



### Agricultural Matters.

#### GREAT VALUE OF GRASS LAND.

From a lecture by Prof. William H. Brewer of Yale University.

During the last twenty-five years, since the Pacific railways placed the great Western grazing grounds in competition with our home farms, the growing, the fattening, and the slaughter of farm animals in this State has so greatly depressed that source of income from our farms, that many have come to fear that our old industry of grazing would never come back. I cannot believe this. We have begun to see the reaction, and I cannot but believe, now that the Western pastures are fully occupied and many nearly exhausted, that, with the increasing population and increasing demands, our hills will be more and more devoted to pasturage and our valleys to hay. Even if only for the dairy, this must be the result. It seems to me inevitable. We cannot hope to ever compete with the easily-tilled prairies in grain-growing, but we can in grass.

England has felt the recent agricultural depression much more severely than we have, suffered a much greater decline in the value of farm lands. But I have noticed that the decline in the production of food grains there has resulted in an increase in grass lands. As the fields are withdrawn from tillage, the acreage of grass continually increases. With the introduction of commercial fertilizers forty or fifty years ago, many old pastures there were plowed up and brought under tillage. Now they are going back to grass again. But it will take a generation or more before some of these regressed fields will have that superlative excellence which formerly made the pastures of that island so famous. Age is as important a factor in excellence with pasture as it is with wine, or old violins. The comparison with old violins is perhaps the better, as age with use is requisite rather than age without use.

Old farm lands, if well kept, differ from new ones in several important characters. The differences as found in meadows are somewhat unlike those found in pastures. Their evolution is analogous, however. In both cases there is a difference in the texture of the turf, in the quality of the product, in the kind and number of varieties of grass of which it is constituted, in the specialized character of these varieties themselves, and in their relations to the soil.

To better understand these differences let us glance at the process by which an old pasture or meadow is made, the change it undergoes with age, and wherein it is unlike a new one. It is an evolution which goes on under natural laws, an adaptation of the grass to the condition imposed, and, like all of nature's evolutions, it goes on slowly.

Let us begin with an old field, long-tilled in crop rotation, and finally seeded down to be hereafter kept permanently in grass. If the land has been tilled for some years the soil is tolerably uniform in composition and in texture from the surface down to the depth reached by the plow. In seeding down usually several kinds of grass seed are used, mixed. I also probably some clover. Univer- experience shows that in such cases several kinds sowed together are able to be successful than if but one.

L. Some of the kinds of grass are better adapted to the soil than others; these have, therefore, an advantage and will ultimately prevail at those least adapted. Some of these, however, run out before, slowly run out. Some of these, however, and these adjust themselves to other. The bare spots between the old and the first are gradually filled up, until the surface of the land is entirely covered. From this time the competition between the various kinds of grass is not for the pasture land, but a contest with each other. The roots of the more abundant near the sur-

soon that becomes richer in organic matter, just where it is needed both for the nourishment of the growing plants and for mollifying the texture and other physical properties of the soil. The texture of the turf becomes closer and makes a more elastic as well as tougher and softer carpet. The turf behaves a little differently when pastured by cattle than when by sheep, and still differs again when hay is the main crop. But in their evolution the process is much the same.

Such old pastures have special characters for dairy use, and regions where they abound have always been noted for the qualities of their butter and cheese, even more than for the quantity produced. This is true of highland and lowland alike. The rich pastures of the lowlands of Holland and Denmark are alike famous with those of Switzerland on the Alps. In fact, the very word "Alps" came originally from the mountain pastures rather than from the mountains themselves. These Alpine pastures, centuries old, the ground has never been plowed nor the land seeded by art, the pastures are such as have developed under the special conditions of climate, soil and grazing which exist there. The butter from them is noted all over Europe, and Swiss cheese all over the world.

It is believed that permanent pastures, if well handled, continue to grow better for fifty or a hundred years; some say for much longer than that. It is nearly forty years since I was in England, but I well remember that English farmers told me that a pasture or meadow had to be at least twenty-five years old to be good, and was not really excellent until the third or fourth rental (forty-two or sixty-three years) at least. There was no other one feature in English scenery which so impressed me as the English turf, whether seen in either the pastures or the parks and lawns. Many of the "parks" are, in fact, pastures. One sees sheep everywhere. Even on the playgrounds of the colleges and schools one sees flocks of sheep, kept there for the benefit of the turf. When Connecticut public opinion shall protect sheep on the Yale athletic field from the dogs, then will Connecticut be able to grow more of the mutton it consumes and the State be richer by very many millions of dollars. Many a hillside, now half-barren, will then be green with turf, and mutton on our tables will be better and cheaper.

The beauty of the turf on old English lawns excites the admiration of all Americans who go there. When I visited the experiment station carried on by Lawes & Gilbert, the plots of grass used to test the effect of fertilizers on the relative abundance of the different species, were taken from the lawn. "We do not know how long it has been established," they told us, "we know, however, that there has been neither plow nor spade in it for over 400 years, and it was, therefore, old enough for our purpose." It is not easy for us Americans to appreciate such a fact. When Columbus started on his voyage of discovery, that lawn was already "long established."

A little story, just now floating the rounds of the press, illustrates my point, although that was not the point probably seen by the original teller of the story. An American millionaire, admiring a grassy lawn in Oxford, said to the gardener in charge, "I would like to have such a turf as this—tell me, my man, how you manage to get it," putting his hand into his pocket as if to pay for the information. "Well, sir," was the reply, "its werry simple, you cuts it as close as ever you can, and you rolls it, and cuts it and rolls it for 600 years, and then you have it."\*

That is in principle just what goes on in the evolution of an old pasture, only it is the cattle or sheep that cut it as close as ever they can, and their trampling rolls it, and in many a pasture in the old world that has gone on for more than the 600 years of the gardener's story.

I was put in a contemplative mood not long ago by reading an account of

\*Note by Mr. Olcott.—Grasses vary as widely in turf as trees vary in timber. We are making very desirable turf of many sorts by seeds sown or by roots planted in from one to three or four years.

a recent sale of cattle described in an English live stock journal. The sale was on an estate occupied by successive generations of tenants since the twelfth or thirteenth century. And in a speech at the dinner which preceded the sale (as is the custom there) the local clergyman wove in some of the history. The cattle were a local breed, "smoky-faced cattle," and he told how that the ancestors of the present tenant were pasturing the ancestors of the present cattle on those same pastures when Edward I. was crowned. Three hundred or more years later, when the reformation was in progress and the near-by abbey was ruined, the same family were grazing their smoky-faced cattle on the same pastures, men tending their herds heard of the beheading of Charles I. and the wars of Cromwell, and the re-establishment of the monarchy under Charles II., and so on down in their local history. How many empires had risen and fallen! What momentous events the world had seen while that industry went on steadily! The grass lands and the business they supported was more permanent than most nations were.

The kind of business prosperity that comes from old grass lands is just the opposite extreme from that known as a "real estate boom." One means continuous thrift and comfort, the other speculation and alternate wealth and poverty. Nations with grass and pastures and meadows are more continuously prosperous than those without, however rich the latter may be.

Compare Holland or Flanders or Denmark, countries with rich pastures and continued fertility, with Italy or Greece. Compare England with its old turf with any Mediterranean country and note the difference. I do not pretend that this is the one cause of the difference, only that it is a cause, a factor, which has both its material and its moral force.

I have alluded to the investigations our experiment station is making of turf grasses. So far as I know they are unique in their methods. It is an effort to investigate them by scientific methods which are not carried on from the strictly botanical standpoint. They might have been made before there was a science of botany. Mr. Olcott, who has charge of this work and who devised the methods, is, as many of you personally know, very enthusiastic, and hopeful in his work. He has also a better knowledge of the foliage and habits of the turf grasses than any other man I know of.

For a better explanation of the methods and the character of the work, let me state a few elementary facts and their relation to the investigation. Botanists have described 3,000 or 4,000 species of grasses, of which a very small relative number have much value in forming the turfs of our climate and in other countries similar to ours. As botanists study grasses, their most important characters are those which relate to flowers and seed. By no other set of characters have grasses been satisfactorily classified, so as to be scientifically studied as a whole or their relations to the rest of the vegetable kingdom understood. The unit of classification as used by botanists, is the species, but the individuals of a species vary among themselves and constitute groups known as varieties. Varieties are more changeable than species and are especially liable to be formed as a result of cultivation, or when they grow amid the conditions of cultivation. Hence we have many varieties of each species of cultivated plants. All the immense number of varieties of maize doubtless have arisen from one original wild species, and so of the varieties of potatoes, of wheat, oats, barley, etc.

The tendency which plants have to run to varieties to suit the local conditions shows itself even in the uncultivated weeds that infest the fields and gardens. Special varieties adapt themselves to the local conditions they find in cultivated soil, because thus better adapted to fight their way and maintain a hold against the aggressions of the farmer or gardener who tries to kill them.

Precisely so with the turf grasses. A single species may exist as numer-

## Over Thirty Years Without Sickness.

Mr. H. WETTSTEIN, a well-known, enterprising citizen of Byron, Ill., writes: "Before I paid much attention to regulating the bowels, I hardly knew a well day; but since I learned the evil results of constipation and the efficacy of



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Pills, I have not had one day's sickness for over thirty years — not an attack

that did not readily yield to this remedy. My wife had been, previous to our marriage, an invalid for years. She had a prejudice against cathartics, but as soon as she began to use Ayer's Pills her health was restored."

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ous varieties, some more robust or aggressive, others less so, having different capacities to withstand too wet or too dry periods, to stand droughts or other vicissitudes of climate, or to endure or flourish under the grazing of cattle. Let us keep in mind, also, that while the natural tendency of plants is to produce seed and propagate in that way, in crops of grass, either when cut for hay or grazed for pasture, it is foliage, not seed, that is the aim of the farmer.

In nature and in art there are two ways by which plants are propagated; the "sexual" method, through the production of flowers and seed, and the "non-sexual" method, which includes many forms, such as underground stems in some species, bulbs, tubers, runners, etc., tillering with grains and grasses, etc. In artificial culture, propagation by means of grafts, buds, cuttings, and similar ways belong to the non-sexual methods, and are very extensively practiced. Gardening and fruit-growing could hardly be carried on without this.

Now, in the production of new varieties by nature, the vast majority come through the seed. Some plants of a new generation differ from the parents. It may be that the new variety will perpetuate itself from the seed, more often it does not, at least with that certainty and completeness that farmers and gardeners wish. Hence, in farm and garden practice, where crops are from annual plants, we seek varieties that grow true to the seed as is the case with our grains and most of our vegetables. When of long-lived plants we often propagate the varieties only by non-sexual methods, by cuttings, grafts, buds, etc. Such is the practice with most of our larger fruits and with many ornamental plants, and only by such methods could our wonderful success have been achieved. In many cases the value of the variety has increased as the tendency to produce seed is reduced. Many of our best fruits produce seed but sparingly, some not at all. We have a familiar example in bananas, which have been so long cultivated and propagated only by suckers, that all the best varieties are seedless. I question if any of you ever saw a banana with seeds, and a variety of seedless grape, known as the Zante currant, has been growing without seeds from ancient times.

We grow various crops for foliage rather than for seed; tobacco is a familiar example. Were it grown primarily for its seed, we would use very different varieties and the leaves would suffer deterioration in the interest of the seed-grower.

Grasses for use on the farm, either for hay or pasture, are grown for foli-

age and stalks, that is, for the vegetative portion rather than the seed. They are all of long-lived species. How long an individual grass plant will live in a well-kept, permanent meadow or pasture, no one knows, but we know that it may be, and usually is, very long-lived.

I have already said that in nature most varieties probably originate in seedlings. Sometimes, however, they originate in the vegetative part of the plant itself. The variation may extend but a single branch, and there are examples of varieties or ornamental plants which have so originated, the varying branch being propagated and multiplied by means of cuttings.

Turf and meadow grasses not allowed to seed, spread, and keep the ground covered by non-sexual methods. Varieties arise as abundantly as with other cultivated plants. However they originate, whether from some chance seed or from some vegetative variation, if they spread in a meadow or pasture it must be by non-sexual methods, and because they are better fitted for the conditions. There are places in every old pasture where the plants are not allowed to seed at all, or, if at all, only at very long intervals. If the foliage is especially liked by the grazing stock they keep it eaten off closely. You all know that in those spots in a pasture, where the growth becomes rank enough to blossom and seed, the stock shuns it and crops the shorter portion still closer, which, therefore, is not allowed to seed. It is this closely-cropped portion that usually makes the closest turf.

Now, under such conditions all long-established grass lands reach their special excellence. The conditions of growth and the varieties themselves are the extreme opposite from those varieties which would be the most profitable to the grower of grass seed. It may be that the turf varieties may not seed readily. I think it very probable, indeed, that this is the case with the most valuable turf varieties.

The number of recognizable varieties that arise in old sod is very large, differing by every shade and in many ways, but these varieties have not heretofore been experimented with as varieties of grain have, and our grains belong to the same botanical family as the grasses. Some thirty to forty varieties of blue grass alone have been experimented with in the grass garden at Mr. Olcott's, at South Manchester, and each turf species is found to exist in several forms.

Now, as to the methods of investigation we practice. Instead of reproducing from the seed he propagates turf non-sexually from old sods. These sods have been gathered in various places in this country, from New England to California and the Gulf, and from Great Britain and the continent of Europe. They have come even from Japan and Corea, and now, as I am speaking to you, he is on the Pacific on his way to Australia to see if that dry climate produces turfs that may aid us here in Connecticut. The drought of last summer and the sorry condition of some of your pastures because of it makes us hope that his mission may be successful.

The branch of modern science which has advanced the most rapidly during the last twenty years, and has also been the most beneficent, is "bacteriology." It has so aided sanitary science that most pestilences may now be controlled or prevented. In nature many kinds of microbes live and develop together, and the separate part each plays cannot be demonstrated by the cultivation. Methods have therefore been devised by means of which even these minute creatures may be separated and each kind grown in "pure cultures" and the nature and effect of each studied by itself.

By an analogous process Mr. Olcott studies turf grasses. A bit of sod is carefully torn into fine shreds, its individual plants separated and set out each by itself and allowed to spread by the sprouts from the root-crowns, until it forms a bit of turf of its own sort. This is essentially the way they spread in a pasture or meadow. Any other sort appearing in its plot is carefully weeded out and the variety is studied as a "pure culture," so to speak. There

is no limit, theoretically, to this method of propagation. It is doing with grass what is extensively done in many branches of horticulture and even in agriculture. It is entirely practicable for lawn purposes, and may be for certain phases of field culture. That, however, is not yet proved. It is not probable that a meadow can be as practicably planted out as a tobacco field, but for certain purposes such planting is probably practicable. It certainly is on as large a scale as has yet been tried. My own door yard has been turfed from one original plant.

In the experimental plots the lawnmower, shaving closely, and the roller, imitate the close cropping and the trampling of animals.

Precisely how the Connecticut farmers are to best use the knowledge we are seeking I do not yet clearly know. That this addition to our knowledge of the habits and nature of many varieties studied and tested there will lead to practical results I have no doubts whatever. We are getting a very much better knowledge of turf and the conditions under which it develops than we have ever had before, and the importance of the study to the industries of this State none will doubt.

In discussing the merits of permanent grass lands I do not wish to be misunderstood as to the line of argument. I do not wish to underrate the other sources of forage or the value of these other forms which are produced in crop rotation. Seeded grass lands, clover, alfalfa, the various other crops grown for forage, have each their own value and will always be largely and profitably used. Connecticut farmers cannot do without them. I am discussing only one phase of the very large subject of forage for farm stock, not the relative value of each. I am discussing the influence of this one of the three ways in which broad acres are devoted to a continuous use for a long series of years. The three ways are by orchards, wood lands and grass lands. Of the three, probably the last is the most permanent, certainly more so than orchards. In nature and in the countries of our older civilization, grass lands are as enduring as even the forests are, probably more so, and are certainly more closely connected with farming industry. This stability and permanence carries its conservative influence into the business of the people, and its permanence into their prosperity.

The improvement of the many breeds of live stock in Great Britain, particularly of cattle and sheep, is intimately related to the permanent grass lands there. The Short-horns, the Ayrshire, Devonshire and Galloway among cattle, the Southdowns and Shropshires among sheep, each were evolved in connection with the pastures of the several districts.

The colonists to America had to make the pastures; there were no old pastures of tame grasses, and before old kinds could be established the generation had passed away that was familiar with them in the fatherland. The very term "grazer" died out here, although it continued in use abroad.

The competition of late in the West destroyed our cattle industry here, and the public sentiment in our cities and manufacturing towns prevented our increasing our flocks of sheep, but I believe that both will in time come back. The natural pasture lands of the West are now all occupied. The dairy interests will doubtless continue to grow in the State, and so the matter of permanent grass lands will continue to increase in importance here.

I will conclude this lecture by quoting the words with which I closed the other lecture alluded to, given before this board twenty-eight years ago, only substituting in the quotation grass lands for pastures: "I am convinced that the more it is considered the more important will seem this matter of well-kept and permanent grass lands, clothing our hills, adorning our valleys, beautifying the landscape, furnishing food for the present generation, and promising permanent wealth and prosperity for the future."

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## The Stock Interest.

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### EXPERIENCE WITH HOG CHOLERA.

EDITOR KANSAS FARMER:—I have read so much in your valuable paper on hog disease and other interesting subjects, and being a farmer and hog-raiser in a small way, I thought my experience might interest some one, as I have been interested and benefited by the experience of others. I take but little stock in the cholera germ so much talked about by learned professors, but am more inclined to believe it goes with the wind, if, in fact, it goes at all.

In my neighborhood we are not very thickly settled and each man raises hogs according to his individual convenience, some in large hog lots and some in small ones, but mostly in pens, from one to five years' standing, and there has never been a case of cholera or hog plague in the settlement or within ten or fifteen miles until this season, when some twenty herds were attacked within one week and one-half to three-fourths died within two weeks after the first being taken sick, and no two herds were handled exactly alike, but all died the same. Sick and well ran together and I do not believe that one out of each hundred was buried. They were scattered all around, and on the roadsides as well. The largest and fattest were first to go and then the young stock. Those that recovered or escaped were the medium-sized and in medium condition. Those in the small pens fared worst and fewer recovered. Such as had a run out or were turned out more largely escaped or recovered than the ones remaining in the pens. I think care was generally taken to take the dead far enough away so that those running out would not get to them.

Nearly or quite all were constipated on the start. Some turned to purging and some did not. Some ate tolerably well, others but little, and some none. The ones that ate lasted the longest. The more they ate the longer they lived. Few made much fuss about dying when they got ready. My largest died in about one week, the smaller ones from two to three weeks and one nearly a month. The younger ones (six or eight months old) showed lung trouble plainly before they died, and on examination the lungs were badly affected; no gall in any; no blood in the liver. Some were full of worms—the liver and stomach and in the intestines and in the kidneys. The worms were about the size of a darning needle and smaller. The liver was somewhat discolored in places, lungs badly. Inside of main stomach dark gray or brown, mold or moss-like; large intestines same, and in some were ulcers like small warts. The water passage on the belly of the males were enlarged or some swollen, and the bladders quite large and full. There was no discoloring of the belly or flanks, nor cough until the last day or two of those that lingered longest.

The disease set in immediately on the heels of a very warm and dry spell. All the hogs suffered badly with the extreme heat, then the wind turned to the east and blew strong and warm for two days. Ten miles east of us was plenty of cholera or plague, and not a herd escaped for ten or twelve miles west of it. Three miles south of the west line there was none. I had made a hog lot of one acre and sowed it with millet, oats, corn and sorghum. It stood a foot or more high, green and growing. I made a brush shade, two feet from the ground, open all round, for a shade. Water in troughs three times a day; none to wallow in. I fed two to three ears of corn twice a day, and my hogs were among the first to get sick. My large brood sow, heavy with pig and fat, suffered most from heat and was the first taken. I took her out and put her in a cool, close pen, but she got worse and seemed deranged and wanted out, and I let her out and she wandered round over the farm sev-

## 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

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eral days and died on one of her cruises. I had shut up my six-months pigs to wean, but let them out. In about a week they began to come down. Five out of the eight died (all males), one got well after a long pull, two sows skipped the disease. Two weighing about 125 pounds, in medium condition, recovered. They were in the lot with the old sow and are there yet. I cleaned out my pen and scattered lime and whitewash thoroughly and shut up the three remaining pigs and they are doing finely.

On first appearance of the sickness I got the prescription published in the FARMER as a cure or preventive, filled out, and fed it regularly every day for two months. I did not think it did much if any good, but I had bought it and was bound to feed it, kill or cure. I am giving small rations of salt, sulphur and copperas, now, once in two or three days. I think something bred the worms and the worms helped to breed or encourage the disease, assisted by the extreme heat. If there is any contagion about it it came in the east wind that came from the infected district east of us; but strong as it was, I don't think it brought any germs with it.

This disease or fatality was different from any I have ever seen among hogs. Stiffness, lameness and weakness in the back and hind parts of the young hogs, but not so with the older ones. Was more fatal among the pigs and shoats than older ones. Large and fat went first.

This is much longer than I had intended, but a full description was necessary if any, and if you think it worthy, you can publish it. Maybe your learned men (professors) may find some capital in it. Doctors must live out of or by their profession, but I do not see much good in them myself.

W. J. COLVIN.  
Belpre, Edwards Co., Kas.

### Some Experience and Some Inquiries.

EDITOR KANSAS FARMER:—There seems to be some hog cholera around. Some have been cleaned out of hogs almost entirely. Quite a good many are also losing hogs by worms. Sometimes, after the hog is dead, a double handful of long, hard worms will crawl out of the hog's nose and mouth, or on examination they will be found strung along in the entrails, almost blocking the passage. I think most of the hogs that have died around here died from worms rather than from cholera. In some cases post-mortem examination shows that these worms have gone through and are found near the liver.

Some of the remedies that I have heard proved successful, are, a can of concentrated lye in ten gallons of water, in which put shelled corn to soak, making both drink and grain ration for them. Another is to put crude petroleum in their slop. Either remedy seems to make unthrifty pigs do enough better to pay for the expense.

I would like to hear, from the KANSAS FARMER writers and readers, their remedies and experience with worms in hogs. My losses have never been more than a pig now and then.

I would like to know the best way to make the ordinary hedge fence hog-tight. My plan has been varied. Sometimes I throw hedge brush in un-

der and sometimes I trim up enough to tack on two or three wires. The latter way is a little more expensive but makes a little more presentable fence.

I would like to know what tariff or embargo we have to pay to Mexico on corn, wheat, hogs and hog and dairy products; also to other countries to which we ship or would like to ship, if not prevented by such tariff, either active or retaliatory. C. H. TITUS.  
Dwight, Kas.

The August (1896) number of *Modern Mexico* contains a schedule of Mexican import duties, from which the following list is taken:

2 cents for every kilogram, 2.2 lbs., cattle.  
2 cents for every kilogram, 2.2 lbs., hogs.  
1 cent for every kilogram, 2.2 lbs., corn, gross weight.  
5 cents for every kilogram, 2.2 lbs., wheat, gross weight.  
15 cents for every kilogram, 2.2 lbs., vegetables, legal weight.  
2 cents for every kilogram, 2.2 lbs., green fruit, gross weight.  
10 cents for every kilogram, 2.2 lbs., dried fruit, gross weight.  
75 cents for every kilogram, 2.2 lbs., preserved fruit, legal weight.

Minister Ransom informed the Department of State, under date of May 25, 1896, that the President of Mexico has issued three decrees making special exemptions and a reduction of the duties on corn imported into certain States of Mexico. These decrees are:

1. The Board of Beneficencia (charity) of the State of Tamaulipas, established under the auspices of the local government, is exempted from the payment of import duties on 20,000 fanegas (one fanega equals 1.54728 bushels) of corn, which may be introduced through Tampico, Laredo or Porfirio Diaz, and shall be sold at cost price in the towns of the State.

2. The Board of Beneficencia of the State of San Luis Potosi is granted exemption from import duties on 8,000 tons of corn, which shall be sold at cost price in the towns of the State.

3. A reduction of 50 per cent. on import duties is granted on foreign corn which may be introduced into the States of Campeche and Yucatan for consumption of the population, this privilege to continue in effect until December 31, 1896.

## Irrigation.

### PROGRESS OF IRRIGATION IN THE ARKANSAS VALLEY.

From remarks of John E. Frost, Land Commissioner, A., T. & S. F. railway, at the annual meeting of Kansas State Irrigation Association, at Great Bend, Kas., October 15, 1896.

It is now sixteen years since the little mill-race at Garden City, which has since become famous, suggested irrigation farming to the few adventurous spirits who had gone far beyond the region then considered the farming district of Kansas and commenced the first irrigation operations in this State.

In the spring of 1882 I brought out from Illinois a party of gentlemen to inspect the so-called irrigable lands in Finney county. I stopped with them a day in Topeka en route, and while there presented them to one of the leading citizens, who inquired our destination and purposes. When I told him we were going to Garden City to inspect the lands in that region with a view to investing there, he said: "Oh, yes, Garden City. Do you know why that place is so called?" And when we assured him that we did not his reply was: "In the first place, because there is no garden there, and in the second place because there is no city there." This rather dampened the ardor of our party, but we went on, nevertheless, and these gentlemen were among the earliest investors in that region.

At that time Sequoyah county, now known as Finney, had a population of about 600 people all told, and Garden City a population of about fifty souls, and it was a fact that there was no city there, and with the single exception of the Worrall farm, which had then been started, there was no garden there. Our State reports give no assessed valuation of property in that county at that time, it then being unorganized. I went there again two years later with some of the same gentlemen and we found that the hamlet of 1882 had become a little city, and gardens were

there, plenty of them. The population had then increased to 2,500, and although not assessed, a fair valuation of the taxable property of the county was not less than \$1,000,000. Ten years afterwards, in 1894, we had, to be sure, been through a boom which left us wiser than before it came, and some of the people of the little metropolis, which had then assumed metropolitan airs, and had buildings which are creditable to a place of 25,000, had lost some of the population which it had at the height of the boom, but the agricultural report of 1895, shows Finney county with a population of over 3,500 permanent residents. Its assessed valuation, although the area of the county had been considerably reduced, had reached \$1,600,000, the total valuation of its farm products for that year was \$400,000, and now we find that while the supply of water in the earlier irrigation ditches had been inadequate, the era of windmill irrigation had arrived, and the Arkansas River valley from the Colorado line to Hutchinson was spotted with windmill irrigation plants, and the reports of the State Board of Irrigation at this time show that there are now 2,600 of these plants in the State, of which, I presume, it is safe to say that 75 per cent. are in the Arkansas River valley.

I use the name Arkansas valley in its broad sense, as covering the immediate valley of the river and its tributary streams.

In this connection it is simple justice to say that these results are due largely to the example set by the irrigation farmers at Garden City, supplemented by the wise and efficient work of the Kansas State Irrigation Association, and especially to the zeal and untiring energy in the work of the promotion of irrigation interests by John H. Churchill, of Dodge City, its President, and E. R. Moses, of this city, Chairman of the National Executive committee of the National Irrigation Congress, and Judge J. S. Emery, of Lawrence, National Lecturer of that body.

A few years before irrigation was practiced in western Kansas there was a locality where a broad bottom spreads out along the Arkansas in eastern Colorado, about sixty miles this side of Pueblo. It has been known since the old days of the Santa Fe trail as Rocky Ford, on account of the Rock bottom in the river at that point. In the early days of which I speak, even before the construction of the railroad out there, an enterprising, stout-hearted farmer from McDonough county, Illinois, strong in his belief in the advantages and possibilities of the great West, had located at this point, and his house was a stopping place and his little store a source of supply on a small scale of the necessities of life for travelers along the historic trail. The stout-hearted, sagacious man to whom I refer was the Hon. Geo. W. Swink, now a member of the State Senate of Colorado. He took out a small irrigation canal at the point named, and about the same time similar small irrigation operations were commenced at Catlin, just above Rocky Ford, and at Las Animas, just below, similar work was in progress, and at the time I speak of, when the town of Garden City was so called because there were no gardens and no city there, not more than twelve to fifteen miles of irrigation ditches were in operation in the Colorado region referred to, and these small ditches were all there were between Pueblo and the Kansas State line, and even up to 1886, when the Lamar United States land district was created, the irrigation operations had increased very little.

I visited Colorado last week and inspected some of the canals in operation there. How changed the scene. There are in the three counties of Prowers, Bent and Otero, including 120 miles in eastern Colorado, about 700 miles of completed main canals in full operation. Extending along them we find farm after farm with their broad alfalfa meadows, their thrifty, branching shade and fruit trees, their flocks of cattle, sheep and swine, and as you ride down the valley from Rocky Ford to the Kansas line it is almost a continuous alfalfa meadow where the delightful

fragrance of the purple alfalfa blossom in its season is in one's nostrils for mile after mile, and the countless big stacks of alfalfa hay furnish a constant and incontrovertible evidence of the prosperity of the farmers and of the development of the great valley. And the alfalfa meadow does not cease, nor is the fragrance of its blossom lost, when we cross the Kansas line. We find both all the way down to Dodge City.

At the time when Senator Swink commenced his first crude irrigation operations no farming was being done in that region. The territory which is now included in the three counties of Otero, Bent and Prowers had a population, including the old town of Las Animas, which was the pioneer town, of perhaps 1,000 people, while to-day Otero county alone contains a population of over 8,000 and its assessed valuation for 1896 is \$2,686,310. The shipments of freight at Rocky Ford for the first nine months of this year were over 10,000,000 pounds, showing an increase over the same period of the previous year of about 1,200,000 pounds, while the express business from that point for the same period shows an increase of about 40 per cent. over 1895.

The total assessed valuation of property in Bent and Prowers counties is a little greater than that of Otero. The ratio of increase in population is very little less, while the agricultural output is constantly increasing, and the outlook for the settlement of the region named during the coming year is most promising; in fact, I am confident that its growth in 1897 will exceed that of any previous year.

In the last five years, in addition to the actual farming operations, some of the most valuable adjuncts to the business of farming have been added. At Lamar, the largest and best flouring mill in Colorado, with a daily capacity of 500 barrels, was constructed and has been in constant operation for several years back. A creamery is also in successful operation as well as a steam alfalfa-seed cleaning warehouse and also one operated by hand power. Flouring mills of about half the capacity each of the Lamar mill are in successful operation at Las Animas, La Junta and Rocky Ford, while creameries and canning factories are being successfully operated at the last named two points, and at Rocky Ford a box factory has been established this season, rendered necessary by the immensely increased shipments of melons and other fruit from that point.

This irrigation development of the past fifteen years has brought with it useful lessons. It has been a great school for farmers and for us who are keenly interested in their success. We have all been going to school, and there is no teacher whose lessons are so valuable as those of experience. There have been failures, many of them; mistakes, thousands of them; who of us does not make them? but from these mistakes and these failures let us learn wisdom. One great lesson that we have learned is, that the basis of successful farming in this great valley is stock-raising in its various branches and with its concomitants. Every farmer should have a bunch of cattle and hogs. Raise them yourselves. Stock feeders sometimes lose money. Their profits are dependent upon the market, but have any of you farmers ever lost money on a calf that you raised yourself and marketed? Have you ever lost money on a milch cow that you raised yourself? Sometimes your crops of corn, wheat, oats, alfalfa seed and hay are not as good as you would like to have them. Sometimes some of them almost entirely fail, but the calves always come in dry weather or wet weather. The calf crop is sure and your cows give milk whether the wind blows or the rains come or fall. The markets fluctuate; some years are more profitable than others, but so long as grass grows and water rains or can be pumped, you are not going to lose money on the animals that you raise yourselves. Do such ir-



"Cowards die many times before their death; the valiant never taste death but once."

There is such a thing as too much valor when the foe is an insidious one. The bravery that faces death on the battlefield is praiseworthy; that which courts death by a reckless disregard of the slow but sure advances of a deadly disease is the acme of foolishness. Consumption causes one-sixth of all the deaths in the world. In spite of this, thousands are to-day disregarding its insidious approach. Any trifling malady that results in disorders of the digestive organs, causing impure blood, emaciation and lack of vitality, may weaken the respiratory organs and make them susceptible to the assaults of the deadly germs of consumption. Dr. Pierce's Golden Medical Discovery will prevent all that. Moreover, after consumption has gained a foothold, it will cure it. It is the best blood-maker and blood purifier known to science.

M. I. Lumley, of Salem, Forsyth Co., N. C., writes: "I had La Grippe and it left me in a terribly bad condition. I had a distress in my stomach that constantly grew worse. I was taken with dysentery and nearly died. I finally recovered from that and got on my feet again. I then took Dr. Pierce's Golden Medical Discovery which completely cured me of indigestion. I can now eat anything without its distressing me."

The wail of womankind has been for a home medical book, written in plain, straightforward language. Doctor Pierce's Common Sense Medical Adviser fills this want and will be sent, paper-bound, absolutely free, for twenty-one one-cent stamps, to pay cost of mailing only. Or in cloth binding for ten cents extra. Address, World's Dispensary Medical Association, 663 Main Street, Buffalo, N. Y.

rigation as you can. If more or less, it pays. It will increase your crop yields in good years and save the crops in bad ones, but couple with your irrigation operations stock farming in some 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. 25c.

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

**HIGHLY ENDORSED.**—With possibly one exception there is no "domestic" magazine more widely or favorably known than *The Housekeeper*, of Minneapolis, Minn. From the standpoint of practical helpfulness to the housewife it is excellent. It is published twice a month, each issue comprising twenty or more large pages. The subscription price is only 50 cents a year. Here is what the Syracuse (N. Y.) *Herald* has to say about it: "No better woman's magazine reaches the *Herald's* table than *The Housekeeper*, published at Minneapolis. It is astonishing that the publishers of this excellent semi-monthly can give such good material for the price (50 cents a year). A woman understands a woman's needs better than a man. *The Housekeeper* is edited by women, and the material given within its columns twice a month is just the quality and quantity the housewife and homemaker desires. Women are interested in their sister housekeepers and *The Housekeeper* is filled with ideas contributed by its readers—ideas that will smooth the rough and ragged path of housekeeping. Covering every branch of home life as it does, *The Housekeeper* is an ideal woman's paper. It is ably edited and is easily the best housekeeper's magazine of the present day." The publishers will send a sample copy free to applicants.

Every season brings a new crop of cough remedies, but they cannot compete with that grand old Dr. Bull's Cough Syrup.

#### Home-Seekers' Excursions.

Very low rates will be made by the Missouri, Kansas & Texas railway, on November 8 and 17, December 1 and 15, to the South. For particulars apply to the nearest local agent, or address G. A. McNutt, D. P. A., 1044 Union avenue, Kansas City, Mo.

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# The Home Circle.

## THANKSGIVING DAY.

A sacred pause amid the din  
And turmoil of a world of care,  
The rush of life, the grinding mart—  
And lo! a nation bowed in prayer.  
Lord, put our worldly fears away,  
And grant a true Thanksgiving day.

A silence filled with holy awe,  
A consciousness of love divine  
That closes every murmuring lip,  
And shows how bright our favors shine.  
Oh, for a grateful heart to say,  
This is indeed Thanksgiving day!

A cool retreat where heated toll  
May wear upon his aching breast,  
For just one short and tranquil hour,  
The soul-reviving flower of Rest.  
O pearl of blessings let thy ray  
Extend to all Thanksgiving day.

A trusting place at which the past  
And present once again unite,  
To hold communion, close and sweet,  
With olden dreams of fond delight.  
Let not a grief-worn memory stay  
In sight on this Thanksgiving day.

A mount apart, whose summit gleams  
Above the vapors sharp and clear,  
Above the poisonous mists of earth,  
Within a heavenly atmosphere.  
Lord, meet us there, we humbly pray,  
In pitying love Thanksgiving day!  
—Julia H. Thayer.

## WIDOW HEBRON'S THANKSGIVING.

BY MARY ANNABLE FANTON.

[Copyright, 1896.]

Susan Hebron was not a widow when she started for the gold region one spring morning back in the seventies. She left Missouri with her husband, a pair of mules, a cow and two small boys.

Hebron was a man who was always nursing a cold and asking fatuous questions. On the way to the "Promised Land," as the Black Hills country used to be called, he acquired a fatal habit of sitting with his feet to the roaring camp fire and his back to the drafty tent flap.

After the mules were sold to pay the funeral expenses, the widow bowed her head, reflected, and subsequently gathered together the cow, the boys, her little remaining cash, and kept pluckily on towards the Mecca for which she had left the Missouri farm. She made many long visits at various ranches en route, where she cooked and served for her board; and finally, late in November, the mule train with which she was traveling went into camp just at the edge of Palmer's Gulch.

"Faro Jim," the best hand at a deal in all the northwest, was postmaster for the week at Palmer's Gulch; that is to say, it was Jim's week to saddle Jenny and hustle down to meet each of the passing mule trains which constituted the Black Hills mail service in those days.

When on this dull November day Jim dashed up to the wagon, designated by one of the train drivers as the "mail bag," and hastily pulling aside a turkey red curtain, he was greeted with a shrill shriek, and his eyes met, not a rusty old mail bag, but a charming widow in the act of combing a mass of shining brown hair and blushing furiously at the intrusion.

Seeing the confusion of the bronze giant, who seemed too stricken to even drop the red wagon flap, the little woman laughingly bade him to wait and she would pass out the bag, and warned him in the future to ring the bell instead of attempting to crawl through the window.

"Faro Jim" was not clever at repartee, and his only answer was to seize the bag and flee precipitately in search of the aforesaid driver, whom he only absolved from the "dandiest kind of a licking" on gleaning from him a curt biography of the lovely widow.

The camp was electrified with the news of Mrs. Hebron's proximity. Fully to appreciate their enthusiasm it must be borne in mind that up to this date Palmer's Gulch had lacked two essential features of civilized life—women and a cemetery.

The latter could be safely trusted to Providence, and the expected visit of "Poker Charlie," who was famous for advancing civilization along this particular line; but the woman question had been a serious problem, and the Gulch did not propose to lose a ready-made chance of settling it.

In ten minutes a committee of the best looking men in Palmer's Gulch had been selected to wait on Mrs. Hebron and urge her to pay the camp a visit at her

earliest convenience, and remain permanently if such were her pleasure. Where women have the charm of novelty, chivalry abounds, and Mrs. Hebron's trip on the following day from the mule train to the Gulch took on somewhat of the air of a triumphal pageant. The best cabin in the camp was placed at her disposal, and "Faro Jim" not only appointed himself commissary-in-chief, but actually milked the cow and parted with a box of his best poker chips that the smallest Hebron boy might "play blocks" to his heart's content.

Dave Holzman endeared himself to every man in the camp, except Jim, by suggesting that they indulge in a particular "layout" for the coming Thanksgiving. "Prunes and cove oysters and whisky may be good enough for the camp," he said, "but it ain't no fitten grub for women and children."

Uncomplimentary allusions were rife as to the right to existence of a store that "didn't keep no women's truck, nor playthings for kids, nor even a paper collar on draft!"

But Jim brought about peace and re-established himself in popular favor by volunteering to do the shopping at the nearest trading post in spite of the brewing storm and camp gossip that the Indians were "on the shoot."

The day before Thanksgiving the mule train that had been pressed into service to deliver "Faro Jim's" various purchases, drove into Palmer's Gulch and deposited at the widow's door a sitting-room carpet of flaming scarlet and yellow, a huge mahogany bedroom set, a box of playthings for the boys, and an assortment of bric-a-brac that would have delighted the soul of a Choctaw chief.

"Faro Jim," the driver said, had waited to bribe the agency cook for the only two chickens at the post. "But he might better not ha' done it," he added, "for the kinty is chuck full of snow drifts, and the redskins are ugly and making it lively where they can."

Thanksgiving dawned bright and stinging cold. It had cleared gloriously at daybreak, and the gorge for miles was a fairy landscape, brilliantly, dazlingly white from mountain top to river bed.

The trading post was half hidden in the drifts, and Jim wondered, as he started forth with the chickens firmly strapped to his saddle, if the boys had remembered to dig out the widow's cabin, move her wood pile close to the door, and milk the cow. As he cantered briskly away over the stretch of prairie which the gale had left bare of snow, he was conscious of two new and strange sensations; the irritation of a stiff paper collar about his brawny throat, and a peculiar fluttering feeling, as he would have expressed it, "somewhar down below the left shoulder blade."

He flung open his coat, and expanded his chest with a great breath of splendid mountain air, and as he settled back in the saddle his eyes were shining with a sudden rush of happiness. All unconsciously he had come into his birthright.

Self-analysis he was incapable of. The greatest joy of his life had come to him and he accepted it with the unquestioning delight of a child.

As Jim left the prairie road and struck the trail that led through the mountain gorge, the little pony picked her way gingerly from drift to drift and over crusting slopes. Jim did not notice that the snow had rendered an always bad road almost impassable, or that the sun was already making dangerous rifts in the ice-coated stream. Jim was in love. Dangers by land or water, or from the tricky red men, were not worth considering.

A faint, gurgling sound, like the far-away howl of a coyote drifted down the gorge. The pony shivered, slipped, floundered and righted herself in the drift; but Jim only smiled as he patted the frozen fowl and remembered the dandy poker game he had played to win them. The cook couldn't be bribed, but poker was too much for the agent.

A cry, like a wolf in sight of prey, fierce, broad, exultant, broke the death-like stillness, and echoed from mountain top to mountain top. This time the pony quivered convulsively, fell back on her haunches, and gighed as though in pain.

# Scott's Emulsion Is the Standard

emulsion the world over. There is not a man, woman or child who is run down, or emaciated, or has weak lungs, that Scott's Emulsion will not benefit. When you ask for it you will likely be told by the druggist that he has an emulsion "just as good." It is not true. No emulsion is as good.

50c. and \$1.00 at all druggists.

Jim's face blanched and icy fingers closed over his heart. For the first time in his rough, wild life he cared what the outcome of a fight with the redskins might be.

Again and again, behind him and on both sides, that awful cry rang out, sharp and resonant—a cry thrilling with the eager anticipation of bloody work.

Choking down a gasp of anguish and rage, Jim sent the spurs sharply into Jenny's sides. He would have liked better turning back and downing a half dozen of the skulking rascals; but that mean death, sure and quick, and Jim meant to try for the life and happiness that lay ahead of him up the gorge.

As yet the path seemed open, and the little broncho struggled bravely through drifts and over ice-cruled banks. With her rough shod feet her chances were fifty to a man's one.

The cries had ceased; but in spite of the distance that still lay between him and his pursuers, Jim heard the crackling of the pine branches, the soft, spongy sound a hundred moccasined feet on the snow, and he knew the war party was closing around him.

Jenny was weakening with fright and fatigue, and only the last dangerous slope and the broad icy river remained to be crossed. His only salvation lay in the little exhausted steed he had loved and petted for years. Laying his hand on her quivering, swollen neck, he whispered:

"Jenny, ole girl, don't fail me; pull us through, Jenny, Jenny, don't go back on a feller when he's just found out what livin' means, and who'll live better, so help him, if just once more he kin see her eyes a' laughin and her brown hair a-shinin in the sun. That's the girl, brace up; you're the best chum a man ever had."

Straining every muscle in response to the caresses, the plucky little beast cleared the last drift and struck the trail leading to the river. With a yell of rage the war party swept down the mountain sides, floundering with difficulty through the drifts. A bullet whizzed past the flying pony; a second partly severed a wing from one of the frozen chickens; then came another and another.

The savages would at least kill this quarry, if they were to be defrauded of the chance of torture.

Just as the bank of the stream was reached, Jim's right arm dropped useless at his side. It stung a little, and the blood made a scarlet trail on the road.

In a moment more the fugitives were on the river, and in spite of Jenny's cautious advance, the treacherous ice was quaking and cracking under every footfall.

In the middle of the stream a second shower of bullets greeted them, spluttering over the icy expanse—one clipping a hole in the crown of Jim's hat, while another struck poor little Jenny squarely in the heart. As she lurched heavily forward the ice gave way, and the water, deadly cold, surged over horse and rider.

For a brief moment, as he sank entangled in the stirrups, it occurred to Jim that the fight might be up. But once again at the surface, with the deftness of a man accustomed to desperate emergencies, he extricated himself from the saddle and by the dexterous use of his feet managed to float along the edge of the broken ice, testing the crust, as he drifted, with his one sound hand.

Little by little, exhausted by loss of blood and cold, Jim worked his way along, cautiously drew his body over the crackling edge, and crawled slowly and with great difficulty, to the shore. Once there the danger was past, for the In-

dians feared both the treachery of the river, and a possible ambush on land.

Bandaged and freshly dressed, smiling faintly at the attentions pressed upon him, Jim was the hero of the widow's Thanksgiving reception. At ten o'clock that night the light was still streaming through the cabin window, and the whole camp allowed, as it sought consolation over Jake's bar, that "Jim was altogether too precious a critter." Their spirits revived, however, when they reverted to the prestige that would accrue to the gulch from a genuine wedding.

### How to Clean Goatskin Rugs.

There are two methods of cleansing white goatskin rugs. If not very much soiled, wet a soft cloth with naphtha and rub the hair vigorously, doing a small portion at a time; then hang the rug upon the line in the open air that the odor may disappear. Do this work in the daylight and have no fire in the room while using the naphtha. If it is necessary to wash the rug choose a cool, windy day for the purpose. Throw half a pint of household ammonia into a tub containing about four gallons of water. Place the rug in the tub and allow it to remain there about 30 minutes; shake thoroughly in the water, rinse carefully in lukewarm water, and hang it in the shade in the open air. When dry it will be found very stiff, but may be softened by hard rubbing and combing with the fingers.—Chicago Tribune.

From time immemorial eggs have been the resort of the housekeeper surprised by unexpected guests. An excellent way to serve them is with a cream sauce. After the eggs are hard boiled dash cold water over them, and, when cooled, take off the shells. The cream sauce should be seasoned with chopped parsley or with curry powder.

## MEDICAL WISDOM.

### The Dreaded Consumption Can Be Cured.

T. A. Slocum, M. C., the Great Chemist and Scientist, Offers to Send Free, to the Afflicted, Three Bottles of His Newly Discovered Remedies to Cure Consumption and All Lung Troubles.

Nothing could be fairer, more philanthropic, or carry more joy in its wake than the offer of T. A. Slocum, M. C., of 188 Pearl street, New York city.

Confident that he has discovered an absolute cure for consumption and all pulmonary complaints, and to make its great merits known, he will send, free, three bottles to any reader of KANSAS FARMER who is suffering from chest, bronchial, throat and lung troubles, or consumption.

Already this "new scientific course of medicine" has permanently cured thousands of apparently hopeless cases.

The Doctor considers it his religious duty—a duty which he owes to humanity—to donate his infallible cure.

Offered freely, apart from its inherent strength, is enough to commend it, and more so is the perfect confidence of the great chemist making the proposition.

He has proved consumption to be a curable disease beyond any doubt.

There will be no mistake in sending—the mistake will be in overlooking the generous invitation. He has on file in his American and European laboratories testimonials of experience from those cured in all parts of the world.

Delays are dangerous. Address T. A. Slocum, M. C., 188 Pearl street, New York, and when writing the Doctor, please give express and postoffice address, and mention reading this article in the KANSAS FARMER.

The Young Folks.

THE FARMER'S THANKSGIVING.

The earth is brown, and skies are gray,
And the windy woods are bare,
And the first white flakes of the coming snow

He bows his head to the laden board,
And the guests they are silent all.
"Thanksgiving, Lord, for the sun and rain,

A THANKSGIVING SERMON.

It was the forenoon of the day before Thanksgiving that Mrs. Jack Hoven stood gazing out of the window.

Then her soul was equally harrowed, for she had that way of fretting over minor ills, over a long array of imaginary woes.

Added to the above woes the children had been clamoring for days for an observance of Thanksgiving.

She predicted a dark outlook for their future, filling the infantile minds with visions of ghastly want.

Unlike his mother, there was not one drop of melancholy blood in little Davy's swift-flowing veins.

little soul was proof against despondent infection.

As Mrs. Hoven stood looking out the window in brooding blueness, her husband came in from the barn and took a seat by the fire to warm.

"John Marsh passed just now," he said: "He says another one of the Green children died last night of diphtheria.

The door into an adjoining room where the children were playing was slightly ajar. A numerous little regiment were the Hoven children, and crowded close together in years.

"Say, Katie," he cried, "let's play Thanksgiving." If we can't have a truly Thanksgiving let's have a play one.

"Oh, we'll have a sermon, an' then go home an' have dinner. Katie can fix us up a nice Thanksgiving dinner.

"Oh, anything," returned the fertile master of ceremonies. "Katie can stuff it with her handkerchief if she can't find nothin' else."

"Will you preach the sermon, Davy?" "Yes, I'll preach the sermon. An' I'll try to preach a good one, too."

"But, Davy, dere ain't nussin' to preach erbout," said solemn little five-year Susie.

Davy had often accompanied his father to Grange lectures and to church, and he had heard Thanksgiving sermons.

The little company were soon in active preparation for their imaginary celebration. A pulpit was formed in one corner of the room by a circle of chairs, while a chair was placed inside for the speaker to stand on.

"My friend," he began, diving at once into his discourse in unceremonious disregard of preliminaries, "we're goin' to have a Thanksgiving sermon.

"Davy," interrupted Susie, "you must member one of de horses died."

"Well, Susie, I ain't sayn' nothin' 'bout dead horses. It's the live horses I'm talkin' 'bout.

Here this grateful minister halted in dead silence for an instant, as if a change of feeling had suddenly crossed his spirits.

"An' I tell you, my friend," he continued with a new animation, "I don't care one cent if half of them turkeys die of hog cholera, same's Uncle John's hogs did.

"No, it ain't wicked, Katie. You don't like turkey good's I do, or you wouldn't think 'twas wicked. Jus' think! We can't have jus' one turkey when we've got 23.

Here the orator paused. "Katie," he said, "is there anything else we've got to be thankful for?"

"Dere's our baby kitties," piped in little Susie.

"Oh, yes, I forgot the kitties," returned the informal preacher.

"An' our cellar full of apples an' good things," said Helen.

"Yes, goodness! I ought to a thought of them. An' now what is there we ain't thankful for?"

"Why, Romy an' the cow died, you know," said Katie.

"Yes, but that ain't but two things, an' we've got as many as 40 to be thankful for. I know what's the worst thing we ain't got to be thankful for.

The minister bounced down from the chair and the appreciative audience repaired to dinner.

The parents had been attracted to the play from the first, and had listened intently to every word of the sermon.

"Mary, what do you think of that sermon?" "I think," she returned, her face illumined with both laughter and tears,

KEYSTONE WOVEN WIRE FENCE. IS THE BEST FOR FARM USE. 25 and 28-inch for hog lots. 46, 55 and 58-inch for general use.

have. What do you say, shall we have a Thanksgiving, Jack?" "Yes, indeed, we will," he returned, springing from his chair with new alacrity.

Fifteen minutes later the whole house was in happy excitement and all hands busy in the work of preparation.

A stimulant is often needed to nourish and strengthen the roots and to keep the hair a natural color.

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All advertising intended for the current week should reach this office not later than Monday.  
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Address all orders—  
**KANSAS FARMER CO., Topeka, Kas.**

If our friends whose subscriptions will expire January 1 will bear in mind that the labors of our subscription department at that time may be lightened by early renewals, and take the first opportunity to send in their dollar bills, they will confer favors which will be greatly appreciated.

Reports of horses dying from "staggers" suggest that great care should be taken to avoid feeding wormy corn. Dr. Mayo will have an article on this subject in the FARMER next week.

The coincident liberal prices of wheat and low prices of corn are reported as having the effect of enlarging the consumption of corn and correspondingly reducing the consumption of wheat.

The volume of business in the United States for last week shows an increase of nearly 10 per cent. over the corresponding week last year and 9 per cent. over the corresponding week in 1892.

It is reported that the American nail trust has gone to pieces because it proved too expensive to buy up all of the outside manufacturers. A big reduction in the price of wire nails is predicted.

The foreign demand for American apples is this year a great one. Shipments to November 14 were:

This year, barrels.....	1,538,827
Last year, .....	332,972
Increase.....	1,205,855

The publisher of the *Kansas Sunflower*, the now famous "Becky Sharp's paper," has made arrangements with us whereby we can offer it and KANSAS FARMER one year for \$1.50, which is the price of the *Sunflower* alone. Send in your subscriptions to this office.

The *Youth's Companion* is one of the finest publications for young and also for older people. We can furnish KANSAS FARMER and *Youth's Companion* for \$2.35 for one year to new subscribers to *Youth's Companion*. Or we will renew subscriptions, with KANSAS FARMER subscriptions, at \$1.65, if sent direct to this office.

*Leslie's Illustrated Weekly* has always been and is now a \$4 paper, and worth the money if any illustrated paper is worth \$4 per year. But in order to accommodate our subscribers we have made arrangements with the publishing company whereby we are able to offer *Leslie's Weekly* and KANSAS FARMER both for one year for \$3.

The thirty-ninth annual meeting of the Missouri State Horticultural Society will be held in the opera house, Marceline, Mo., December 8, 9 and 10, 1896. One hundred dollars will be given in premiums. The Randolph and Alhambra hotels will give rates of \$1 per day to delegates. Railroads will give rates, providing 100 hold certificates.

**A MUCH-MENTIONED LETTER.**

Since the publication, recently, of the letter of Mr. C. Wood Davis, we have received a large number of letters with reference to it. A few of these have objected to the publication as too political. One has thought it of too little value for the space occupied. The great majority have ordered copies for friends or have otherwise commended the letter. We fully agree with those who object to the political features and have decided that for the future correspondents will be required to avoid all political allusions, and that political articles will be rejected, however much of other valuable matter they may contain.

The letter has attracted attention outside of Kansas, not so much on account of its politics as on account of its economic showing. Perhaps a fair consensus of comment on the important matters presented in Mr. Davis' letter is contained in the following, from the *American Elevator and Grain Trade*, of Chicago, the ablest journal of its kind published:

"Our old friend, C. Wood Davis, of Peotone, Kas., has been writing a letter to a Detroit man, which the KANSAS FARMER has been publishing in installments of six columns. It is chock-full of politics as well as of economics, and Mr. Davis evidently feels like bolting both parties. He denies that either side has told the truth about the cause of low prices, especially the truth about the low price of wheat; and he denies with characteristic vigor that the policies advocated by either party would help matters any; least of all the farmer, with whom prosperity must begin. And then he tells at length why prices of farm products have been low and why they must necessarily be high in the near future.

"We always like to read what Mr. Davis writes. He is tart as a lemon and yet his views are optimistic, from the farmer's standpoint. He believes the time is near at hand when farmers, as a class, will be the most prosperous part of the community, and, in fact, about the only prosperous part. And further, the farmer is to blossom out as a monopolist, because acres cannot be multiplied. In fact, Mr. Davis has been called the 'apostle of prosperity through starvation,' because he believes that the abundance of the past few years is only the result of fortuitous circumstances which have given an unusual amount of good crop weather. Were it not for this we would already be starving, or precious near it, Mr. Davis thinks. And he gives the figures.

"We cannot give the voluminous data in full on which the Kansas statistician bases his views. Briefly summarized, the world's wheat acres have increased about 1 1/2 per cent. since 1884, while the consumers of wheat have increased 18 per cent. Meanwhile the world's rye fields have shrunk nearly 4,000,000 acres. In the last fourteen years the world has seen ten phenomenal wheat crops, showing an aggregate excess of 1,259,000,000 bushels over what the normal production would have been. The four under-average crops averaged a deficit of only 65,000,000 bushels. The last four crops of the world's wheat have given an aggregate product of 663,000,000 bushels greater than it would have been had the yields since 1891 been no greater than the average of the last twenty-five harvests. He figures that the over-average product of wheat and rye in the three crops of 1893-94-95 has aggregated 1,090,000,000 bushels. Had it not been for this annual over-average of 363,300,000 bushels of wheat and rye the world would now be starving.

"And with corn. Twenty-five years ago Europe, with the Americas and Australasia, had 63,000,000 acres in maize. In 1895 the same regions had 115,000,000 acres, an increase of 82 per cent., against an increase of 36 per cent. in the bread-eating populations of European lineage. With cottonseed displacing corn and corn products, is it any wonder corn is low? But the world's requirements of wheat and rye will soon take acreage from corn, and, in Mr. Davis' view, the bicycle and trolley have come none too soon, for all food products, such as wheat, rye, corn, pork, beef, etc., must of necessity be much higher.

"Perhaps Mr. Davis is right, but there is a chance for him to be wrong. He was mistaken three years ago and he may be fooled again by meteorological conditions which will continue to produce over-average crops. Anyhow, we hope he won't insist on starving the rest of us in order to even up things with the farmer. We want him to relent when he gets wheat up to \$1.10 and corn up to 70 cents."

The Michigan Agricultural college is conducting a "Farm Home Reading Circle." The object is to furnish to the farmer, at his home, at moderate cost, such courses of reading as will be beneficial to him in his occupation and

at less cost than he can otherwise obtain it. The advantages of systematic reading are too well understood to need any argument on that point. The Michigan college has made a success of its work in this direction and has a continually growing circle. Membership in the circle is free to farmers residing in that State. To all others the fee is \$1. Full information can be had on application to Herbert W. Mumford, Secretary, Agricultural College P. O., Michigan.

**WHAT THE GRANGE DESIRES.**

The National Grange, after a session of ten days, at Washington, D. C., completed its work November 19. A very elaborate report from the Committee on Transportation was presented and adopted. It detailed many of the complaints against carriers, among them: "Elevator charges, manipulation of rates through 'milling in transit privileges,' cutting of export rates, so that the middleman can ship from the interior to the seaboard cheaper than the producers; the unintelligibility of rate sheets posted at railroad stations," etc. The report recommended several amendments to the interstate commerce law. Among them were these:

First—That the procedure in the courts to enforce the orders of the commission should be confined to the record made up of the testimony taken before the commission, and the order of the commission should be enforced unless the court shall find in such proceedings some material error prejudicial to the carrier which furnishes sufficient reason to refusing to enforce it.

Second—That the commissioners should have power to require, after investigation and inquiry, that the rates, facilities or practices involved in the case shall be changed, modified or corrected as specified in the order, so that when the commission has determined what is unlawful, it shall be its duty to prescribe what is lawful in respect to such rates, facilities or practices.

Third—That uniform classifications of freight articles should be established without delay and the commissioners required to conform to such classifications.

Fourth—That the commission should have power to require connecting carriers to establish through route for continuous carriage of freights, and make reasonable through rates for shipments over such routes, and in case of disagreement between carriers in regard to division of rate between them the commission should have power to determine the apportionment of through rate between several carriers.

Fifth—That the commission should have authority to determine and prescribe the form, contents and arrangement of the schedule and joint tariffs of rates required by the act, to be published and filed, and from time to time to change such prescribed form as may be found expedient.

Sixth—That the charge of higher rates on domestic tariff than on like service for through export traffic should be distinctly prohibited.

Seventh—That the commission should have authority to require the prompt filing of annual and monthly reports by carriers. The committee recommends the discussion of transportation matters generally, and particularly those arising from time to time in various localities in the local granges, and that our Senators and Representatives in Congress be asked, as occasion may demand, to take necessary action for removal of transportation abuses by suitable legislation.

A reciprocity resolution was discussed and tabled because it trenched on politics.

Notice the fine advertisement of the *Youth's Companion* in this and the three succeeding issues of KANSAS FARMER.

"BROWN'S BRONCHIAL TROCHES" are a simple and convenient remedy for Bronchial Affections and Coughs. Carry them in your pocket.

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

**DAIRYMEN MEET.**

The tenth annual session of the Kansas State Dairy Association convened at Abilene, on Wednesday morning, November 18. An attendance of seventy-five at the opening and 150 later in the day, presaged the best meeting in the history of the association. The Reception committee met the delegates, and comfortable quarters were found at the Pacific and Central hotels, where talk of separators, breeds, butter fat, dairy salt, and the prospect of an anti-oleo bill filled the lobbies.

So far there are eighty-eight entries of butter and cheese, and the different prizes offered amount to about \$500. Never has there been greater interest taken in this department.

Secretary Hoffman called the convention to order and read a letter from President Brandt, regretting that illness in his family prevented his attending. J. E. Nissley, ex-President, was chosen chairman, and M. L. Hoffman offered the invocation.

Hon. J. R. Burton, on behalf of the Abilene citizens, welcomed the visitors. He lauded the association's work in giving the people pure butter and in developing a great industry that had done so much for Dickinson county. Mr. Burton stated that butter from this county could be laid down in a foreign market at a transportation charge of 2 cents a pound, whereas twenty-five years ago it would cost 6 cents a pound to transport the same to Kansas City. He also stated that Abilene had been very much depleted after the boom subsided, but at the present time there was only one empty store in the city, and the credit for this change must be given to the dairy business, that has been developed in the last few years. Mr. Burton believes that we should have not only pure butter but pure food of all kinds, and that the people should inform their representatives what sort of legislation is demanded.

In the absence of Mr. Fuller, of Atchison, the response was given by Mr. Hill, of Kansas City, who said some nice things about the delegates present and also the people of Abilene.

**PRESIDENT BRANDT'S ADDRESS.**

President Brandt's annual address was then read by the Secretary, Mr. Hoffman. In substance he said:

We are here to confer as to mistakes, errors, successes, etc., and crystallize our theories. The milk business was a few years ago considered a small, dabbling affair. Yet in the United States, the milk industry amounts to one-seventh the value of farm products and is preceded only by meat, corn and hay; wheat has the fifth place. The total value of milk products in 1889 was \$411,976,532, an increase of 200 per cent. in thirty years. Kansas in twenty years has, however, advanced only 2 per cent.

Trained dairymen is one of the great needs of the State, men and women who understand the business from the bottom. To secure these we should have a State Dairy school and a committee should be appointed by the Association to work to that end.

He called attention to the need of legislation against oleomargarine. At the last session of the Legislature a bill in favor of the butter-makers "passed the Senate and was lost in the House." Mr. Brandt hoped that Mr. Leedy, the Governor-elect, would work in harmony with the dairymen.

More hearty co-operation between patrons and proprietors of creameries was urged and an improvement in the quality of cows was advocated to get better results. He predicted that the increased prosperity coming to the nation will bring better prices for butter and that an era of better returns is ahead.

Mr. Brandt has been Secretary two years and President one and has made a most estimable and capable officer of the association.

The first paper of the session was read by Mr. C. O. Musser, of Abilene, on the practical use of artificial refrigeration in the average creamery. Many points were brought out by Mr. Musser, showing that refrigeration without ice has many advantages, the chief ones being dry air and a saving of room, also it is easier to regulate the temperature and maintain it near the freezing point, and even below, than



by any other method. To get the most benefit from this system the room should be well insulated. Anhydrous ammonia is the agent used.

An important subject to Kansas dairymen was advanced in a paper by Mr. Frank Trauger, of Herington, on the question, "Can Kansas Compete Successfully With Eastern States in the Production of Cheese?" Mr. Trauger stated that with the same care of cows, and intelligence on the part of the cheese-maker, as good an article can be made here as in New York or Wisconsin. Mr. Trauger said that at his factory he made one pound of cheese from 8.41 pounds of milk, and that Mr. John Bull, of Ravanna, had made one pound from eight pounds of milk on buffalo grass. He stated that the cheese made by Mr. C. B. Merry, of Nortonville, from cheap feed and on land valued at only one-half as much as that in the older cheese States, had sold nearly as high as cheese made east of the Mississippi river. With these points in our favor, the question of quality is the principal factor. With a reputation for honest goods, Kansas should be a competitor in the markets for a good share of the cheese trade, of at least our own country. Mr. Monrad, of Chicago, stated that we would be handicapped somewhat on account of dry atmosphere, although by supplying artificial moisture to our curing-rooms we might compete successfully with other dairy States. Mrs. Parvin, of Larned, thought there was a future for cheese-makers in this State, from the fact that we were protected in marketing largely by home consumption, thereby saving transportation charges. Mr. Monrad said, further, that our grasses would make as good cheese as made anywhere in the world. Mr. A. G. Eyth, of Enterprise, says he has as good curing-rooms as can be found in the most modern cheese factory.

"Mottles in Butter," was a subject presented by Mr. F. S. Hurd, of Meriden. This is one of the most serious questions in the manufacture of perfect butter. Unequal distribution of salt was one of the prime causes. Salt should be thoroughly dissolved before the working is finished. Freezing butter does not produce mottles. Mr. Eisenhower thought the temperature of the water used in washing the butter was one of the principal causes. Dr. Eyth stated that two workings would do away with mottles. Mr. Erb said he had been troubled with mottles and could not find the cause. A general discussion brought out the fact that lack of working caused mottles, and also by not thoroughly dissolving the salt.

"Have We Derived Any Benefit From the Use of Butter Cultures" was opened by E. C. Lewellen, of Newton. The only culture I have experimented with was "B 41," and we were supposed to make butter from it which would sell on the market for at least 2 cents a pound more. It did not do it. Dr. Eyth said he preferred to use starters or cultures made by himself. Mr. Hoffman said he did not believe they had received any benefit from the advertised butter cultures. A general discussion showed a good deal of difference of opinion. Some were heartily in favor of cultures, others preferred starters made by themselves. Mr. Monrad said benefits had been received from commercial cultures. Commercial starters are more uniform, and if we ever expect to get a good export trade we will have to use pure cultures, a very difficult matter with home-made cultures. Eighty-five per cent. of Danish creameries use commercial cultures. J. L. Hoffman stated that American butter was better than Danish butter, and received his information from an Englishman who is importing butter.

Prof. Haecker, of Minnesota, said that the one thing needful in many of the Western States was good dairy knowledge among the producers of milk, as well as in butter-making. His idea was that each State should appropriate some money for that purpose.

"Comparative Profits of Milk Production With the Agricultural Products," was the subject opened with a paper by Mr. E. O. Adey, of Minneap-

olis. It depends considerably on location. In some places, where grain crops are abundant, it may show a different proportion. But on an improved Kansas farm there was no question that the milk product is the best paying. By selection he had nearly doubled the capacity of his herd. One instance: From April 1, 1896, to October 1, 1896, fourteen cows furnished 42,687 pounds of milk. Time will not increase the production of wheat per acre, but the outlook for the bettering of creamery cows is first-class. His paper closed with the following, which was highly applauded:

"Corn in the corn crib,  
Chickens in the yard,  
Meat in the smoke-house,  
A tub full of lard;

"Milk in the dairy,  
Butter by the load,  
Coffee in the box  
And sugar in the gourd;

"Cream in the cream pitcher,  
Molasses in the mug,  
Honey on the buckwheats—  
And cider in the jug."

"Are Skimming Stations a Success?" was the subject of J. K. Forney's paper. He held that it had been a most successful and practical plan in connection with the Belle Springs company's plant, and advised it as a feature of all creameries which are conducted on a large scale.

Prof. T. L. Haecker, of the Minnesota Experiment Station, gave a long address on "Cost of Producing a Pound of Butter." He is one of the most skillful butter experts of the West and his words were listened to with interest. He showed how the cost varies with good or bad management and presented one of the best papers of the session.

Geo. Morgan, of Oak Hill, handled "Dairying for Profit." He said many cows, through the winter, had no other feed except what they picked up in the stalk field. One farmer was referred to who had 2,500 bushels of corn, but had no time to give it to his cows. A few years ago another farmer said that corn was too high to feed to cows. And in either case, with many dairymen the cow was obliged to hunt her own feed and still furnish a good yield of milk. Cows were cited that only produced \$1.50 worth of milk per month when sold to the creamery, and all for the lack of proper care.

Mr. D. S. Brandt, of Newton, talked on condition of milk delivered at the creamery, insisting on cleanliness and good care. Mr. Brandt said he had known milk to be sour when delivered to the factory, in three hours after being drawn from the cow. He gave some good advice in regard to cooling milk. The main cause of bad milk was in closing the can over night and in mixing warm milk with cold.

Prof. Haecker stated that he raised good heifer calves by feeding three weeks on fresh milk, and then gave only separator milk, with the addition of from a teaspoonful to a tablespoonful of ground flaxseed at each feed. The milk was given warm from the machine and the flax meal added without scalding.

The afternoon session of Thursday was devoted to three addresses by experts from three States. They were: Prof. Curtis, of Ames, Iowa; Prof. Georgeson, of the State Agricultural college, and Prof. Haecker, of Minneapolis, Minn. The first talked on the best breed of cows; the second on work in the college on dairying, and the last on "To What Extent Can Butter Fat Be Influenced by Feeding?" The addresses were able and helpful throughout.

Mr. J. E. Nissley read one of the best papers offered at the convention, entitled "Looking Backward," and Mr. J. H. Monrad read a similar one on "Looking Forward." We hope to give both of them entire at some future time.

Secretary Coburn, of the State Board of Agriculture, gave a very interesting paper, which he was pleased to call "Let Us Get Better Acquainted With the Cow." Mr. Coburn said, among other good things: "I claim that the cow is a vastly better institution than most of us give her credit for; that it is in her power and is her pleasure to do much more for us than we as yet permit her to do, through doing a little more for her. If she, with the care we

might well bestow on her, and the feeds we raise in a profusion unsurpassed anywhere else on earth, can yield us milk containing 200 or 300 pounds of butter fat in a year, it is a folly well-nigh wicked to be satisfied with a yield only half as great; if by churning her cream with brains the product will sell for 12 instead of 6 cents per pound, or 20 cents instead of 10, we owe it to ourselves to put in the requisite brains. Here and there men are doing this, and wherever and whoever they are they have money; their conditions are improving and they are not talking of emigrating. They are here to stay, and will build up the country by building up themselves. Free coinage, 16 to 1, will be the medium; free coinage of golden butter and cheese, at the ratio of sixteen ounces to one pound. The people of this county of Dickinson more than those of any other in the State have caught the inspiration, as the assessors' returns show 21 per cent. more milch cows here than its closest competitor in dairying has, and a dairy output 24 per cent. greater in value the past year than any other county in Kansas. Furthermore, while there has been a slight decrease in the number of cows (probably gone to do missionary work elsewhere) the value of the county's cow products, spite of falling prices, has shown an increase of about \$110,000, or 65 per cent. Neither crop failure nor the 'crime of '73' have prevented the cow-owners of this county from jingling in their pockets more than a quarter million of good 100-cent dollars received for milk during these 365 days of depression. I am loyal enough to Kansas and to those who have been my fellow citizens during all the years of my manhood to maintain that any good thing in an agricultural way that the Danes can do in Denmark, the Canadians in Canada, or the Norwegians in Minnesota we can do in Kansas—not only as well but a good deal better. What Dickinson county is doing other counties can do, I and believe ought to do. We want to get out of the slough and into the sunshine. Our horses and our oxen have not taken us there as we hoped and my suggestion is that we now try hitching the cow on in front. The fact that the sworn assessors' statistics show that during the past ten years the average value of the Kansas milch cow's annual dairy product—making no account of her calf—has been but \$7.70, persuades me that we are not on such terms of profitable intimacy with her as our hard-up condition warrants."

Mr. C. O. Musser secured the gold medal offered by Wells, Richardson & Co. on their butter color; score 98. The second prize went to Messrs. Brandt & Essley, of Canton; score 97. Mr. Henry Van Leemven, of Effingham, scored 99 on cheese, as did A. G. Eyth, who scored 99 on his two exhibits of Brie and Minster cheeses. Mrs. E. H. Parvin took second prize on her cheese; score 98. There was one exhibit of dairy butter furnished by Mrs. D. Hall, of Ellinwood; score 94. Altogether there were 104 entries of butter and seven of cheese. The average score of all the butter was 93.91, which is somewhat better than in former years.

The prize butter was made from cream that tested 32 per cent. of fat and was churned at 52° and finished at 55°.

Mr. A. W. Patch, of Boston, was the expert judge on butter, and Mr. C. W. Stephenson, of Chicago, on cheese.

The prizes which went to the Belle Springs company were: From Creamery Package Co., 250 butter tubs, \$62.50; cash to C. O. Musser, \$12. From Wells, Richardson & Co., gold medal to C. O. Musser, \$50. From Genesee Salt Co., cash, \$25. From De Laval Separator Co., cash, \$15. From Standard Oil Co., twenty gallons oil, \$6.40. From Hutchinson Packing Co., gold, \$10; fifteen sacks salt, \$20.

Officers were chosen as follows: President, J. L. Hoffman, Newton; Secretary and Treasurer, J. K. Forney, Abilene; Assistant Secretary, F. S. Hurd, Meriden.

The resolutions adopted say the association has met in the leading dairy county of the State, and viewing the

prosperity the members are inspired in pushing the work. They extend hearty thanks to Abilene for the entertainment given; to Dr. Hawitt, C. H. Pattison and J. K. Forney and the committees for their work, also to the professors from Iowa and Minnesota; thank Secretary Coburn for his book on "Cow Culture" and endorse his work; favor an anti-oleomargarine bill; ask a State dairy school at the Agricultural college; commend the State Board of Agriculture and pledge the association's effort to prevent its being used as a political machine.

A resolution endorsing ex-Gov. Hoard, of Wisconsin, for Secretary of Agriculture, was adopted, and J. R. Burton requested to present it to President-elect McKinley.

### HALTING.

It is important that farmers as well as other business men keep well informed as to developments likely to affect values. In the following brief excerpts from Henry Clews' circular of last Saturday will be found his serial statement of the situation. His reasoning on these several points is necessarily omitted on account of length. But with the statements of fact before them our readers will be able to do the reasoning act about as well as it can be done for them. Mr. Clews opens his circular with this statement:

"In the investment and speculative departments of Wall street, the past week has been one of partial reaction."

Following some comment upon this, there are six numbered statements, each of which is amplified at considerable length. We give here only the bare statements:

"(1) There has been already a quite considerable advance in prices.

"(2) The realizing has been quite important in amount and of a somewhat unusual nature.

"(3) There has been no spurt in the volume of general trade corresponding to what had been somewhat prematurely expected as an immediate result of a sound money victory.

"(4) For the reasons just referred to, there has so far been no material for any striking increase in the earnings of the railroads.

"(5) The interruption of imports of gold has continued longer than was expected by not a few of the habitues of Wall street.

"(6) This gold question, however, has a doubtful side as to the foreign markets for our securities. Further advances in the Bank of England rate of interest are expected and intimations come from London of a possible 6 per cent. rate for a few weeks, while Kaffir stocks are again making trouble."

### How to Make a Little Money!

Send eleven (11) 2-cent stamps to the Watt Manufacturing Co., 47 E. Third St., Cincinnati, O., who will send you by mail a "Morris Towel Rack," a wonderful dainty household article that is screwed into the wall, and by a button fastens the towel securely so it cannot be pulled out or fall out. It is nickel-plated and very ornamental. With this sample go around and take orders, and you will be surprised to see how many people want just such a useful thing. Most families will buy five or six of them, so every person can have his own towel and towel rack; saves washing as the towels do not lie on the floor. Any lady or gentleman can easily make from \$6 to \$8 a day by canvassing with this little wonder. The stores will buy them as well as the families. It is much easier to sell an article like this that does not cost much, as everybody will buy. Our readers should secure the agency for the "Morris" at once.

### 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.

## Horticulture.

### OBSERVATIONS ON THE CARE OF FRUIT TREES.

By Prof. L. H. Bailey, in Bulletin 102, Cornell University Experiment Station.

(Continued.)

Tillage should generally be stopped in late summer or very early fall. The tree has completed its growth. It must now ripen and prepare for winter. It can spare some of the moisture which comes with the fall rains. We may, therefore, sow some catch or cover crop. This crop will, if properly plowed under, greatly improve the mechanical condition of the soil; its roots will catch some of the leaching nitrates, of which the roots of the trees are now in little need; it will catch the rains and snows of fall and winter and hold them until they gradually percolate into the earth; it will prevent the puddling and cementing of the soil during winter; it will dry out the soil quickly in the spring, if the plant is one which survives the winter and starts early into growth, thereby making very early tillage possible. What this cover crop shall be must be determined by local conditions. It is probable that better results will be attained if different crops are used in different years, in a rough sort of rotation. Crimson clover is certainly one of the best. This is an annual. If sown too early, it becomes too mature in the fall and kills out; if sown too late, it secures insufficient root-hold and is killed by the winter. We now think that about the middle of July or the first of August is the safest time to sow it, under normal conditions, in this latitude. Other good cover crops are peas, vetch, and possibly, now and then a year's crop of field clover. Oats, sowed corn, rape, spurry, buckwheat, rye, may be used occasionally.

Begin to till when the orchard is planted, and till the entire surface. If trees are properly set and if cultivation is begun the first year, the roots will go deep enough to escape the plow. The roots of trees spread much farther than the tops. I will give some examples from trees of which we have carefully measured the tops and roots. We have a standard Howell pear tree set in 1889. It grows on a hard clay knoll. The full spread of the top is seven feet. Two roots were laid bare, and they ran off in one direction to a distance of twenty-one feet. Assuming that they ran an equal distance in the other direction, the spread of roots was forty-two feet, or just six times that of the top. And yet it is commonly said that the spread of roots and tops is about equal! Now, these roots were long and whip-like. The soil was so poor that they were obliged to search far and wide for pasture. Compare with this a Fall Orange apple, set in 1889, in rich, well tilled soil. Here the roots are in good pasture and they remain at home; yet their spread is twice that of the top. The top of this tree had a diameter of eight feet, and we were able to follow the roots eight feet upon the side in which we dug. These object lessons enforce the importance of tilling all the land between the trees.

But these figures teach another lesson. Even at their highest point, the roots of the pear are eight inches below the surface. They escape the plow. A like remark applies to the Fall Orange apple. Now compare with a tree the same age as the others, which has always stood in sod. The roots ran ten feet in one direction and the total spread of the top was six feet; but the roots lie just underneath the surface. This land could not be plowed without great injury to the tree. Let us consider the relation of this tree to moisture; the roots are in the driest part of the soil; the grass is pumping out the water and locking it up in its own tissues and sending it into the atmosphere with great rapidity; the soil is baked and pulls up the water by capillary attraction and discharges it into the air; there is no tillage to stop this waste by spreading a mulch of loose and dry soil over the earth. If one were to sink a well under this tree and were to erect a windmill and pump, he could

not so completely deprive the tree of moisture! And the less moisture, the less food!

Cultivate in such manner that the land will be in uniform fine tilth. Every good farmer knows that the value of his crop depends more upon the tilth of the soil than upon the richness of it. Fertility is largely locked up in poorly tilled lands. Orchards which are plowed late in spring are usually in bad condition all the season, especially if the soil is clay. Fall plowing upon stiff and bare lands is apt to result in the puddling of the soil by the rain and snow; if there is sod on the land, this injury is less likely to follow. In general, it is best to let orchard lands pass the winter under a catch crop.

Lack of available plant food is unquestionably the cause of much of the failure of orchards. This fact is strongly emphasized in Bulletin 103, which shows that apple trees on a single acre may use, in the course of the twenty most productive years, over \$400 worth of nitrogen, potassium and phosphorus; and if the owner wants large crops, the trees must have a still larger amount of food. The soil itself is a great storehouse of plant food, and this treasure is unlocked by the judicious tillage which I have recommended; but plant food must also be added to the soil if the best results are desired. It should be said, however, that no amount of fertilizer can atone for neglect of cultivation, for unless the soil is in congenial mechanical condition the plant is incapable of utilizing the food which may be applied. The better the tillage, the greater the benefit which comes from the use of fertilizers.

There is much yet to be learned respecting the fertilizing of orchard lands. In general, nitrogen can be supplied in sufficient quantity by thorough tillage and the use of occasional cover crops of crimson clover, peas or vetch. In fact, it seems to be easy to apply too much nitrogen on some lands, causing the trees to make a too heavy growth. Young trees make light drafts of potash and phosphoric acid, and it is probable that apples and pears do not need much fertilizing on good soils for the first three or four years, if they are given good cultivation, unless other crops are grown with them. But just as soon as the trees show an inclination to bear, judicious applications of mineral fertilizers may be made. If this fertilizing is begun thus early in the life of the orchard, and if the tillage is good, the applications need not be very heavy, but they should be applied every year. Two or three hundred pounds of high-grade muriate of potash, and an equal weight of some high-grade phosphate (as Florida or South Carolina rock or fossil bone) may be considered to be good dressings. Stable manures are excellent, but they are so seldom to be had in sufficient quantity that they are practically beyond reach. A leading virtue of the stable manures is the vegetable matter which they contain and which puts the soil into good mechanical condition; but this fiber can also be had by the use of cover crops.

In nursery lands, the soil is injured in its mechanical texture by the methods of cultivation and treatment. The best nursery lands are the "strong" lands, or those which contain a basis of clay, and these are the ones which soonest suffer under unwise treatments. The nursery land is kept under clean culture and it is therefore deeply pulverized. There is practically no herbage on the soil to protect it during the winter. When the crop is removed, even the roots are taken out of the soil. For four or five years, the land receives practically no herbage which can rot and pass into humus. And then, the trees are dug in the fall, often when the soil is in unfit condition, and this fall digging amounts to a fall plowing. The soil, deeply broken and robbed of its humus, runs together and cements itself before the following summer; and it then requires three or four years of "rest" in clover or other herbage crop to bring it back into its rightful condition. This resting period allows nature—if man grants her the privilege—to replace the fiber in the

soil and to make it once more so open and warm and kindly that plants can find a congenial foothold in it.

(To be continued.)

### THIRTIETH ANNUAL MEETING.

Kansas State Horticultural Society--December 9, 10, 11, 1896.

The following address and program of this old and useful society will be read with interest:

To Kansas Farmers and Horticulturists:

Horticulture in Kansas has entered a new era and our horticulturists have gotten down to business. Thirty years of experience have not been wasted among such progressive people. We think this a business program. It contains no reminiscences, no "looking backward." The six day sessions will be given entirely to business, and the three evenings to instructive entertainment. The society now occupies three beautiful rooms in the capitol, and takes its rightful place as one of the leading educational and industrial bureaus of the West. Our meeting at Lawrence, a year ago, and the summer meetings at Iola and Oswego, being so largely attended, show the larger interest our horticulturists have in increasing their horticultural knowledge. We expect a still larger attendance and greater interest and satisfaction in this annual for 1896. No progressive horticulturist in Kansas can afford to neglect this great opportunity fostered by the State for his benefit. Come, everybody, and make the annual meeting of 1896 memorable in the "annals of Kansas."

Wednesday, December 9, 1896.

MORNING SESSION, 9 O'CLOCK.

Prayer, by Chaplain G. W. Burge, of Lincoln Post, G. A. R.

Reading of communications.

Appointment of temporary committees.

County fruit reports.

AFTERNOON SESSION, 1:30 O'CLOCK.

County fruit reports (continued).

Revision of fruit lists.

EVENING SESSION, 7:30 O'CLOCK.

Address of welcome, Hon. C. A. Fellows, Mayor of Topeka.

"A Practical Fruit Farm," A. Chandler, Argentine.

"Co-operative Marketing," W. D. Cellar, Edwardsville.

Reports of officers.

"Forestry for Western Kansas," S. T. Kelsey, Kawana, N. C.

Thursday, December 10, 1896.

MORNING SESSION, 9 O'CLOCK.

Reports of standing committees.

Revision of constitution.

Election of officers.

Business discussion—"Good of the Society."

AFTERNOON SESSION, 1:30 O'CLOCK.

Revision of fruit lists (concluded).

Revision of fruit manual.

Horticultural discussions on planting, cultivating, spraying, etc.

EVENING SESSION, 7:30 O'CLOCK.

"Glass in Horticulture," William H. Barnes, Topeka.

"The Monster in Horticulture," Hon. Edwin Taylor, Edwardsville.

"Good Times for Everybody," Miss Lucy D. Kingman, Topeka.

"Hardy Garden Flowers," Prof. E. A. Popenoe, State Agricultural college.

Friday, December 11, 1896.

MORNING SESSION, 9 O'CLOCK.

Revision of fruit manual (concluded).

Horticultural discussion on evaporating, marketing, storing, etc.

AFTERNOON SESSION, 1:30 O'CLOCK.

General horticultural discussion (continued).

EVENING SESSION, 7:30 O'CLOCK.

"Grapes and Apricots."

"Cold Storage," George Richardson, proprietor of a successful cold storage at Leavenworth.

"Birds in Horticulture," Prof. L. L. Dyche, State University.

"Pear Culture," B. F. Smith, Lawrence. Adieux.

All railroads interested have agreed upon a uniform rate of one and one-third fares for round trips, on the certificate plan, provided 100 are in attendance by rail. Be sure to get a certificate from the agent when buying your ticket, and hand it to the Secretary on arrival.

Topeka has ample accommodations for everybody. Board and lodging may be had at its hotels at from 70 cents to \$2 per day. Restaurants furnish good meals at from 15 to 25 cents, and lodgings at 25 to 50 cents. Board at private houses can be had at reasonable prices. Inquire of the Acting Secretary.

Exhibits of fruits, vegetables, flow-



The papers are full of deaths from

## Heart Failure

Of course

the heart fails to act when a man dies, but "Heart Failure," so called, nine times out of ten is caused by Uric Acid in the blood which the Kidneys fail to remove, and which corrodes the heart until it becomes unable to perform its functions.

Health Officers in many cities very properly refuse to accept "Heart Failure," as a cause of death. It is frequently a sign of ignorance in the physician, or may be given to cover up the real cause.

WOMAN'S  
**Safe Cure**

A Medicine with 20 Years of  
Success behind it . . .

will remove the poisonous Uric Acid by putting the Kidneys in a healthy condition so that they will naturally eliminate it.

ers, roots, bulbs, seeds, trees, traps, pickers, pruners, sorters, dryers, sprayers or other articles of use in horticulture will be welcomed, especially such as can be made at home by the people. While circulars and advertising matter may be distributed, yet none of the society's time can be allowed to advertisers. The society will have a quantity of fruit on exhibition from cold storage, having taken special care to place many varieties in cold storage for exhibition at this meeting.

Thayer's Berry Bulletin for December.

Who should grow berries? First of all, farmers everywhere, for family use. Farmers must grow berries or do without. No one can grow them so cheaply as he. They may be produced ready for picking at 2 cents per quart. The farmer saves cost of picking, packing, boxing, crating, freight, express and profits of growers. He gets them at first cost, fresh from the vines, and to the extent of his own family, has the best market in the world—a home market. He can select the best land and location on his own farm, and is sure of a profit with half a crop.

Farmers can never have ideal homes without the fruit garden. It teaches the lessons of intensified farming, and results in better tillage, larger crops, better stock and improved methods in every way. Good gardens and poor farms never keep company long.

The growing of berries for family use is easily done. The growing of berries largely, and selling them in good market, requires considerable skill and a special business tact. Only those who have good location, good market and a taste for the business should attempt it. Many small farmers so situated are making a success by commencing moderately and increasing acreage from season to season as experience warrants.

Berries should be grown by owners of all village homes, and acreage property in city and village may be profitably used for that purpose.

The market gardener selling his own products can often make an acre or two of berries very profitable. They are suitable companions for their vegetable friends, and sell well together.

The business or professional man, almost broken with care, may recover health and strength in the pleasant walk of horticulture. It is restful to both mind and body.

Many women dependent on their own efforts are securing substantial aid from their garden; berries and flowers thrive best under the gentle touch of women.

Many a bright boy may receive his

first incentive to business and earn his first money by growing berries or vegetables. Give them a patch of ground and encourage them in this work.

The amateur growing berries for pleasure also gets close to the heart of nature, and in common with every worker of the soil may receive her smile.

### In the Dairy.

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

#### CHOOSING A DAIRY COW.

"Among the points to which attention should be given in making choice of suitable cows for a butter dairy, the digestive organs are important. Where these are defective good milch cows are rarely met with, since these organs have a powerful influence, not merely on all the functions of the body, but more especially on the secretion of the milk gland," says *Farm and Home*. "A good state of the digestive organs is shown by a moderate-sized belly, with yielding sides; a large mouth, thick and strong lips, a good appetite, easy and quick digestion, glossy hair, supple skin, with a kind of unctuous touch. The constitution should be sound, and this is implied by large lungs, a broad and prominent chest, a somewhat slow respiration, and a great inclination to drink—an inclination stimulated by an abundant secretion of milk. Preference should be given to a cow with small bones, fine and slender limbs, and tall fine at the base; head small but long, narrowing toward the horns, the horns themselves of a bright color, tapering finely; small neck and shoulder, slender, especially near the head; prominent eye, and a gentle, feminine expression.

"Good milkers allow themselves to be easily milked—often while ruminating they look with pleased eye at the person who milks them; they like to be caressed, and caress in return. The udder is formed principally by the glands which secrete the milk, and are called the milk glands. In all cows the abundance of milk is in proportion to the size of the milk glands. The marks indicating that these glands are constituted so as to produce much milk are, a very large development of the hind quarters, a wide and strong lumbar region, a long rump, haunches and hind legs wide apart, a large space for lodging the udder, milk glands well developed, and causing the udder to be of considerable size. In good cows the glands constitute a large part of the udder, and accordingly after milking it shrinks much and appears flabby and wrinkled. The teats should be equally thick throughout their length and set well apart, as in the Ayrshire cow, thus indicating that the milk vessels are spacious. The teats of many cows are cone-shaped, and the junction with the udder not well defined, and the older the cow gets the more unshapely do the teats become. There should be only four teats or outlets, one to each quarter; sometimes there are one or more small extra teats—usually behind—which would contain milk, but these should be removed with a pair of scissors at birth. The teats are hairless, but in good cows the udder is well covered with soft, woolly hair and very fine skin. Fleishy udders, which are hard and large, often contain fat in addition to the proper structure of the glands, which presses upon the smaller ramifications of the milk ducts, preventing secretions; this is one reason why milking cows should not be kept in too high condition. Of all the marks for ascertaining good cows, the best are afforded by the blood vessels; if the veins which surround the udder are large, varicose, and winding, they show that the milk glands receive much blood, and, consequently, that their functions are active and the milk is abundant. The veins on the lateral part of the belly are easily observed. These veins issue from the udder in front and at the outer angle, where they form in good cows a considerable varicose swelling. They proceed toward the front part of the body, forming angles more or less distinct, often divide toward their anterior extremity and sink into the body by several openings."

#### Alfalfa (Lucerne) for Butter Production.

A winter feeding experiment with dairy cows is reported in detail in bulletin No. 43 of the Utah Experiment Station, by F. B. Linfield. Tests were made to determine the value of Utah fodders in feeding dairy cows; also as to how much grain it would pay to feed with the fodders used; and, third, to determine the effect of feed on the per cent. of fat in the milk. The experiment was conducted during the winter of 1894-95. Full details are given in the bulletin, and the results, as far as can yet be determined, are summarized as follows:

1. This test adds but another item to the fairly well established fact that an increase in the quantity of concentrated food in the ration of a cow, does not increase the richness of the milk, provided the cows are well fed to start with.
  2. Any increase in the grain fed over six pounds per day increased the cost of the dairy products almost without exception; and the test indicates that, with the fodders used, eight pounds of grain is the highest limit for the greatest profit.
  3. Considered from the point of price, lucerne hay and grain seem to be a more economic ration than one of mixed hay and grain, but considering the weight of food, there is very little difference, though the results are slightly in favor of lucerne.
  4. It is evident from these tests that, with the price of lucerne as reported (\$3.75 per ton), cows may be fed at a food cost in winter of less than 9 cents a day per 1,000 pounds live weight, even with cows that will produce one pound of butter or more a day.
  5. The test also shows that, with the right kind of cows, butter fat may be produced during the winter at a cost of not more than 9 cents per pound.
  6. The cows which were the largest eaters per 1,000 pounds live weight, were, without exception, the largest and most economic producers.
- Any one interested in this experiment can obtain the bulletin, free of cost, by applying to Luther Foster, Director Utah Experiment Station, Logan, Utah.

Some farmers seem willing to sell their best cows because they can sell them for a little more money and can sell them more easily, and then continue to breed from their inferior cows, thereby breeding down instead of up. No man will ever get to the front in the dairy business who pursues such a course. When you have a cow to dispose of, sell it from the other end of the herd.

#### Farmers' Institutes.

The following dates and appointments for farmers' institutes in this State, under the auspices of and to be attended by representatives from the Agricultural college, have so far been made:

- Russell, Russell county—December 4 and 5; Prof. Georgeson.
- Oneida, Nemaha county—December 10 and 11; Profs. Hitchcock and Willard.
- Nortonville, Jefferson county—December 17 and 18; Prof. Olin and Mrs. Kedzie.
- Oak Grange, Shawnee county—December 17 and 18; Profs. Georgeson and Winchup.
- Hackney, Cowley county—December 29 and 30; Profs. Fallyer and Mason.
- Hiawatha, Brown county—December 30; Dr. Mayo.
- Overbrook, Osage county—January 21 and 22; Profs. Mayo and White.
- Berryton, Shawnee county—February 11 and 12; Profs. Graham and Walters.
- Haven, Reno county—February 11 and 12; Profs. Popenoe and Lantz.

A cup of muddy coffee is not wholesome, neither is a bottle of muddy medicine. One way to know a reliable and skillfully-prepared blood purifier is by its freedom from sediment. Ayer's Sarsaparilla is always bright and sparkling, because it is an extract and not a decoction.

#### "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 3,000 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.



MRS. BURTON HARRISON, ONE OF THE POPULAR WRITERS FOR 1897.

Celebrating in 1897 its seventy-first birthday, THE COMPANION offers its readers many exceptionally brilliant features. The two hemispheres have been explored in search of attractive matter.

## The Youth's Companion

For the Whole Family.

In addition to twenty-five staff writers fully two hundred of the most famous men and women of both the Old and the New World, including the most popular writers of fiction and some of the most eminent statesmen, scientists, travellers and musicians, are contributors to The Companion.

A delightful supply of fascinating Stories, Adventures, Serial Stories, Humorous and Travel Sketches, etc., are announced for the Volume for 1897. The timely Editorials, the "Current Events," the "Current Topics" and "Nature and Science" Departments give much valuable information every week. Send for Full Prospectus.

**FREE** Distinguished Writers  
to Jan. 1, 1897, with Beautiful Calendar.

As a special offer The Youth's Companion will be sent free, for the remainder of the year 1896, to all new subscribers. One of the most beautiful Calendars issued this year will also be given to each new subscriber. It is made up of Four Charming Pictures in color, beautifully executed. Its size is 10 by 24 inches. The subjects are delightfully attractive. This Calendar is published exclusively by The Youth's Companion and could not be sold in Art Stores for less than one dollar.

700 Large Pages in Each Volume. 52 Weeks for \$1.75.

12-Color Calendar FREE.

New Subscribers who will cut out this slip and send it at once with name and address and \$1.75 (the subscription price) will receive:  
FREE—The Youth's Companion every week from time subscription is received to January 1, 1897; 0 P  
FREE—Thanksgiving, Christmas and New Year's Double Numbers;  
FREE—The Companion 4-page Calendar for 1897. The most costly gift of its kind The Companion has ever offered;  
And The Youth's Companion 52 Weeks, a full year, to January 1, 1898.

THE YOUTH'S COMPANION, Boston, Mass.

#### 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.

#### Half Rates Plus \$2.

Burlington Route to the West and Northwest, November 3, 17, December 1 and 15, round trip, twenty days limit, to Nebraska, Kansas, Wyoming, Utah, Black Hills, and certain parts of Colorado. Splendid through trains of chair cars (seats free), and handsome compartment observation vestibule sleepers. Only dining car line to Denver via St. Louis and Kansas City, cafe plan (pay only for what you order). The Burlington Route is the original Harvest Excursion line. See the magnificent corn crops of Nebraska. Send to the undersigned for pamphlets on Missouri and Nebraska, and consult local agent for rates and train service. L. W. WAKELEY, General Passenger Agent, St. Louis, Mo.

#### 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.

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. Griess, Box J, Lawrence, Kas.

#### SMITH'S SMALL FRUITS FOR SPRING 1897

100 varieties old and new Strawberries, including Wm. Belt, Brandywine, Paris King, Bissel, Isabel, Barton, Marshall, New Raspberries—Egyptian, Miller, Bishop, Columbian. If you want plants I have two millions for sale. 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.

## CHOICE SEED POTATOES

COBURN No. 1.—A new seedling of great vigor; pinkish; short but very bushy vines; white bloom; extra early; eyes shallow; very prolific, indeed; good table potato and a good keeper. Price \$1.25 per bushel, or three bushels for \$3.

EARLY KANSAS.—A large medium variety; russet straw color; medium vines; purple bloom; eyes rather deep, but a great yielder of very large potatoes, and an extra good table potato. Price \$1 per bushel, or three bushels for \$2.25.

CARMAN No. 1.—Same as the Early Kansas, except it has white bloom and does not grow so large tubers. Price \$1 per bushel, or three bushels for \$2.25.

KANSAS FARMER.—A new seedling of great vigor. A late variety, oval, flattened; eyes very shallow; straw color; very prolific; vines medium and spreading, completely covering the row; white bloom; very best of all keepers and a good eater. Surely worthy of its name and a grand potato. Price \$1.25 per bushel, or three bushels for \$3.

Three pecks of each of the above four kinds, \$2.50; packed in lined barrels and delivered at depot free. Write your name, postoffice, county and express office very plainly, and send money with order. I can furnish most all of the leading new kinds.

Address CLARENCE J. NORTON, Morantown, Kansas.

When writing to advertisers please mention KANSAS FARMER.

## 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 37890—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 Geo. Wilkes. 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, Nebraska State fair, 1896. Our SILVER WYAN-DOTTES 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 P. TOLFORD, Manager, Chester, Neb.

**A Successful Combination Sale.**

The first annual combination public sale of registered Poland-Chinas from the Tower Hill herd of B. R. Adamson, of Fort Scott, the Clover Leaf herds owned by G. Hornaday & Co., of Fort Scott, and the Vernon County herd, owned by J. M. Turley, Stotesbury, Mo., was held at Fort Scott, last Thursday, November 19, 1896, and it was a decided success in every way and the breeders were well pleased with their first sale, and the combination sale will be continued hereafter annually, also a bred sow sale will be held February 2, 1897.

The stock offered at this sale was in splendid condition and the quality and breeding attracted a large attendance of leading breeders and farmers, who promptly bid on the stock under the seductive guidance of the auctioneers, (Cols. S. A. Sawyer and J. W. Sparks.

The result of the sale was as follows: The consignment of G. Hornaday & Co. consisted of three boars, sold for \$41, average \$13.66; nine females, sold for \$248, average \$26.87; twelve head, \$389, average \$32.4. J. M. Turley's sold as follows: fourteen boars, \$230, average \$16.42; eleven sows, \$386, average \$35; twenty-five head, \$516, average \$20.64. B. R. Adamson's seventeen boars sold for \$330, average \$19.41; eighteen sows, \$520, average \$28.89. The total result of the combination sale was seventy-two head, which brought \$1,655.50, a general average of \$23.

The following comprise a complete list of the purchasers: Irwin & Duncan, Elm Beach farm, Wichita, Kas.; Joe Young, Richards, Kas.; Frank Gonsalus, Hammond; Thos. D. Hubbard, Kimball; Sam'l Pettit, Uniontown; A. M. Illias, Stotesbury, Mo.; H. H. Officer, Hillsdale, Kas.; W. H. Kirker, Uniontown; J. W. Redmond, Fort Scott; J. M. Cole, Fort Scott; Hugo Mitchener, Godfrey; A. Kerr, Neal; C. H. Goodrich, Columbus; E. E. Wait, Altoona; J. S. Penny, Devon; J. D. Kale, Fort Scott; L. L. Thomas, Fort Scott; H. W. Hughes, Fort Scott; E. W. Wagner, Erie; Kreetch Bros., Drexel, Mo.; W. P. Goode, Lenexa; G. G. Council, Williamsville, Ill.; G. Heiser, Deerfield, Mo.; R. M. Henderson, Natchez, Miss.; C. M. Lindquist, Fort Scott; Wm. Poorman, Barclay, Ill.; Geo. Collins, Marmaton, Kas.; W. D. Pope, Fort Scott, Kas.; John Morewood, Mulberry, Mo.; Clifton George, Lathrop, Mo.; J. T. Bell, St. Paul, Kas.; R. E. Singer, Coalvale, Kas.

"I escaped being a confirmed dyspeptic by taking Ayer's Pills in time." This is the experience of many. Ayer's Pills, whether as an after-dinner pill or as a remedy for liver complaint, indigestion, flatulency, water brash and nausea are invaluable.

**Publishers' Paragraphs.**

One of the most useful pocket references for the stockman is the "Red Book," published the first of each year. It is a little cyclopedia of transactions on the live stock markets. The regular price of the book is 25 cents. We will furnish the "Red Book" free to every subscriber who will send another yearly subscription with his own.

LIFE AND WORK AT WASHINGTON.—When he was Secretary of State, Mr. Blaine contributed to *The Youth's Companion*, as did Mr. Gladstone when he was Prime Minister. During the coming year the Secretary of the Navy, the Postmaster General and the Attorney General of the United States will describe in the same periodical features of the national work with which they are identified. "What the Attorney General Does" will be explained in a valuable article by Hon. Judson Harmon. "How a War Ship is Planned and Built" will be described by Secretary Herbert, while the Postmaster General has chosen for his subject, "Early Days of the Postoffice." In 1790,

the first year of Washington's administration, there were in the United States seventy-five postoffices and 1,875 miles of postal routes. In 1895 there were over 70,000 postoffices and nearly half a million miles of postal routes. The primitive postal service is sketched by Mr. Wilson in a remarkably entertaining article.

We have received from Warner's Safe Cure Co., of Rochester, N. Y., whose advertisement may be found in another column, their attractive pamphlet for 1897, of which 5,000,000 copies, it is stated, are being distributed free by mail and through druggists. It contains, besides advertising matter, biographical sketches and portraits of all the Presidents of the United States, including President-elect McKinley. The perusal of the pamphlet affords abundant proof that Warner's Safe Cure Co., which has twenty years of success back of it, is as active and enterprising as ever.

The New York World, thrice-a-week edition. Eighteen pages a week, 156 papers a year. It stands first among "weekly" papers in size, frequency of publication and freshness, and variety of contents. It is splendidly illustrated and among its special features are a humor page, exhaustive market reports, all the latest fashions for women and a long series of stories by the greatest living American and English authors, Conan Doyle, Jerome K. Jerome, Stanley Weyman, Mary E. Wilkins, Anthony Hope, Bret Harte, Brander Matthews, etc. We offer this great newspaper and KANSAS FARMER together, one year for \$1.65.

BEECHER AS A SLAVE AUCTIONEER.—Even people of mature years whose memory is clear about matters before and during the war have practically forgotten that Henry Ward Beecher used his pulpit in Plymouth church, Brooklyn, as an auction block for slaves. The most famous of his "slave sales" was that of the beautiful girl, Sarah, and it was upon this occasion that the most exciting scenes ever witnessed in Plymouth church, or in any other American church for that matter, occurred. Mr. Beecher was unusually dramatic; he put a fire into his words, as he stood the slave girl on the platform beside him, which fairly burned into the hearts of his auditors. It was not long before the people became almost hysterical with excitement. But Beecher kept on until he was ready to pass the collection baskets. Then the auditors gave vent to their feelings, and not only heaps of money was put into the baskets, but men and women took off their rings, unfastened their watches and threw them in the baskets and on the platform. It was a remarkable scene, and such a one as probably will never be equaled in this country. Mrs. Beecher recalls the event with wonderful vividness in her article in the *Christmas Ladies' Home Journal*, when she tells the whole story of "When Mr. Beecher Sold Slaves in Plymouth Pulpit." The scene itself is remarkably well brought to the eye of the reader by a striking illustration made by De Thulstrup from material furnished the artist by Mrs. Beecher.

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

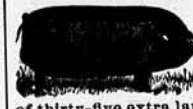
**THE STRAY LIST.**

FOR WEEK ENDING NOV'R 12, 1896.

Cowley county—S. J. Neer, clerk.  
FOUR MARES—Taken up by S. S. Hoard, in Windsor tp. (P. O. Grand Summit), October 20, 1896, one bay mare, 7 years old, white hind feet and cold, branded face, valued at \$12; one black mare, 10 years old, branded face, valued at \$10; one bay mare, 8 years old, white hind feet and star in forehead, valued at \$18; one bay mare, 8 years old, white hind feet and star in forehead, valued at \$12.  
FOUR GELDINGS—By same, one brown geld'ng, 6 years old, branded on right shoulder with diamond

**J. G. Peppard** MILLET CANE SEEDS  
1400-2 Union Avenue. CLOVERS TIMOTHY  
KANSAS CITY, MO. CRASS SEEDS.

**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 28603, 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 SHORT-HORN CATTLE!**

AT BUNCETON, COOPER CO., MO., DECEMBER 10, 1896.  
30 BULLS—20 HEIFERS—MAINLY YEARLINGS.

A choice selection from my herd of over one hundred and fifty head of high-class Short-horns, containing Cuckshanks, Butterflies, Victorias, Aconites, Wood Violets, Scotch-topped Young Marys, Young Phillips and other standard families, sired principally by Ambassador 110811, Col. Aberdeen 79502 and Britisher 106627. This is not a cull sale, but contains all the bulls on the farm old enough for early service and about all the yearling heifers. I wish to call special attention to the nicely-bred Scotch yearling, Golden Knight, by the great Godoy 115675 and out of Golden Violet; the robust Silverhead by Col. Aberdeen 79502; the thick, stylish Orange Duke by Col. Aberdeen; the red, massive Howard by Red Butterfy and out of Kate Sharon by Imp. Burgomaster 93813. Of the more attractive heifers is Phillippa by Prince Byron 189513 and out of Phillis, a massive 1,700-pound cow; Lady Goodness by Golden Prince 115668, and Angelica 2d by the old premier bull, Britisher 106627. You will not be disappointed when you see the stock.  
Send for catalogue to  
W. P. HARNED, Bunceton, Mo.  
COL. J. W. JUDY, Auctioneer.

**GREAT COMBINATION SALE**

**BERKSHIRE HOGS!**  
The Best of Breeding and Quality.

Berkshire breeders who wish to introduce into their herds the popular strains of blood to be found in the great prize-winners at the leading State Fairs of 1896, are invited to attend the

**Missouri Breeders' Sale**  
SEDALIA, MO., DECEMBER 9, 1896.

Sale will be held in MENEFFEE'S STABLE, East Main street, near central part of the city of Sedalia.  
The tops of the following well-known herds have been placed in this sale, viz.: N. H. GENTRY, Sedalia, Mo.; HARRIS & McMAHAN, LeMone, Mo.; JUNE K. KING, Marshall, Mo.; W. N. BRISKY, Independence, Mo.; JAMES HOUK, Hartwell, Mo. All of the stock offered is registered in the Record of the American Berkshire Association.  
For catalogue or other information, address either of the parties named above, or  
Auctioneer, JAMES W. SPARKS, Marshall, Mo.

under a bar, valued at \$14; one bay gelding, 9 years old, star in forehead, valued at \$12; one brown gelding, 3 years old, star in forehead, valued at \$12; one gray gelding, 3 years old, slit in front of left ear, valued at \$10.  
COLT—By same, one sorrel yearling horse colt, flaxen mane and tail; valued at \$10.  
FOR WEEK ENDING NOV'R 19, 1896.  
Edwards county—A. G. Aderhold, clerk.  
MULE—Taken up by J. M. McCarter, in Franklin tp. (P. O. Fellsburg), October 14, 1896, one mouse-colored male mule, line on back, fifteen hands high; valued at \$15.  
FOR WEEK ENDING NOV'R 26, 1896.  
Linn county—William H. Ward, clerk.  
MARE—Taken up by V. W. Brice, in Blue Mound tp. (P. O. Coldwater), October 30, 1896, one bay mare, about 4 years old, fifteen hands high, weight about 1,050 pounds, black mane and tail, both hind feet white, star in forehead, lump on left hind ankle; valued at \$20.  
Comanche county—J. E. Harbaugh, clerk.  
STEER—Taken up by M. Schoub, in Rumsey tp. (P. O. Coldwater), October 21, 1896, one red and white spotted Western steer, 3 years old, medium size, branded A enclosing J; valued at \$12.50.  
Bourbon county—H. Frankenburg, clerk.  
PONY—Taken up by C. G. Beaman, in Marion tp., November 2, 1896, one chestnut sorrel horse pony, supposed to be 7 or 8 years old; valued at \$10.  
PONY—By same, one clay-bank horse pony, white strip on face, supposed to be 7 or 8 years old; valued at \$5.  
Labette county—J. F. Thompson, clerk.  
HORSE—Taken up by E. F. Ferril, in Mt. Pleasant tp. (near Altamont), October 22, 1896, one bay horse, fifteen hands high, white spot in forehead.  
HORSE—By same, one black horse, fifteen and a half hands high, wire out on left front foot.  
Shawnee county—Chas. T. McCabe, clerk.  
COLT—Taken up by C. W. Edson (P. O. Silver Lake), one sorrel mare colt, 1 year old past, two white hind feet.  
COLT—By same, one black horse colt, 1 year old past, white face, one white hind foot.  
Pottawatomie county—Frank Davis, clerk.  
STEER—Taken up by C. J. Reed, in Lincoln tp., October 23, 1896, one black and white yearling steer, square crop off left ear, piece of rope in dewlap, indistinct brand on left hip, has horns; valued at \$15.  
STEER—By same, one red and white yearling steer, branded A on left shoulder and 1 on left hip; valued at \$15.  
Wabasha county—J. R. Henderson, clerk.  
STEER—Taken up by Wm. Breymer, in Newbury tp. (P. O. Paxico), November 3, 1896, one red and white spotted two-year-old steer, small hole in right ear.  
Wyandotte county—Leonard Daniels, clerk.  
STEER—Taken up by L. E. Scott, in Prairie tp., on or about October 15, 1896, one dark red steer, no white, 1 year old past, split in right ear, seems to have been dehorned; valued at \$16.



**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,**  
EMPORIA, KANSAS.  
H. L. LEIBFRIED, Manager.

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.

I have a mare that got her leg burned on a picket rope. It is all healed up but that leg swells when she stands in the stable. She is not lame.

Answer.—The trouble is that the blood supply to the part is interfered with. It will return to its normal condition all right without treatment.

CEREBRITIS.—Three of my neighbors have lost horses recently, all affected the same way. They refuse their feed and in thirty-six hours lose their sight and become deranged, running into obstacles of all kinds.

Answer.—The horses probably died from cerebritis, or inflammation of the brain, caused by eating wormy or mouldy corn.

A new advertiser of Poland-Chinas this week is E. W. Reynolds, of Madison, Greenwood county, Kansas. His World's Fair herd have obtained considerable notoriety and his stock is recognized as of the best in the State.

Gossip About Stock.

J. R. Killough & Sons, Richmond, Kas., report that their recent cattle sale was a success. Fifty-two head of cows, heifers, yearling steers and calves sold for \$1,104.

The greatest opportunity to secure "toppy" Berkshire swine will be at the breeders' combination sale to be held at Sedalia, Mo., December 9, 1896.

A representative of the FARMER took a look at the Chester Whites owned by our advertiser, W. S. Attebury, of Rossville, Kas., and found them in fine trim. He has for sale a few fine young sows, sired by Free Silver, which are bred and ready to go out, some May and June boars, some July, August and November pigs, and he also wishes to dispose of one of his herd boars, Kaw Valley Pride 6601 (Vol. V. Standard).

Mr. F. W. Baker, proprietor of the Richland stock farm, Council Grove, Kas., knows how to build up a good herd, and has succeeded so well that his report is that his sales have been immense. New additions recently made to the Richland herd indicate no abatement of the efforts which have brought success.

Mr. F. W. Baker, proprietor of the Richland stock farm, Council Grove, Kas., knows how to build up a good herd, and has succeeded so well that his report is that his sales have been immense. New additions recently made to the Richland herd indicate no abatement of the efforts which have brought success.

Horse Owners! Use GOMBAULT'S



Caustic Balsam

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or smudges from Horses and Cattle. SUPPURES ALL CAUTERIES OR FIRING. Impossible to produce scar or blemish.

MARKET REPORTS.

Kansas City Live Stock. KANSAS CITY, Nov. 23.—Cattle—Receipts since Saturday, 10,961; calves, 448; shipped Saturday, 1,879 cattle, 360 calves.

SHIPPING AND DRESSED BEEF STEERS. No. Ave. Price. 23.....1,299 \$4.75 24.....1,321 4.41 25.....1,437 4.20 40.....1,533 4.00

TEXAS AND INDIAN STEERS. 4 Ind. .... 917 \$3.70 173..... 759 2.85 3 Ind. .... 756 2.85

NATIVE HEIFERS. 1.....1,270 \$3.25 1..... 920 3.20 1..... 730 3.00 3..... 910 2.85

NATIVE COWS. 1.....1,087 \$3.00 7.....1,220 2.81 4..... 932 2.50 1..... 810 2.00

NATIVE FEEDERS. 38.....1,020 \$3.95 18..... 974 3.75 2..... 905 3.25 1..... 970 3.15

NATIVE STOCKERS. 1..... 390 \$3.75 87..... 615 3.55 3..... 583 3.25 5..... 394 3.00

Hogs—Receipts since Saturday, 4,568. The market was 5c higher and in some cases more. The following are representative sales:

67...243 \$3.40 54...271 \$3.37 83...216 \$3.37 59...203 3.37 70...226 3.37 76...259 3.37 78...241 3.37 74...217 3.37 72...214 3.37 69...188 3.37 78...230 3.35 70...222 3.35 84...209 3.35 205...222 3.35 9...241 3.35 64...230 3.35 63...310 3.35 71...235 3.35 77...219 3.35 80...216 3.35 82...225 3.35 66...255 3.35 72...197 3.32 6...175 3.32 53...236 3.32 58...292 3.30 49...212 3.30 35...285 3.30 74...254 3.30 21...218 3.30 58...306 3.30 20...176 3.30 75...175 3.30 56...291 3.30 69...222 3.25 39...301 3.25 5...176 3.25 6...168 3.25 40...197 3.25 57...312 3.25 50...352 3.25 108...337 3.25 72...178 3.22 54...354 3.22 20...355 3.20 74...162 3.20 4...425 3.20 4...377 3.20 58...347 3.20 10...124 3.10 7...162 3.00 147...112 2.90 18...102 2.85 2...170 2.50

Sheep—Receipts since Saturday, 1,040; shipped Saturday, 2,075. The market was strong and active. The following are to-day's sales:

509 Texas..... 78 \$2.70 | 184 Col..... 90 \$2.65 125 Col..... 90 2.65 | 72 sw..... 92 2.50

Horses—Receipts since Saturday, 202; shipped Saturday, 73. There was not much stir about the market this morning. The receipts are moderately heavy, but not equal to the number the same time a year ago.

Chicago Live Stock.

CHICAGO, Nov. 23.—Cattle—Receipts, 16,000; market steady for good, others weak; fair to best heaves, \$3.40@5.15; stockers and feeders, \$2.70@3.80; mixed cows and bulls, \$1.40@3.90; Texas, \$2.50@4.00.

Hogs—Receipts, 22,000; market 5 to 10c higher; light, \$3.20@3.45; rough packing, \$3.00@3.15; mixed and butchers, \$3.20@3.50; heavy packing and shipping, \$3.20@3.50; pigs, \$2.60@3.45.

Sheep—Receipts, 14,000; market strong; native, \$2.00@3.50; western, \$2.50@3.10; lambs, \$3.00@5.10.

St. Louis Live Stock.

ST. LOUIS, Nov. 23.—Cattle—Receipts, 3,000; market strong.

Hogs—Receipts, 3,000; market 10c higher; Yorkers, \$3.20@3.35; packers, \$3.10@3.35; heavy, \$3.00@3.42 1/2.

Sheep—Receipts, 2,000; market 10c higher.

Chicago Grain and Produce.

Table with columns: Nov. 23, Opened, High'st, Low'st, Closing. Rows include Wheat, Corn, Oats, Pork, Lard, and Ribs.

Kansas City Grain.

KANSAS CITY, Nov. 23.—The trade in wheat was rather slow this morning, with no appreciable change in prices.

Receipts of wheat here to-day, 84 cars; a year ago, 92 cars. Sales were as follows on track: Hard, No. 2.

BROOMCORN F. JELKE & SON

Established 1850. 53 Walnut St., Cincinnati, O. 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 South-west centering at Kansas City has direct rail connection with these yards, with ample facilities for receiving and reshipping stock.

Table with columns: Cattle and calves, Hogs, Sheep, Horses and mules, Cars. Rows include Official Receipts for 1895, Slaughtered in Kansas City, Sold to feeders, Sold to shippers, Total Sold in Kansas City, 1895.

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

NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED. C. F. MORSE, E. E. RICHARDSON, H. P. ORILD, EUGENE RUST, V. Pres. and Gen. Manager, Secretary and Treasurer, Assistant Gen. Manager, Gen. Superintendent, W. S. TOUGH & SON, Managers HORSE AND MULE DEPARTMENT.

The 16 to 1 Agony is Over

AND NOW IF YOU HAVE ANY

MODELS, CASTINGS, MACHINE WORK

THE TOPEKA FOUNDRY

TOPEKA, KANSAS.

1 car choice 75 1/2, 1 car choice 75c; No. 3, 1 car fancy 72 1/2, 1 car 71 1/2, 1 car 71c, 5 cars 70c, 1 car 68c; No. 4, 3 cars 65c, 2 cars 64c, 12 cars 63c; rejected, nominally 50 1/2@58c; no grade, nominally 40@50c. Soft, No. 2 red, 1 car fancy 87 1/2c; No. 3 red, 3 cars choice 85c, 3 cars choice 84c, 1 car 83 1/2c, 1 car 83c, 1 car 80c; No. 4 red, 1 car 75c, 1 car 71c; rejected, 1 car 55c, 1 car 52c, 1 car 51c, 1 car weevily 55c. Spring, No. 2, nominally 72@74c; No. 3, 2 cars 71c, 1 car 72 1/2c.

Consign Cattle, Hogs and Sheep to LONE STAR Commission Company

for best results. A new company. Capital \$100,000. Telephone 1108. Market reports furnished. Write us. KANSAS CITY STOCK YARDS.

John Moffett, Manager. L. B. Andrews, Office. T. S. Moffett, W. C. Lorimer, Cattle Salesmen. H. M. Baker, Hog and Sheep Salesman. W. A. Morton, Solicitor.

MOFFETT BROS. & ANDREWS

Live Stock Commission Merchants.

Feeders and stockers purchased on orders. Personal attention given to all consignments. Correspondence invited. Market reports furnished. References—National Bank of Commerce, Kansas City, Mo.; Citizens State Bank, Harper, Kas.; Bank of Kiowa, Kiowa, Kas. Rooms 67-68 Live Stock Exchange, Kansas City, Mo.

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

BEFORE BUYING A NEW HARNESS Send your address with 2c stamp for illustrated Catalog, giving full description of Single and Double Custom Hand-Made Oak Leather Harness. Sold direct to consumer, at wholesale prices. King Harness Co., No. 37 Church St., Oswego, N. Y.

"MONEY-MAKING SECRETS"

Explaining how liberal incomes may be easily and safely earned, will be mailed FREE to all who mention this publication when addressing F. D. MORGAN, Banker, 64 Wall Street, New York.

Wanted, an Idea.

Who can think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write John Wedderburn & Co. Patent Attorneys, Washington, D. C., for their \$1,800 prize offer and list of 200 inventions wanted.

DO YOU WANT TO MAKE MONEY?

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.

GRASS AND FIELD SEEDS

MITCHELL & RAMSEY, ST. JOSEPH, MISSOURI.

Bedwetting CURED. Sample FREE. Dr. F. E. MAY, Bloomington, Ill.

### The Apiary.

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

#### Hybrid Bees.

A cross of the Italian and native bee is termed a "hybrid." The hybrid bee has some peculiar traits, some good and some bad ones. An Italian queen crossed with a native drone will produce bees that are almost equal to the pure Italian bees as honey-gatherers, and in some instances they are preferred as comb honey producers, or at least they have been given the credit of building the most beautiful comb honey. This is due to the fact that the Italian bees fill their cells full of honey, and when capped over the capings come directly against the honey, or partially so, and the comb's beautiful white surface is thus colored. The hybrid, but more especially the native bee, and from which is instilled in the hybrid, do not fill their cells thus so full, and when sealed over the comb presents a beautiful whiteness.

One peculiarity about the hybrid bees is their vindictiveness. They are very cross, and in this respect exceed all their ancestors. This is true in almost every case, and without an exception. It seems that the irritable nervousness of the old black or native bee, thus mingled with the energy and determination of the Italian bee, breeds into the hybrid a warlike disposition to such an extent that no one now thinks of retaining them in the apiary, any more than they would the common black bees.

A pure Italian queen thus crossed with a native drone, while she produces hybrid bees, also produces pure Italian drones. This is true, from the fact that the drone egg does not receive fertilization, and hence is as pure as the queen. On the other hand, if a native queen is fertilized with an Italian drone, and produces hybrids just the same, her drones will be pure native. Hence it will be seen how much more progress we will make in reaching the purity of either race by crossing in the right direction. By using a pure Italian queen to breed from an apiary may be rapidly brought up to a pretty fair state of purity, even if originally black bees.

Usually, we determine the purity of Italian bees by their color. In a colony of hybrids this cannot be done, unless we take the colony as a whole. In a colony of hybrid bees, we usually have all colors, from a bee with three or more yellow bands, characteristic of the Italian bee, to a bee of solid black or brown. It is very unusual that a colony of hybrids shows a uniform color of one or two bands to each bee, and I have never yet seen this to occur. It is very different in the pure Italians, as they are very uniformly marked, and have never less than three yellow bands, and sometimes as many as four or five.

According to my observation, I believe the hybrid bees are more inclined to rob than any other. I am also inclined to believe that they are not the best to protect their own stores against robbers, and are no improvement over the native or black bees in this respect.

#### Bee Stings, and How to Avoid Them.

In handling bees, the object constantly in mind with most people is to avoid stings. Fear, coupled with imagination, which always go together in this particular, is the principal cause of the greater portion of the trouble in regard to bee stings. Practice greatly lessens this fear, and with apiarists generally it is considered but a trivial matter. As a defense against bee stings smoke is used. If smoke is applied properly it is an absolute defense and an insurance against stings. With practice and proper manipulation bees may be handled without smoke to a great extent, and it is always better to handle them thus when it can be done. At certain seasons of the year bees can be handled much better than at others, and with much less danger of being stung. During the honey season, when they are gathering stores, they are very gentle and

will allow themselves to be knocked around and handled roughly without attempting to resent it. At other times, with but very little interference on our part, they will at once resent with stings. This is more especially so during the autumn months.

There is no way that bees can be driven into submission except by smoke, and this depends upon the manner of using it. Smoke improperly applied may be the means of arousing them to a fighting pitch and produces more harm than good. When bees are to be smoked into submission, they should be smoked thoroughly, or until the bees have all filled themselves with honey. It is thus filling themselves with honey that makes them docile, and the smoke produces this effect. This is only necessary in some cases, and we may say extreme cases. A few very slight puffs of smoke will subdue most colonies, and only in cases where heavy smoking is required should we use it. The only manner in which we can apply smoke properly is with a bee-smoker. By opening a hive of bees and noting their actions, we can tell if smoke is required. If the bees come boiling up out of the hive like hornets out of their nest, they require smoke enough to drive them back, and if they repeat this after being smoked, they require more, and so on until they remain down in the hive, after which the combs may be removed and the bees changed around in almost any conceivable shape without any molestation on their part.

Experience will teach any one that the best way to handle bees is to do it without smoke when it is possible, and with Italian bees it is seldom impossible. The most successful apiarist is the one that uses the least smoke. The secret of handling bees without smoke, is careful manipulation. Open the hive carefully, so as not to jar them; remove the frames likewise: don't kill any bees; don't be in a hurry; there is nothing gained by rapid manipulation; treat your bees as friends, such as they are, and not enemies. As we have said above, fear is the prime cause of most stings. If bees are flying about your head threateningly, give them no attention whatever. If you strike at them, or try to dodge them they will sting you. If a bee lights on your face or hands, give it no more attention than you would a fly, and it will not sting you. If you jerk away your hand or try to drive it away, it is sure to sting you if possible. If a bee leaves its sting in your flesh, which they almost always do, with poison sac attached, remove it with a blade of a knife, or your finger nail, by scraping it off close to the flesh. If caught by the thumb and finger, as is often the case, the contents of the poison sac is squeezed into the flesh. A sting thus should be removed at once, as the muscular contractions will rapidly work the sting in deeper and deeper.

Below I give a clipping from the Kansas City Times, copied from the New York Journal. To avoid stings this is an exceedingly "short cut" route, and our readers may try it and report. I should be glad, too, if the editors of those two leading publications would test this and report also. I believe this much, that if you hold your breath long enough you will not feel the sting:

"Here is the way to rob a bee-hive of honey and avoid being stung: Just hold your breath. Simple and easy enough, and the only reason it hasn't been tried more often is that few people know of it. Even the bullet-like hornet cannot injure you if you just stop breathing for a moment. In fact, you can pick him up and watch his sting apparatus vainly work, for he can't puncture your skin any more than he can sheet-iron."

#### How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last fifteen years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O. WARDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75 cents per bottle. Sold by all Druggists. Testimonials free.

## A COMPOSITE PICTURE of all who have been cured of diseases of the LIVER, KIDNEYS and BLADDER would show thousands restored to PERFECT HEALTH



BY USING **Dr. J. H. McLEAN'S LIVER AND KIDNEY BALM** THE PEERLESS REMEDY, RELIEVES QUICKLY AND WORKS A PERMANENT CURE For Sale at Druggists Price, \$1.00 a Bottle. THE DR. J. H. McLEAN MEDICINE CO. ST. LOUIS, MO.

## FARMERS

DO YOU WANT TO BETTER YOUR CONDITION? If you do, call on or address: The Pacific Northwest Immigration Board, Portland, Oregon.

## ORGANS FREE

on trial. High-grade, popular priced Organs, such as never were offered before. Unequaled 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.

## WE BUY

paper clippings and \$50 a thousand. Particulars for stamp. NEWS CLIPPING CO., Dept. H. N., 804 W. 129th St., N.Y.

## HATCH Chickens BY STEAM-

With the MODEL EXCELSIOR Incubator. Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class Hatcher made. GEO. H. STAHL, 114 to 122 S. 6th St., Quincy, Ill.

## LIFE PRODUCERS

THE SUCCESSFUL INCUBATORS. LIFE PRESERVERS. THE SUCCESSFUL BROODERS. All about them in our catalogue. Sent for 6 cents. DES MOINES INCUBATOR CO., Box 83, DES MOINES, IA.

## DEAD • EASY!

The Great Disinfectant Insecticide 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. THOS. W. SOUTHARD, Gen. Agent, 528 Delaware St., Kansas City, Mo.

## Throw out the Seeds

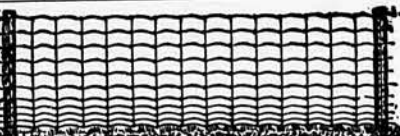
of your raisins and grapes and prevent appendicitis. You can seed them yourself, without loss of time or tax of patience, with the

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