsters being booked. Write or come.

ROYAL HERD POLAND-CHINAS and B. P. Rock Chickens.

Cunningham's Choice 15751 S., second premium State fair, 1895; his grand sire Victor M. First premium State fair, 1893, on Plymouth Rocks. Fifteen eggs for \$2. Ward A. Bailey, 1470 E. 15th St., Wichita, Kas.

Clover Leaf Herd Poland-Chinas.

We Have the Best. Nothing Else. J. H. Sanders Jr. 14953 S. 35089 O. heads our herd. Three of his get sold for \$365; entire get at sale averaged over \$200; get during his term of service exclusive of public sale brought over \$2,700. Thirty-eight pigs getting ready to go out. Among our 14 brood sows are Black Queen U. S. Corwin 28801 S., Silver Bar U. S. 30884 S., Black Queen Hadley 1st 36374 S., Annie Black Stop 38631 S. and Ruby Rustler 4th 36355 S. Write, or better, visit the herd. G. HORNADAY & CO., Fort Scott, Kas.

DIETRICH & SPAULDING, Proprietors Highland Herd Poland-Chinas, Richmond, Kas.

Herd headed by Breckenridge. Fifty spring pigs for sale at prices to suit the times. A few fall boars that are large and growing, with good finish. Also a few fall sows that are bred to Claud Sanders and Darkness U. S. Spring gilts can be bred to the above named boars or Silver Chief by Ideal Black U. S., dam Sunshine by Chief Tecumseh 2d. Write or come.

JONES HE PAYS THE FREIGHT. Farm and Wagon SCALES.

United States Standard. All Sizes and All Kinds. Not made by a trust or controlled by a combination. For Free Book and Price List, address JONES OF BINGHAMTON, Binghamton N. Y. U. S. A.

ADAM'S PORTABLE CORN CRIBS.

Two styles. Four sizes each, Adam's No. 1 Crib, The best made. Adam's No. 2 Crib for One Cent per bushel. Ask your dealer for them or write W. J. ADAM, Cheap and Convenient, JOLIET, ILLS.

To Cripple Creek VIA COLORADO SPRINGS

The Chicago, Rock Island & Pacific Railway is 4 hours quicker To Cripple Creek than any other line.

Full particulars by addressing JOHN SEBASTIAN, G. P. A., Chicago.

DO YOU WANT TO MAKE MONEY?

— THEN BUY —

CRIPPLE CREEK STOCKS

NOW! and take advantage of coming advance in prices.

Bull Hill Gold Tunnel Stock

We are recommending, and have a limited amount of TREASURY stock, full paid and non-assessable, that we can sell at 3 cents a share.

This Tunnel site runs under the famous Bull Hill and cuts many valuable veins. Eight hundred feet of work already done. Prospectus, map, etc., furnished if desired. Send orders to

THE MECHEM INVESTMENT CO., Colorado Springs, Colo.

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. In order to receive a prompt reply, all letters for this department should be addressed direct to our Veterinary Editor, Dr. N. S. MAYO, Professor of Veterinary Science, Kansas State Agricultural college, Manhattan, Kas.

PARALYSIS IN PIGS.—Some pigs three months old get weak in the back and hind legs. At times they are nearly helpless, at other times apparently much better. H. M. S. Peabody, Kas.

Answer.—Don't feed the pigs too much. Give them plenty of green food and range. Allow them access to a mixture of salt, sulphur, wood ashes and lime, or give them some of the medicine recommended by the Bureau of Animal Industry for hog cholera and swine plague. Give clean, comfortable, dry quarters, not on a board floor.

SICK CALF.—A calf, three months old, has been sick with a severe diarrhea until two weeks ago. That has stopped, but the calf coughs badly—there appears to be mucus in its throat. It pants when it breathes. It looks like a skeleton. W. M. B. Kirkland, Tex.

Answer.—Your calf seems to have pneumonia. There are also symptoms of tuberculosis (consumption). If it is the latter, the sooner the calf is killed and buried the better. If it has pneumonia, good care and nursing is the best treatment.

The Treatment of Wounds.

Last week a subscriber asked for the proper method of treating a wound "from start to finish." As the subject is important, a more extended treatment of the subject seems justified.

The first thing to be done in the treatment of a recent wound, is to stop an excessive flow of blood, if an artery of considerable size is cut, as death may follow from hemorrhage. Excessive bleeding may be stopped by "taking up" the blood vessel—that is, by tying the cut blood vessel tightly with a thread or string. Burning the end of the blood vessel with a hot iron or by binding the wound together, plugging with cotton or by astringent solutions, etc. After stopping hemorrhage, cleanse the wound of all foreign matter, dirt, sticks, etc. A wound will not heal with foreign bodies in it.

After cleansing the wound apply some antiseptic or "healing" solution, such as a solution of corrosive sublimate—one part of corrosive sublimate to one thousand parts of pure water, or a solution of one part carbolic acid to twenty parts of water. A remedy which is extensively used in veterinary practice for healing sores of all kinds is "white lotion," composed of three-fourths ounce zinc sulphate (white vitriol), one ounce of lead acetate (sugar of lead), and one quart of rainwater. It must be remembered that no remedies heal. The healing process is all done by nature. "Healing" remedies act by destroying germs which retard the healing process. The hair should be clipped closely from around the edges of a wound, so it will not irritate the wound. Then bring the edges of the wound together closely as possible. This is usually accomplished by stitching the parts together, but in most wire cuts on the legs it is usually impossible, as the stitches will tear out. In some cases edges of a wound may be brought together by a bandage. In bringing the edges of a wound together, care must be exercised that the skin only is not closed, thus leaving a cavity where pus (matter) will collect.

Wounds should be kept as clean as possible. Use antiseptic dressings freely but do not disturb a wound more than is absolutely necessary. If proud flesh forms it must be destroyed by a caustic. If a wound is swollen, dry and painful, a poultice may be applied. Then follow with the antiseptic dressings.

Dr. Bull's Cough Syrup is the best in the market. A single bottle will convince you of its excellence. Try it.

Horse Owners! Use 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 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.

MARKET REPORTS.

Kansas City Live Stock.
KANSAS CITY, Oct. 12.—Cattle—Receipts since Saturday, 10,150; calves, 243; shipped Saturday, 1,348 cattle, no calves. The market was uneven; prices ranged from steady to 10c lower. The following are representative sales:

No.	Ave Price	No.	Ave Price
17.....	807 \$2.70	28.....	858 \$2.65
NATIVE HEIFERS.			
1.....	930 \$3.40	2.....	945 \$3.25
3.....	890 3.00	4.....	747 3.00
NATIVE COWS.			
1.....	1,160 \$3.00	1.....	920 \$2.75
15.....	810 2.30	2.....	1,520 2.10
10.....	895 2.15	1.....	1,000 1.85
9.....	945 1.75	1.....	860 1.00
NATIVE FEEDERS.			
23.....	1,102 \$3.60	10.....	1,073 \$3.60
21.....	1,128 3.60	7.....	928 3.40
3.....	1,090 3.25		
NATIVE STOCKERS.			
27.....	592 \$3.55	22.....	680 \$3.40
13.....	718 3.30	5.....	672 3.25
2.....	480 3.00	3.....	863 2.70
5.....	895 2.75	1.....	700 2.50

Hogs—Receipts since Saturday, 2,522; shipped Saturday, 619. The market was 5 to 10c higher.

No.	Ave Price	No.	Ave Price
88.....	187 \$3.40	54.....	174 \$3.35
64.....	186 3.35	65.....	206 3.30
39.....	211 3.30	97.....	179 3.30
73.....	233 3.27 1/2	43.....	233 3.27 1/2
70.....	232 3.27 1/2	68.....	256 3.27 1/2
90.....	223 3.25	57.....	267 3.25
62.....	256 3.25	81.....	190 3.25
78.....	212 3.25	67.....	217 3.25
83.....	229 3.25	72.....	213 3.25
50.....	270 3.22 1/2	71.....	297 3.20
57.....	304 3.20	70.....	295 3.20
65.....	306 3.17 1/2	58.....	316 3.12 1/2
18.....	351 3.10	1.....	370 2.25

Sheep—Receipts since Saturday, 8,034; shipped Saturday, 1,636. The market was steady to a shade lower. The following are representative sales:

No.	Ave Price	No.	Ave Price
12 nat. lbs.	59 \$3.00	1172 U. sheep	105 \$2.60
1445 U. m.	97 2.40	19 U. culls	92 1.75

Horses—Receipts since Saturday, 145; shipped Saturday, 75. The market was rather quiet this morning, but receipts are moderately fair and a good feeling prevails. A good supply will be on hand for the opening of the regular market to-morrow. There were some new buyers looking around, and intimated that they would attend the sales this week.

Chicago Live Stock.

CHICAGO, Oct. 12.—Cattle—Receipts, 21,000; market slow, best steady; fair to best beefs, \$3.25 to \$3.50; stockers and feeders, \$2.40 to \$3.65; mixed cows and bulls, \$1.25 to \$3.50; Texas, \$2.40 to \$3.25.

Hogs—Receipts, 36,000; market and 10c higher; light, \$3.15 to \$3.60; rough packing, \$3.00 to \$3.15; mixed and butchers, \$3.10 to \$3.55; heavy packing and shipping, \$3.20 to \$3.55; pigs, \$2.25 to \$3.55.

Sheep—Receipts, 25,000; market steady; native, \$1.50 to \$2.25; western, \$2.25 to \$3.00; lambs, \$2.75 to \$4.00.

St. Louis Live Stock.

ST. LOUIS, Oct. 12.—Cattle—Receipts, 6,070; market slow to steady; native beef steers, \$3.20 to \$4.00; Texas steers, \$2.00 to \$2.80.

Hogs—Receipts, 4,000; market strong to 5c higher; light, \$3.00 to \$3.50; mixed, \$3.00 to \$3.35; heavy, \$3.10 to \$3.45.

Sheep—Receipts, 2,000; market strong.

Chicago Grain and Produce.

	Oct 12	Opened	High'st	Low'st	Closing
Wht—Oct.....	68 1/2	70	68 1/2	68 1/2	68 1/2
Dec.....	72 1/2	73 1/2	72 1/2	72 1/2	72 1/2
May.....	72 1/2	73 1/2	72 1/2	72 1/2	72 1/2
Corn—Oct.....	23 1/2	24	23 1/2	23 1/2	23 1/2
Dec.....	24 1/2	25	24 1/2	24 1/2	24 1/2
May.....	27 1/2	28 1/2	27 1/2	27 1/2	27 1/2
Oats—Oct.....	17 1/2	17 1/2	17 1/2	17 1/2	17 1/2
Dec.....	18 1/2	18 1/2	18 1/2	18 1/2	18 1/2
May.....	20 1/2	20 1/2	20 1/2	20 1/2	20 1/2
Pork—Oct.....	7 00	7 25	7 00	7 25	7 25
Dec.....	7 15	7 27 1/2	7 15	7 27 1/2	7 27 1/2
Jan.....	7 95	8 15	7 95	8 15	8 15
Lard—Oct.....	4 35	4 52 1/2	4 35	4 52 1/2	4 52 1/2
Dec.....	4 52 1/2	4 72 1/2	4 52 1/2	4 72 1/2	4 72 1/2
Jan.....	4 52 1/2	4 72 1/2	4 52 1/2	4 72 1/2	4 72 1/2
Ribs—Oct.....	3 75	3 90	3 75	3 90	3 90
Dec.....	3 75	3 90	3 75	3 90	3 90
Jan.....	4 00	4 10	3 97 1/2	4 10	4 10

Kansas City Grain.

KANSAS CITY, Oct. 12.—Trade in wheat was rather slow because buyers were slow to pay any advance, but the bulk of the offerings were sold—some at steady prices, some a little higher.

Receipts of wheat here to-day, 134 cars; a year ago, 250 cars.
Sales were as follows on track: Hard, No. 2, 1 car choice 63c, 4 cars 62c, 1 car 61 1/2c, 3 cars 61c; No. 3, 2 cars 61c, 4 cars 60 1/2c, 14 cars 60c, 9 cars 59 1/2c, 3 cars 59c; No. 4, 4 cars 58c, 4 cars 57 1/2c, 12 cars 57c, 4 cars 56 1/2c, 12 cars 56c, 2 cars 55 1/2c, 3 cars 55c; rejected, 1 car 55c, 1 car 54c, 1 car 53 1/2c, 2 cars 53c, 2 cars 52c, 2 cars 51c, 3 cars 50c; no grade, nominally 45c. Soft, No. 2 red, 4 cars 72c; No. 3 red, 1 car fancy 72c, 1 car 70c, 1 car 69 1/2c, 1 car 68c; No. 4 red, 1 car 65c; rejected, 3 cars 60c. Spring, No. 2, 2 cars 61c, 1 car 59c; No. 3, 1 car 59c, 2 cars 57c, 1 car 56c.
Corn was firmly held and met with fair demand.

BROOMCORN F. JELKE & SON

Established 1850.

53 Walnut St., Cincinnati, O.

Cash Advances Made on All Consignments. Commission Merchants and Dealers in Broomcorn and all kinds of Broom Materials and Machinery.

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 for 1895.....	1,689,652	2,457,697	864,713	52,607	103,368
Slaughtered in Kansas City.....	923,167	2,170,827	567,015		
Sold to feeders.....	392,262	1,376	111,445		
Sold to shippers.....	218,506	278,999	69,784		
Total Sold in Kansas City, 1895.....	1,533,934	2,446,202	748,244	41,588	

CHARGES: YARDAGE, Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 6 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, E. E. RICHARDSON, H. P. CHILD, EUGENE RUST,
V. Pres. and Gen. Manager. Secretary and Treasurer. Assistant Gen. Manager. Gen. Superintendent.
W. S. TOUGH & SON, Managers HORSE AND MULE DEPARTMENT.

ONE DOLLAR

For this Set of Lasts and Stand.

TOPEKA FOUNDRY,

TOPEKA, KANSAS.

We make anything in Cast-Iron, Models, Patterns. WRITE US.



Receipts of corn to-day, 51 cars; a year ago, 54 cars.

Sales by sample on track: No. 2 mixed, 13 cars 21c; No. 3 mixed, nominally 20 1/2c; No. 4, nominally 19 1/2c; No. 2 white, 8 cars 21c; No. 3 white, 1 car 20 1/2c; No. 4, nominally 19c.

Oats sold slowly. Offerings were large, and it was difficult to get steady prices.

Receipts of oats to-day, 48 cars; a year ago, 37 cars.

Sales by sample on track, Kansas City: No. 2 mixed, nominally 17 1/2c; No. 3, 2 cars 16 1/2c, 1 car 15c; No. 4, nominally 12 1/2c; No. 2 white, new, 1 car 19c; old, 1 car 22c; No. 3, 2 cars 16 1/2c, 5 cars 17c, 1 car 18c; No. 4, 1 car 15c.

Hay—Receipts, 73 cars; the market is steady. Choices timothy, \$7.00 to \$7.50; No. 1, \$6.00 to \$7.00; No. 2, \$5.00 to \$6.00; No. 3, \$4.00 to \$4.50; prairie, choices, \$4.50 to \$5.00; No. 1, \$4.00 to \$4.50; No. 2, \$3.00 to \$3.50; No. 3, \$2.00 to \$2.50.

St. Louis Grain.

ST. LOUIS, Oct. 12.—Receipts, wheat, 64,000 bu.; corn, 144,075 bu.; oats, 93,555 bu.; shipments, wheat, 16,840 bu.; corn, 64,010 bu.; oats, 14,870 bu. Closing prices: Wheat—Cash, 71c; December, 72 1/2c asked; May, 76 1/2c. Corn—Cash, 21 1/2c; December, 23c bid; May, 25 1/2c. Oats—Cash, 16 1/2c; May, 20 1/2c.

Kansas City Produce.

KANSAS CITY, Oct. 12.—Butter—Creamery, extra fancy separator, 15c; firsts, 14c; dairy, fancy, 12c; fair, 10c; store packed, fancy, 8c; packing stock, 6c.

Eggs—Strictly candled stock, 13c per doz. Poultry—Hens, 5 1/2c; roosters, 10 1/2c each; young roosters, 5 1/2c per lb.; spring, 5 1/2c; broilers, from 1 1/2 to 2 lbs., 6 1/2c; turkeys, over 7 lbs., 8 1/2c; spring and old ducks, 6c; spring geese, 8c; pigeons, 75c to 85c per doz.

Apples—Choice eating stock sells from 40c to 60c a bu.; inferior, 30c to 35c a bu.; cooking stock, 10c to 35c; Ben Davis seems to form bulk of supply and prices range from 20c to 40c in a small way, according to quality; shippers are paying for Northern Spy \$1.00 a bbl. in car lots; for fancy fall and winter varieties, \$1.00 to \$1.25 a bbl.; Jonathans, \$1.50 a bbl. for fancy and 75c to \$1.00 for No. 2 stock. Grapes, Ohio and New York Concord, 9-lb. baskets, jobbing, choice stock, 11c to 12c; inferior, 8c to 9c; small way, 12c to 12 1/2c; Delaware, 4-lb baskets, 12c; Niagara, 10c a basket.

Potatoes—In a small way prices ruled 20c to 25c; in round lots, 16c to 18c; in car lots, 17 1/2c. Sweet potatoes, new stock, 25c per bu.

RUSSELL'S STAPLE PULLER

AND WIRE SPLICER



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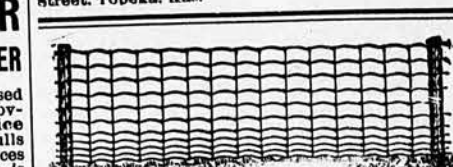
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However opinions may differ on the financial question, there has been no demand for a change in the fence standard. "Just as good as the Page" is current everywhere, if you can safely rely on the promise being redeemed. After all, it is better to get the genuine stuff and take no chances. Write

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

The Apiary.

Conducted by A. H. Duff, Larned, Kas., to whom inquiries relating to this department should be addressed.

Wintering Bees.

This work is better begun as early as the first of September, and should not be put off later than October. During August and September, if little or no honey can be gathered, many queens entirely cease laying, and when winter comes on such colonies are stocked with old bees which must die in large numbers before spring. Bees that are hatched during the autumn months are the only available stock to withstand the winter. If colonies are found without brood, they should be fed a small portion every day to induce brood-rearing. Suspension of brood-rearing occurs with colonies, whether they have a light or heavy supply of honey, and the only way we can secure a force of young bees at this time of year is by this stimulative feeding. Usually a half pint of sirup daily is sufficient for this purpose. Feeding may continue a week or ten days in this respect, but if the colony should lack in the necessary amount of stores, they may be fed more heavily. Feed may be given them as liberally as they can store it away, until they have a sufficient supply.

Bees should not be disturbed during the winter by feeding or otherwise. It should be done early, during warm weather, so as to give the bees a chance to seal it over before cold weather. Late feeding is the cause of much unsealed stores in the hive, and this makes an unwholesome diet, as the moisture arising from the bees during cold weather condenses it and it becomes diluted. This produces dysentery, the dreaded winter disease of bees.

Every colony of bees should have twenty-five or thirty pounds of good sealed honey to carry it through the winter properly. The only feed that I would recommend is granulated sugar, thoroughly melted by adding water and bringing it to the boiling point. It should not boil any length of time, for it will again crystallize. The sirup should be thin when fed—about the consistency of thin molasses. Before feeding begins it would be well to arrange the brood nest, but in most cases the bees have already done this. The center of the hive should contain three or four combs that are empty in the center and lined at the top and ends with honey. Other frames, heavy with honey, may be placed at the sides until the hive is filled. During autumn we often find frames of combs filled with pollen near the brood nest, and an excessive amount of this is not desirable for wintering, and may be removed. Pollen is used only for rearing brood, and to confine bees on it for winter food it has a tendency to produce dysentery. Any pollen thus removed should be replaced early in spring.

Bees surely need some other treatment during winter than leaving them out in ordinary hives. Different modes of wintering have been adopted, but two methods are most in vogue. One is to place them in cellars, and the other in chaff protection on summer stands, or, in other words, chaff hives. The latter plan is the more extensively practiced. The chaff hive is an outside box or shell enclosing the hive of bees, and much larger. It admits a packing space of two or three inches around the sides, ends and bottom, and from six to ten inches on top. It is not best to stint the space for packing. We have used chaff hives of different sizes, and invariably find the largest size to be the best. Four inches of packing space around the hive and twelve inches above, have never failed to give better results than less. A separate shell for chaff is much better than a double-walled hive with the space permanently filled with chaff. In this, the hives may be set in or taken out at will, and the upper stories or surplus chambers being removed in autumn, the whole space may be filled with chaff. In this manner the chaff entirely surrounds the bees with the exception of the entrance, which should be left open, so that the bees may come forth

at will when the weather permits. The covering over the bees and directly under the chaff should consist of a cloth only, and no board covering should be used. The cloth covering will allow the moisture arising from the bees to pass off, and the chaff above will absorb it; thus the colony will keep dry. Bees should be placed in winter quarters before cold weather comes, and left during winter in perfect quiet. Any disturbance in cold weather is damaging to them and ought to be avoided.

The apiary should be excluded entirely from stock of any kind, and even a constantly traveled pathway close to hives is undesirable. Apiaries ought not be located close to railroads for this reason.

If bees become destitute of stores during winter a frame of sealed honey can be given them. If this is not at hand, slabs of granulated sugar, made in the form of candy, may be placed on the frames where the bees have access to it. It is best to place it directly over the cluster of bees and as near as possible to them. Liquids cannot be fed to bees during cold weather, and at such time must be avoided.

Cellar wintering, especially in the Northern States, is practiced to a great extent. Those that have become experts at cellar wintering have become the most successful in bringing bees through without loss, and this mode of wintering is increasing. The time of putting bees in the cellar depends upon the season or locality—usually about the first of November—and the time of placing them out in the spring is from the middle of April to the first of May. Underground repositories in which bees are to be wintered should be intended and arranged for their exclusive use. Cellars or basements under buildings that are occupied for other uses are not proper places to keep bees, as the constant disturbance will annoy the bees and failure and loss will be the result.

Bee Notes.

It does not pay to allow bees to remain in ordinary hives unprotected in winter. Study the different modes of wintering and select the one that suits your fancy.

We would be pleased to have all readers of the KANSAS FARMER who have bees, either few or many, to send in their reports for this department for the present season—number of colonies, amount of surplus honey, kind of hives used, variety of bees, method of handling, best honey-producing plants, and anything you want to say about bees.

Catarrh Cannot Be Cured

with LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing catarrh. Send for testimonials, free.

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A Look Through South Missouri for Four Cents.

The Kansas City, Fort Scott & Memphis Railroad Company has just issued a magnificent book of sixty or more photo-engraved views of varied scenery in south Missouri. From these views an accurate knowledge can be obtained as to the productions and general topography of that highly-favored section that is now attracting the attention of home-seekers and investors the country over.

The title of the book is "Snap Shots in South Missouri." It will be mailed upon receipt of postage, 4 cents. Address J. E. Lockwood, Kansas City, Mo.

Every man should read the advertisement of Thos. Slater on page 15 of this paper.

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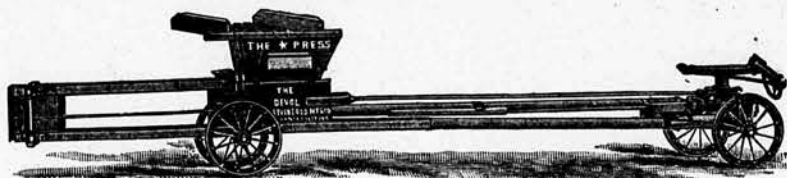
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examine the brand (see list genuine brands). Any shade or color desired can be easily obtained by using NATIONAL LEAD CO.'s brands of Pure White Lead and Tinting Colors.

Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

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SEND FOR CIRCULAR, E. KRAUSER & BRO. MILTON, PA.

FARMERS

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KILLS HEN LICE
By simply painting roosts and dropping-boards. Kills Mites and Lice, cures Colds and Cholera, also kills Hog Cholera germs. If your grocer or druggist does not keep it, have them send for it.
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Specially designed to break up the hardest subsoil. It can be run 2 feet deep, which lets in all the rain, storing it up for all crops, which insures against drought and standing water on the surface. For further particulars address
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Housewives Can easily chop meat for sausage and mince-meat, suet, corn for fritters, scrap meat for poultry, hash, beef for tea, etc., with the

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These cribs are made of selected and seasoned oak and 5 double strands of wire and will last a lifetime. After the crib is empty it can be used for garden or yard fence. It is the most economical, serviceable and durable temporary crib in use. This crib is made in three sizes—500, 800 and 1,200 bushels. Write for prices. Secure agency.

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GOLD! GOLD!!

Address G. T. Nicholson, G.P.A., A., T. & S. F. Ry., Monadnock Bldg., Chicago, or W. J. Black, A. G. P. A., Topeka, Kas., and ask for free copy of profusely illustrated book descriptive of Cripple Creek. It is well worth reading.

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Made of steel and iron. Earlier and larger crops.

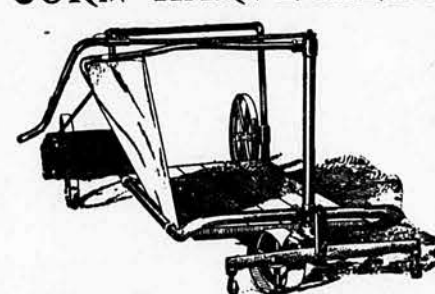
Soil, roots and plants taken up together, preventing stunting or injury. Vegetables, flowers, strawberries, tobacco, small nursery trees, etc., can be moved at all seasons. Invaluable for filling vacancies. Transplanter with blade 2 inches in diameter, \$1.25; same with 3-inch blade, \$1.50. SPECIAL PRICE with KANSAS FARMER: By a special arrangement with the manufacturers we are able to offer the Transplanter and KANSAS FARMER one year for price of Transplanter alone. Send \$1.25 and we will mail KANSAS FARMER to you and send you the Transplanter by express. Or call at FARMER office and get the Transplanter and save 25c. express charges. Address KANSAS FARMER CO., Topeka, Kas.

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We make them easy-running, durable, satisfactory, and the finish is far beyond any other you have ever seen.

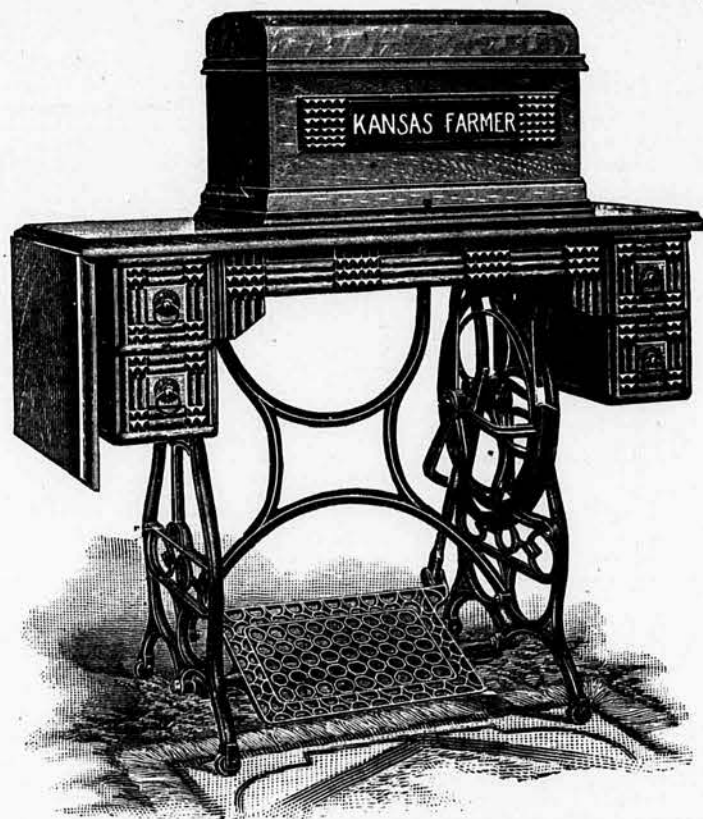
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Finished in Either Oak or Walnut. Freight Charges Prepaid to All Points East of the Rocky Mountains.

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The Attachments supplied without extra charge are of the latest design, interchangeable, and constructed to slip on the presser-bar. They are made throughout of the best steel, polished and nickel-plated, and there is not a particle of brass or other soft metal or a single soldered joint about them. They consist of Ruffler, Tucker, Binder, Braider Foot, Under Braider Slide Plate, Shirring Side Plate, Four Hemmers of assorted widths, Quilter, Thread-Cutter, Foot Hemmer and Feller.

The Accessories include twelve Needles, six Bobbins, Oil Can filled with oil, large and small Screwdrivers, Sewing Guide, Guide Screw, Certificate of Warranty good for five years, and elaborately illustrated Instruction Book.

Guarantee: We give with it the manufacturers' guarantee, who agree to replace at any time in TEN YEARS any part that proves defective.

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"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time, will be inserted in this column, without display, for 10 cents per line, of seven words or less, per week. Initials or a number counted as one word. Cash with the order. It will pay. Try it!

SPECIAL.—Until further notice, orders from our subscribers will be received at 1 cent a word or 7 cents a line, cash with the order. Stamps taken.

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APPLES AND CONCORDS.—We have a surplus of two-year-old apple trees and Concord grape vines. We want to sell them, and will make a special price until the surplus is disposed of. Miami Nurseries, Cadwallader & Fort, Louisburg, Kas.

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FOR SALE.—Corn, corn fodder and sugar cane, and rent farm. Also farm for sale or trade. Address 212 West Eighth Ave., Topeka, Kas.

AN EXPERIENCED YOUNG MARRIED MAN wants to manage a farm for wages or share. Good references, and can give bond. Address Chas. A. Babbitt, Hiawatha, Brown Co., Kas.

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SHROPSHIRE RAM, ALLEN'S 1704 (A.S.C. 68870). I wish to sell this ram, as I cannot use him any longer. He is a fine one and fit to head any flock. Is a son of noted Proud Salaphian. Also some registered and unregistered lambs for sale to suit the times. The above are all fine stock. Write quick. Elwood Rush, Shaw, Kas.

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SHORT-HORN BULLS.—Crucifix-shaped, for sale. Choice animals of splendid breeding. Address Peter Sim, Wakarusa, Shawnee Co., Kas.

EGGS FOR HATCHING.—See advertisement elsewhere. Belmont Stock Farm.

FOR SALE OR TRADE.—One hundred and sixty acre farm in Graham county, Kansas. Nice, smooth land. No incumbrance. Also 160 acre farm in Scott county, Kansas. Smooth land. No incumbrance. I will sell cheap. Address Thomas Brown, Box 65, Palmer, Kas.

MOESER ICE AND COLD STORAGE CO.—Topeka, have just completed their new cold storage building, on the latest modern plan, and now have the best facilities for storing all kinds of fruits, butter, eggs, etc. Railroad switch to storage building. Car-load lots unloaded free of charge. Write for prices.

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

WANTED.—Buyers for Large English Berkshires and improved types of Poland-Chinas, from prize-winners, at farmers' prices. Riverside Stock Farm, North Topeka, Kas.

WANTED.—Buyers for Large English Berkshire gilts, bred or ready to breed to son of imported boar. Bargains! O. F. Updegraff, North Topeka, Kas.

SPECIAL WANT COLUMN—CONTINUED.

ALFALFA SEED.—Crop of 1896. Pure and fresh. Write for prices. McBeth & Kinulson, Garden City, Kas.

TEN YOUNG SHORT-HORN BULLS FOR SALE by Wm. H. Ranson, Walnut Hill Stock Farm, North Wichita, Kas. Twenty-five years experience in breeding and handling Short-horns. Write.

SHAWNEE COUNTY CIDER MILL.—Bring your apples to my cider mill, three miles west of Kansas Ave., on Sixth street road. My mill will be in operation every Tuesday, Thursday and Saturday till November. Henry McAfee Topeka.

WE MAKE A GOOD FARMER'S SPRING WAGON, two lay backs and let-down end-gate, for \$55. Warranted. Kinley & Lannan, 424-426 Jackson street, Topeka.

FOR SALE.—One hundred and sixty acre farm, one and a half miles from Bushong station, Lyon county, Kansas. Good spring. Price \$8 per acre. J. B. McAfee, Topeka, Kas.

FOR SALE.—Farms in Morris, Osage, Lyon, Bourbon, Cherokee, Labette, Neosho, Anderson, Montgomery, Coffey, Woodson and many other counties for sale on eight years' time. No interest asked or added in. Write for new circulars with descriptions and prices. Hal W. Neiswanger & Co., Topeka, Kas.

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LiveStockAuctioneer, JAS. W. SPARKS, Marshall, Mo. Sales made everywhere. Refer to the best breeders in the West, for whom I sell. Satisfaction guaranteed. Terms reasonable. Write before claiming dates. Mention KANSAS FARMER.

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HIGHLAND KENNELS, TOPEKA, KAS.—Great Danes and Fox Terriers. The first prize and sweepstakes winner, Great Dane King William, in stud. Dogs boarded and treated for all diseases; also, remedies by mail. Correspondence solicited.

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To hold 500 bushels. Larger sizes are unsafe. Made from hard-wood slats 4x2 inches, one and a half inches apart. Heavy annealed wire cables. Not made out of f. noing. Specially constructed crib, warranted to stand strain, provided with gate.

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ROCK ISLAND IMPLEMENT CO.,
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R. S. COOK, WICHITA, KAS., Poland-China Swine

BREEDER OF
The Prize-winning Herd of the Great West. Seven prizes at the World's Fair; eleven firsts at the Kansas District fair, 1893; twelve firsts at Kansas State fair, 1894; ten first and seven second at Kansas State fair, 1895. The home of the greatest breeding and prize-winning boars in the West, such as Banner Boy 2841, Black Joe 2860, World Beater and King Hadley. For sale an extra choice lot of richly-bred, well-marked pigs by these noted sires and out of thirty-five extra large, richly bred sows. Inspection or correspondence invited.

ELM BEACH FARM POLAND-CHINA SWINE

The home of the great breeding boar, SIR CHARLES CORWIN 33095. Our 1896 crop of pigs are by six different boars and out of fashionably bred sows, including such grand individuals as the prize-winning \$500 Lady Longfellow 34099 (S.), that has eight pigs by the prize boar, King Hadley. STOCK FOR SALE at all times and at very reasonable prices. We also breed Short-horn cattle. Write or come and see us.
IRWIN & DUNCAN, Wichita, Sedgwick Co., Kas.

PUBLIC SALE!
OF
HEREFORDS!

INDEPENDENCE, MO., OCTOBER 23, 1896.

25 BULLS AND 50 HEIFERS.

Choice selections from our herds that number over 600 head of pure-bred Herefords. For catalogues and other information respecting this sale, address

GUDGELL & SIMPSON, Independence, Mo.
JAS. A. FUNKHOUSER, Plattsburg, Mo.

SEVENTY-FIVE HEAD.

SEVENTY-FIVE HEAD.

SECOND ANNUAL
PUBLIC SALE OF POLAND-CHINA HOGS

—TO BE HELD AT—

RICHMOND, FRANKLIN CO., KAS., FRIDAY, OCTOBER 30, 1896.

The offering is by far the best I have ever made, and will comprise the herd boars, Upright Wilkes 13246, J. H. Sanders Jr. 13729 and Medium Pride, twenty sows bred to my herd boars, also about fifty spring pigs of both sexes, splendid individuals and of the choicest breeding.

TERMS.—A credit of six months at 8 per cent. will be given. Sale at 1 p. m. Free entertainment and transportation furnished at Richmond. Come and bring your friends. Spread the news.

Col. J. W. SPARKS, Auctioneer. J. R. KILLOUGH & SONS, Richmond, Kansas.

There Is No Doubt About the MERIT of THE KEYSTONE DEHORNING KNIFE.
It cuts both ways, does not crush. One clip and the horns are off close. Write for circular. A. C. BROSIUS, Cochranville, Pa.

Ship Your Produce Direct
TO MARKET.

It is the only way to get the true value of what you have to sell. It is no longer an experiment. Our shippers testify to it every day. We receive and sell: Butter, Eggs, Poultry, Veal, Game, Hay, Grain, Beans, Seeds, Potatoes, Broom Corn, Hides, Wool, Green and Dried Fruit, Vegetables, or any thing you may have to ship. We make prompt sales at the Highest Market Price and send quick returns. Write us for Prices, Shipping Tags, or any information you may want.

SUMMERS, MORRISON & CO., Commission Merchants,
174 South Water Street, CHICAGO, ILL.
References: Metropolitan National Bank, Chicago, and this paper.

ANNUAL PUBLIC SALE.
25 Boars. 35 Sows.

FASHIONABLY BRED POLAND-CHINAS.

PRINCETON, FRANKLIN CO., KAS.
Tuesday, October 27, 1896.

Among the offerings will be the two-year-old boar, Ely Tecumseh by Tecumseh J. Corwin 10744 S. and out of Warner's Gold Drop (14442), she by the noted \$800 Free Trade 4420 S. and out of King's Gold Drop (11714). The late fall boar, Mont Ida Chip 2d by Lord Chip 11151 S. and out of Bettie May (33940). His sire, Lord Chip, was a first place and sweepstakes winner in 1895 and a first place winner in 1896. There will be twelve brood sows, yearlings and two-year-olds, some of which will have litters at side. They are bred to Princeton Chief 14545 S., a son of Chief Tecumseh 2d 9115 S. There will be forty spring pigs—twenty-three extra choice boars and seventeen gilts—that were sired by five different boars, viz.: Business 11637 C., Princeton Chief 14545 S., Dictator 2d 14065 C., Riley Medium 12306 S. and Upright Wilkes 13246 S. The youngsters are smooth, well finished and a well grown out lot.

TERMS.—All sums of \$15 and under cash; on sums over \$15, six months time without interest if paid when due; if not paid when due, 10 per cent. from date of note; 4 per cent. discount for cash. Sale to begin at 1 o'clock p. m. For further information write for catalogue.

COL. S. A. SAWYER, Manhattan, Kas., Auctioneer.

H. DAVISON & SON, Princeton, Kansas.



WILD TOM 51592.

Sweepstakes bull Wild Tom 51592. Weight when thirty-four months old 2,205 pounds in show condition. He is the best living son of Beau Real 11055. Dam Wild Mary 21238. Winnings:—Iowa State Fair, 1895, first in class, first in special, first in sweepstakes, and Silver Medal; Kansas State Fair, first in class, first and special at head of herd, first bull and four of his get.

FARM.—Two and a half miles northwest of city. We furnish transportation to and from the farm if notified.

SUNNY SLOPE FARM

***** EMPORIA, KANSAS, *****

Hereford Cattle Headquarters

Sunny Slope Farm is one of the largest breeding establishments in the United States. Three sweepstakes bulls in service—Wild Tom 51592, Climax 60942, Archibald VI. 60921, also the great breeding bull, Archibald V. 54433, who was the sire of two sweepstakes animals (Archibald VI., sweepstakes under one year of age, and Miss Wellington 5th, sweepstakes heifer over all beef breeds when twelve months and twenty days old. We have thirteen serviceable bulls for sale, ranging from eight to twenty months old. We also have forty bulls for sale, ranging from five to eight months old. Also a choice lot of heifers and cows. We combine the blood of Anxiety, Lord Wilton and Grove 3d. Breeders are invited to inspect our herd.

C. S. CROSS,

H. L. LEIBFRIED, Manager.

EMPORIA, KANSAS.