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AN APOLOGY.

EDITOR KANSAS FARMER:—It is evident, from an editoria in the FARMER of November 26, and the editor's promise that no more political remarks shall appear, that an apology is in order to those who have objected to the "non-partisan politics" embodied in a recent letter of the writer's, and that an especially humble apology is due to that lone reader who thinks that so much of the FARMER'S space as the letter occupied might better have been employed in telling how to watch a turkey to her nest; and I now tender such apology on behalf of the editor as well as myself, as we were joint offenders. But the objectors must allow me to say in passing that there are "politics" and "politics." One kind the dictionaries define as "politicalism" or "partisanship." Not being even a little bit of a partisan, I could not have trespassed in that direction, and had no desire to, preferring to leave "politics" of this class to the very able howlers who have recently made the welkin ring with promises of prosperity if only particular partisan politics were accepted. Another kind of "politics" Addison—defines as "that part of ethics which consists in the knowledge or the practice of conducting the affairs of state or nation; political science, or political economy." Although making no pretensions to being an economist, I have occasionally tried, in my simple statistical way, to talk of "political" matters which may be said to come within the scope of Addison's definition. It is true that in the letter in question all reference to American parties and their leaders might have been omitted; but then we could not show the impassible gulf between "politicalism" and politics as well as with the object lessons afforded by the operation of the party cry of "home markets" and "reciprocity," and by showing what effect they have had in bringing prosperity to American farmers. And the fact that the farmer is to have fair prices with or without "free silver" and without regard to "free trade" might have been left unannounced. Yet for the offense given to those over-sensitive souls who object to "political economy," even of home production, and dislike anything that approaches actual interests more nearly than did last year's sermons, I humbly apologize and promise never to offend again until they have learned to distinguish between "politicalism" and the "politics" which deal with economic subjects. Indeed, the editor of the FARMER promises that when I attempt to invade the FARMER'S columns again with matters pertaining to economics he will exercise the veto power, so that I can safely make this promise.

Even my learned friend of the *American Elevator and Grain Trade* seems not to be aware that "politics" in its right sense is synonymous with "political economy," as he makes a radical distinction; but then, a resident of a city (Chicago) selling enormous quantities of wind and calling it wheat is not expected to be correct in his terminology.

Referring to the hope expressed by the Chicago editor that prices for wheat and corn shall not be carried above \$1.10 for wheat and 70 cents for corn, I beg leave to remark that this is more, much more, than Chicago wheat or corn is worth or likely to be, but the real articles, grown upon the farms, will, in the case of wheat, at least, bring much more before the end of this century. Indeed, if wheat brought a price relatively as high as 70 cents for corn its level would be \$1.75, as it costs but two-fifths as much to grow the bushel of corn as it does the bushel of wheat. However, we can understand the small difference he makes in the price of the two grains when we remember that upon the fields of Chicago a bushel of wind wheat is grown as cheaply as a bushel of wind corn. Presumably, much cheaper, as the production of flat wheat in Chicago's grain pits is many times greater than the local production of corn.

My friend of the *Elevator* says that I

may be shown to be in error in the future as I was three years ago; but in this case his statement seems to be as inexplicit as his use of the word "politics," as he does not state where or in what manner I was mistaken, and I move that he be required to furnish a bill of particulars.

As early as June, 1890, I wrote: "That the wheat area of the United States is likely to expand until 1893 or 1894, after which there will be, in all probability, a shrinkage, and I expect to see the wheat area reduced to some 34,000,000 acres not later than 1897, and possibly in 1896."

This is not the error, evidently, which our *Elevator* friend refers to, as in 1891 the acreage rose to its maximum of 39,900,000 acres, and has since shrunk to 34,000,000 acres, as I indicated it would, although it reached that level sooner than I expected.

In the KANSAS FARMER of September 27, 1893, it was stated that: "The time is near (and half a dozen years is near in national life) when the food and fiber-producing West and South will levy an indemnifying tribute upon the manufacturing East; that prices for farm products will soon be as much above a fairly remunerative level as they have been below."

In the *New York Sun* of May 6, 1894, I wrote that: "The bread-eating populations have, since 1869, increased 34.3 per cent., and should this rate of increase be maintained until 1920 food must be provided for 165,000,000 added units requiring, at the present unit rate of consumption, the grain and potatoes from 205,000,000 new acres, although the available lands upon which drafts can be made are now less than twenty-five years ago in the measure of the vast areas brought under cultivation, notably in the United States, since 1869. Yet, in the last twenty-five years additions to the world's food-bearing lands have been less than 4,000,000 acres per annum. Is it probable that such an annual average can be doubled during a period of twenty-five years ending with 1920? If it cannot then the yield an acre must increase enormously, or scarcity, instead of the present abundance, be the rule."

On January 9, 1895, the statement appears in the KANSAS FARMER that: "Happily, for the farmer, population has now so increased that these great stores (of wheat and rye) are rapidly going into consumption, and as there is not the most remote probability of the world's wheat acreage ever again being excessive, we may assume that the existing acreage deficit, a deficit that annually increases by quite 2,000,000 acres, assures the farmer that he is now seeing the last of very cheap wheat. This by reason of the fact that with no more than average acre yields from every acre of the world's wheat-bearing lands in 1895 the aggregate product will be 160,000,000 bushels less than world requirements for the harvest year. Existing stores of wheat may supplement such yield in a manner to prevent dearth and high prices for a twelve-month after harvest (in 1895), but a second crop with no more than average in (world) acre yield would result in scant supplies and high prices."

Although the crop of 1895, harvested six to seven months after the above was published, gave an outturn 160,000,000 bushels above what would have resulted from an average world yield an acre, yet the very scant supplies I then foresaw and foretold has resulted, and prices are seeking a continuously higher level, and if the crop of 1897 is no better than world conditions now indicate they will probably reach a level much higher than our friends in the city of wind wheat believe to be either probable or desirable.

In the spring of 1895 a communication was sent to *Bell's Weekly Messenger* (London) in which it was said that: "Should yields an acre in any year be no greater than in 1890-91, that year's harvest would be from 250,000,000 to 330,000,000 bushels below present world requirements. Climatic stability and the relentless law of averages assure such a result in some near-by year. Two world harvests giving no greater yields than the average of the last fourteen will at once restore prosperity to the world's food-growers, and the scar-

city of available lands, with the existing acreage deficit, assures an unlimited period of meager supplies and exacting demand. There are no more agricultural Americas to be exploited."

Conditions essential to the obtaining of agricultural prosperity, and the probability of their speedy coming were indicated in the KANSAS FARMER of October 23, 1895, in the statement that: "There exists an exact and ascertainable ratio between population requirements and the acres producing each of the primary food staples; but in order to ascertain this ratio terms of years must be taken long enough to determine what is the average acre yield for each staple. This I have endeavored to do and seem to have been the first, as I continue to be the only one, applying this, the only scientific measure of productive power. Like all innovators, I am derided for my pains. Still, I am correct, and this will be generally acknowledged just as soon as one world crop of wheat and rye not above the average in acre yield shall be succeeded by one of the same character. Indeed, one short world crop of wheat and rye—that is, one materially below the average in acre yield—will, by exhausting the last vestige of existing stores of grain, bring great and continuous scarcity and astoundingly high prices, I have no doubt. Continuous scarcity, because there has been but one crop of the bread-making grains (that of 1894) which equaled present requirements, requirements that increase by more than 40,000,000 bushels (of wheat and rye) annually. When such conditions obtain, as obtain they will, maize and all other staple products of the farm will bring high prices, as we shall then be forced to take a part of the maize fields to provide the (world's) needed bread."

Particular attention is directed to the communication in the KANSAS FARMER of February 27, 1896, in which the statement appears that: "If it is true, as the data at hand indicates, that the exportable surpluses (of wheat) of India, Australia, Argentina and North Africa are to be reduced by 50,000,000 bushels, and the imports of those regions increased by about 13,000,000 bushels; that the world crop of 1895, although 0.75 of a bushel an acre above the average yield of the last twenty-five years and 137,000,000 bushels in the aggregate above an average crop, was quite 200,000,000 bushels below world requirements, then we may, with reason, hope that this year (1896) will see an absorption of the enormous reserves piled up from the great harvests of 1891, 1892, 1893, and especially 1894, when 250,000,000 bushels more were garnered than in 1895."

It appears that as long ago as 1890 I indicated the probable reduction of the wheat area of the United States, which has since occurred; that from 1890 I have pointed out a great and growing deficit in the world's food-bearing acres, obscured and masked, it is true, by the exceptionally favorable meteorological conditions of recent years, but as inevitable in its ultimate effect upon the world's food supply as the operation of the law of probabilities so clearly expounded by Laplace; that but for an exceptional succession of favorable seasons over world-wide areas scarcity and high prices would have obtained years since; that with one crop below the average in acre yield, or two average crops in succession, such scarcity and high prices were certain to come; that early in 1895, and continuously since, reserves of wheat and rye were rapidly going into consumption, thus preparing the way for present conditions and the gradual if rapid elevation of the price level; that but one crop of the bread-making grains had ever been grown (that of 1894) which equaled present world requirements; and I may now add, that while it is possible yet it is highly improbable that this generation will see another such crop of both wheat and rye, and that each and every year's crop hereafter must largely exceed that of 1894, both in acre yield and in the aggregate, if the millions of units added yearly to the consuming element are to have their share of bread

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—and it is more than possible that in years not very remote dollar wheat will look very cheap.

That we may see how enormous is the increase of world requirements it is but necessary to state the incontrovertible fact that the last four world crops of wheat exceeded those of the preceding four years by more than 750,000,000 bushels; the last four world crops of rye exceeded the preceding four by more than 760,000,000 bushels; that the last four world crops of barley exceeded the preceding four by more than 300,000,000 bushels; that the last four world crops of oats exceeded the preceding four by more than 500,000,000 bushels; the last four world crops of potatoes exceeded the preceding four by more than 3,000,000,000 bushels. Yet requirements have so increased that these enormous products—the result of favorable climatic conditions, as the acreage increase was very slight—have been absorbed, and no reserves are in store to supplement the short crops of 1896, which are, for each of the products named, with the possible exception of barley, below the average. If such great crops have been no more than sufficient to meet requirements since 1891, what must be the effect upon prices should the world have four crops no greater than those of 1888, 1889, 1890 and 1891? Yet the wheat and rye crops of the last-named years were, in their totality, such as to show that the average acre yield of the four harvests exceeded the average acre yield of the last twenty-five world harvests.

Many mistakes have been made by the writer, but thus far those making such broad statements in relation thereto as that of our friend of the *Elevator and Grain Trade* have not been able to point out a single one in all the years that my work has been under fire, and I shall be greatly obliged to him if he will particularize the mistake which he alleges was made three years ago, in order that I may make open confession and do works meet for repentance—and because I am desirous of seeing how much more acute than other critics is this champion of the farmers who grow such enormous crops of wheat, and corn, and oats, and lard, and pork, upon the little bit of ground owned by the Produce Exchange of the breezy city by the lakes.
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Thos. Slater has a message for every man on page 15.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

JANUARY 20, 1897.—D. A. Kramer, Poland-Chinas, Washington, Kas.
FEBRUARY 1, 1897.—Risk & Gabbert, Poland-Chinas, Weston, Mo.
FEBRUARY 2, 1897.—B. R. Adamson, J. M. Turley and G. Hornaday & Co., Poland-China brood sows, Fort Scott, Kas.

Kaffir Corn and Corn Meal as Fattening Feeds for Aberdeen-Angus Heifers.

From Bulletin No. 61, by Prof. C. C. Georson, Farm Department Kansas Experiment Station.

During the same period which covers the experiment with hogs, the experiment station also fed three Aberdeen-Angus heifers for market. Having a little red Kaffir corn on hand, it was concluded to feed one of them on Kaffir corn meal and the other two on corn meal, and compare results. The animals, however, are too few to afford any reliable conclusions, and the results are given here simply for what they are worth.

The heifer in lot I. was a year and six months old, and the heifers in lot II. were two years and four months old, both being about the same age. All three were pure-bred. The experiment began November 6 and continued until February 26, 112 days. The feed consisted of Kaffir corn meal and cut corn fodder for the heifer in lot I. and of corn meal and cut corn fodder for lot II., from November 6 until December 18. But the gains on these rations were not altogether satisfactory; so the feed was changed, as follows: Lot I. got a mixture of Kaffir corn meal seventeen parts and oil meal one part, and the fodder was changed from cut corn fodder to alfalfa hay; the same ration was given lot II., with the exception that corn meal took the place of Kaffir corn meal. A week later, December 25, the meal for both lots was reduced to sixteen parts and the oil meal was increased to two parts. This continued until January 22, when the feed was again changed for both lots to sixteen parts of the meal to three parts oil meal.

Although these heifers had been reared in the college herd and had been tied up before, they were wild and nervous, as is the character of the breed, and it took some time before they overcame this nervousness. Each animal was given all it would eat, and with some slight variations in appetite they ate fairly regular quantities throughout the experiment.

The heifer in lot I. gained 154 pounds, or an average of 1.37 pounds daily; those in lot II. averaged 190 pounds, or 1.7 pounds daily. The larger gains of lot II. might be expected from the fact that they were older and larger.

The first week the heifer in lot I. lost fifty-seven pounds and it took nearly two weeks more to make up this loss; so, at the end of three weeks, she was but a few pounds heavier than she was when the experiment began. The total grain eaten was 1,693 pounds, of which the oil meal weighed 129 pounds and the Kaffir corn meal 1,564 pounds. She ate 74.5 pounds corn fodder and 193 pounds of alfalfa. On this she gained 154 pounds. She made a pound of gain on 10.99 pounds grain and 1.73 pounds roughness. This ratio of feed to gain is somewhat higher than the steers fed heretofore on an equally nutritive ration have required.

Heifer No. 91, in lot II. made one pound of gain on 9.96 pounds grain and 2.17 pounds roughness. Heifer No. 92 required more feed to make a pound of gain than either of the others, consuming 11.12 pounds of grain for each pound of gain.

If it may be assumed that the heifer in lot I. made a normal gain for the feed consumed, and that the average of the two heifers in lot II. likewise represents a normal animal, then we find that the corn meal ration was slightly more effective than the Kaffir corn ration in the production of beef. Yet the difference is but small. The cost of a pound of gain in lot I. was 4.61 cents, and the cost of a pound of gain in lot II. was 4.49 cents. Kaffir corn and corn being valued alike at 35 cents per

hundred-weight. The results certainly show that Kaffir corn can be used as a substitute for corn in a fattening ration when oil meal forms part of that ration.

Summary account of gains, in pounds.
Total gain of Lot I., 154 pounds.
Average daily gain, 1.37 pounds.
Total gain of Lot II., 381 pounds.
Average daily gain, 3.40 pounds.
Average daily gain per head, 1.70 pounds.

Lot I.—Summary of feed eaten and the cost of gain.

Grain eaten, 1,693 pounds.
Total food eaten, 1,960.5 pounds.
Average daily gain, 1.37 pounds.
Total cost of feed, \$7.107.
Roughness eaten per pound of gain, 1.73 pounds.

Roughness eaten, 367.5 pounds.
Total gain, 112 days, 154 pounds.
Cost per pound of gain, 4.61 cents.
Grain eaten per pound of gain, 10.99 pounds.
Total food eaten per pound of gain, 12.72 pounds.

Lot II.—Summary of feed eaten and the cost of gain.

Grain eaten, 1,982.5 pounds.
Total food eaten, 2,415.5 pounds.
Average daily gain, 1.77 pounds.
Total cost of feed, \$8.605.
Roughness eaten per pound of gain, 2.17 pounds.

Roughness eaten, 433 pounds.
Total gain, 112 days, 381 pounds.
Cost per pound of gain, 4.52 cents.
Grain eaten per pound of gain, 9.96 pounds.
Total food eaten per pound of gain, 12.13 pounds.

Totals of Lot II.—Summary of feed eaten and cost of gain.

Grain eaten, 4,008 pounds.
Total food eaten, 4,756 pounds.
Average gain per head, 190.5 pounds.
Average daily gain per head, 1.70 pounds.
Total cost of feed, \$17.142.
Grain eaten per pound of gain, 10.51 pounds.
Total food eaten per pound of gain, 12.47 pounds.

Roughness eaten, 748 pounds.
Total gain, 112 days, 381 pounds.
Average daily gain of lot, 3.40 pounds.
Cost per pound of gain, 4.49 cents.
Average cost of feed per head, \$8.57.
Roughness eaten per pound of gain, 1.96 pounds.

Razor-Backs and Hog Cholera.

EDITOR KANSAS FARMER:—Of late years our county is visited every fall and winter by the dreaded enemy of the pork-producer, hog cholera. Before the importation of car-loads of razor-backs from Arkansas and Texas, cholera was a rare thing in Crawford county. These half-starved hogs are gathered from the woods, where they have always had the freedom of the range, where they made their living by gathering mast, roots, etc. They are shipped here in cars often infested with disease; but if the hogs are perfectly healthy and have not been exposed to any disease when they are brought to the county, they are often sold out to farmers, scattering them broadcast over the county. They are then placed in small feed lots and fed heavily on a corn and water diet, without exercise, to which treatment they are not accustomed. They soon become gorged, their digestion deranged, they are not able to resist the cholera germs, and soon these razor-backs are dying like October flies.

The disease, in many ways, spreads to other herds of the vicinity. Some farmers try to keep their cholera a secret from their neighbors, which is very mean, and, gathering all fat hogs able to walk, load them in a wagon and haul them to market, scattering, by the droppings from the wagon, the disease all along the road. I know of herds near the highway over which hogs were hauled to market, that took the cholera, while other herds of the vicinity, back from the road, escaped. Often the dead hogs are dragged out onto the fields (although it is a violation of law to do so), there to be eaten, and carried about the country by dogs; while crows and buzzards feast upon them and fly for many miles, to feed lots, where they leave the germs, to be taken up by the healthy swine. Thus, on and on the deadly cholera goes, devastating thousands of valuable herds, sweeping all in its course—the thoroughbreds on which time, money and care have been lavished for many years. And if it were possible to track the disease back to its source, it would almost invariably be found in some careless man's feed lot, full of those long-legged, lantern-jawed, razor-backed elm-peelers brought from the Southern woods.

There is much more money lost than made by bringing these Southern hogs into Kansas to fatten, and shoats bought from the city stock yards are very little better, so far as cholera is concerned.

Our Legislature should listen to the

appeal of the modern, civilized hog, the mortgage-lifter, as he begs for protection.

We have a law to keep out Southern cattle, that the Texas fever may not be scattered. Why not have a law to keep out these Southern hogs, as well, if it can be demonstrated that they are a source of hog cholera. I would be glad to hear, through the KANSAS FARMER, from persons who have had experience with these Southern hogs, or from those who live in communities where they have been shipped in and fattened, as to whether they are a source of propagating hog cholera.

WILKIE BLAIR,
Beulah Land Farm, Beulah, Crawford Co., Kas.

Our Sheep and Hogs in England.

The last annual report of the United States Secretary of Agriculture states that American sheep during the year 1896 have been landed in Liverpool in greater numbers than during any preceding year. They have consisted largely of corn-fattened muttons, and nine-tenths have been of superior quality.

The profitable market for mutton in England has encouraged sheep-growing and fattening in many of the Western States. Although prices fluctuate considerably, being regulated by the supply and prices of native English mutton, there is, as a rule, only a difference of about 3 cents per pound between the best English and the best United States mutton. This is not because of English prejudice against the American article, but because many of the sheep from the United States, having been rapidly fattened on corn prior to shipment, show sometimes 80 per cent. of their added weight to be tallow, while the flesh (English declare) is flavored by the corn feed.

American yearlings and two-year-olds command practically the same price as English sheep of the same age and quality, and have sold during the present year at from 14 to 16 cents per pound.

It was, however, the misfortune of American shippers, notwithstanding the increased vigilance and rigor of the inspection of animals for export, to have landed during the year 1895-96 a few lots of sheep in Liverpool and London affected with the scab. It is quite possible that this disease was generated by infected ships upon which diseased sheep had been sent from Argentina and other countries, and then, without proper disinfection, had been put into the carrying trade between the United States and Europe. It is, however, believed that if sheep are wet and crowded during a voyage scab may be generated by those conditions.

The Glasgow market finds fault with American sheep, and also Canadian, by declaring them too big and fat. The Scotch want medium weights, and for them will pay high prices. Foreign markets demand some other breed of sheep for mutton than the Merino and its crosses, and those looking to profitable ventures in this line should secure the best mutton breeds of sheep, which, when they are landed in as good condition as American cattle, will soon have as high a reputation and bring as remunerative figures.

IMPORTS OF HOG PRODUCTS.

Great Britain continues the largest purchaser and importer of swine flesh and hog products in the world.

In 1893 British consumers took from foreign countries 3,000,000 cwt., over 3,500,000 cwt. in 1894, more than 4,000,000 cwt. in 1895, and nearly 3,500,000 cwt. during the first nine months of 1896. This year will, therefore, show a large increase in consumption. It is noticeable that while there was an increase of 800,000 cwt. in 1895 over 1893 the value fell from \$41,250,000 to \$38,500,000.

Shipments from the United States of these products are pretty steady and average 2,500,000 cwt. a year. American packers are not participating in the profits of the growth in consumption of swine flesh and hog products in Great Britain as much as they ought to, because they do not cure meats especially suited to the English demand. But their Danish and Canadian competitors are increasing their shipments into the United Kingdom every year. This is

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because the packers of Denmark and Canada are carefully catering to the taste of the English consumer. Eighty per cent. of the entire Danish product finds market in England. The cost of swine at the packing houses in Denmark is given at 6 cents a pound live weight, with a dockage of 20 per cent. on refuse, together with 28 pounds of bone. The freight on the product to London is only \$7.30 per ton, and the price realized is about \$11 per cwt.

Irish packers are more damaged by Danish competition than are those of the United States, and the great abattoirs of Ireland are advocating improvement in breed of swine for that country, and also in the methods of curing the meat for market.

To Change Color of Holsteins.

EDITOR KANSAS FARMER:—Jacob Ruf, Urbana, Kas., wants to know how to change the color of Holstein cattle. What I know about it is from actual experience. I put a Red Polled bull with fifteen Holstein cows, and the calves were all cherry red and hornless.

D. F. VANBUSKIRK.

Blue Mound, Kas.

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Very low rates will be made by the Missouri, Kansas & Texas railway, on November 3 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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Irrigation.

Conducted by HON. M. B. TOMBLIN, Goodland, Kas.

PUMPING WATER FOR IRRIGATION.

From advance sheets of a report of United States Geological Survey, by Herbert M. Wilson.

Until within the last decade the water supplies used in irrigation in our Western States were brought to the places of utilization almost wholly by gravity. There are, however, large volumes of water situated at such low levels that gravity will not carry it to the fields, and only in recent years have we come to a realization of the fact that this water may be raised by pumps or other lifting devices to elevations from which it will flow by gravity to the irrigable lands.

Extensive areas may be brought under cultivation through pumping after the supplies which gravity alone will bring have been entirely utilized. Not only is the water which may be raised from wells or low-lying streams available, but that which finds its way by seepage from irrigation canals and irrigated lands may be gathered into wells and pumped to the surface and again employed in irrigation. For, as irrigation is practiced, the subsoil becomes saturated, the ground water level is raised, and much of the water delivered to the surface by gravity systems finds its way by seepage from the fields into the soil and may through pumping be used again in irrigation, thus adding to the duties of the ultimate sources of water supply.

The value of pumping for such purposes has been recognized for ages in the older European and Asiatic countries, and a large portion of the irrigation in Europe, India, Egypt, China and Japan is carried on by such means. In oriental countries pumping is performed almost wholly by animal or man power. In some portions of Europe, notably in Italy, some pumping is done by modern machinery, chiefly in raising water from existing low level to high level canals. In our own country numerous pumping plants actuated by wind, gasoline, water and steam powers have been erected within the last few years, and they have proved so efficient and economic as to at once gain favor with Western irrigators.

The real value of pumping as a means of irrigation, and the extent to which it may be employed, are as yet scarcely appreciated. A great many windmills and some water wheels are utilized in our Western States for this purpose, and a little pumping is done by steam and gasoline. But the value of the water supplies to be derived from lifting is sure to increase greatly as the cheapness and adaptability of this method come to be fully recognized. It is now a well-established fact that pumping occasionally furnishes irrigation water more cheaply than does gravity, both as regards first cost of the pumping plant, equivalent to the cost of water rights, and as regards the cost of maintenance and operation, which corresponds to the annual water rental or rate in the gravity system. In pumping, the source of water supply is more directly under the control of the irrigator, while he is troubled by none of the vexatious controversies arising from questions of priority of right or of water appropriation, of time of supply, and of rotation in the ditches; nor is he so likely to have his supply cut down in seasons of drought.

According to the figures given by F. H. Newell in the report on Agriculture by Irrigation, prepared for the United States census of 1890, the average first cost of water derived from gravity supplies for the whole United States was \$3.15 per acre, varying between \$3.62, the average for Wyoming, and \$12.95, the average for California. The average annual water rental was \$1.07 per acre, ranging between 44 cents in Wyoming and \$1.60 cents in California. The average cost per second foot of water on account of construction of some of the great gravity canals of the West, and based on the assumption that their whole supply was utilized, varied between \$125 for the Bear River

canal, Utah, and \$730 for the Turlock canal, California. The cost per acre irrigated for the same works varied between \$5 for the Bear River canal and \$14.50 for the Turlock canal. The average cost per acre irrigated by some of the greater of the storage reservoirs of the West varied between \$19.96 for the Hemet Valley reservoir in California and \$81.80 for the Sweetwater reservoir in California.

On the other hand, numerous wind-mill pumping plants have been erected in the West, the first cost of which is equivalent to a charge of about \$20 per acre irrigated, or less, while the cost of maintenance, equivalent to annual water rental, is practically nil. Hydraulic rams have been utilized in pumping for irrigation at a cost of about \$10 per acre irrigated, with practically no charge for maintenance and operation. Gasoline pumping engines are extensively used in the West, the first cost of which has been equivalent to about \$30 per acre irrigated, with a cost of operation of \$1.25 per acre. Water-power pumping plants have been erected in the West at costs ranging from \$1 to \$15 per acre irrigated, and with operating charges varying between \$1 and \$2.50 per acre. Of steam pumping plants so far erected in the West the cost has ranged from \$5 to \$10 per acre irrigated, with an operating charge of from \$1.50 to \$3 per annum per acre irrigated.

As an indication of the extent to which pumping, even in the crudest forms, may be utilized, either to supplement gravity supplies or independently of them, it may be stated that in one small area in India, between the Ganges and Jumna canals, there are over 350,000 wells, supplying water by lifting to 1,500,000 acres of crops. In Madras, India, 2,000,000 acres are irrigated by water pumped from 400,000 wells. In one small province in southern India there are over 100,000 wells, many of which have been sunk through hard rock to depths of from eighty to ninety feet and are capable of irrigating in ordinary seasons from one to four acres each. In our own country, on the great plains sloping eastward from the Rockies, and on many of the broader intermontane valleys and in the great California valley, wherever the wind is comparatively constant and of relatively high velocity, vast areas of land may be brought under cultivation through irrigation by water lifted from wells by means of windmills. In like manner, streams which are flowing between steep banks may not only furnish water supplies for irrigation by means of pumping, through wind, steam or gasoline power, but, if of sufficient size, may furnish water power for lifting. The extent to which water supplies are to be derived from such sources is yet difficult to estimate, but it is certainly within the realm of probability that eventually nearly one-half as much area may be brought under cultivation through lift as through gravity supplies.

Winter Irrigation.

EDITOR KANSAS FARMER:—The chief reason that no better results on the uplands in western Kansas and the whole plains country has been obtained from irrigation, is that the ground is not in the proper condition to take the water when it is put on. Dry earth and dust are almost a non-conductor of moisture, and to get sufficient water on the ground to wet the soil thoroughly, so that it will reach the fine rootlets of the plant without at the same time injuring them with too much water by excluding the air from the roots, is almost an impossibility. To wet the subsoil thoroughly, and when it can be done with the least expense, is the problem that winter irrigation proposes to solve.

The water settles into the soil by three processes—surface tension, capillarity and gravity. It is by surface tension and capillarity that the subsoil is chiefly moistened. The wetting of the soil downward continues until the surface becomes drier than the subsoil, when the downward process practically stops and the upward process again begins. The process is always from the moister to the less moist earth.

Evaporation from the surface goes

on at all times and under all conditions of temperature, but is least rapid during the colder months of the year, and especially when the ground is frozen. Water being put on the ground late in the fall and during the winter will, therefore, sink deeper and deeper into the subsoil before its downward course is stopped by surface evaporation.

While, ordinarily, in the summer time an inch of water will wet down from four to six inches of soil, in the winter this same amount of water will sink to nearly thrice this depth, or from twelve to eighteen inches. If the subsoil is thoroughly wet, say, to the depth of six feet in the fall and winter, the season will indeed be a rare one that will not produce a crop of barley, oats or wheat by the ordinary rains of the spring seasons. No such seasons have occurred in western Kansas to my recollection. For the past few years western Kansas has had no winter rains or snow to wet the subsoil, hence the spring and summer rains fell on a soil unfavorable, by its dryness, to make use of the water properly, and instead of soaking into the earth to any depth, it rapidly evaporated. In each of these dry seasons enough rain has fallen in the spring to mature a fair crop had the subsoil been wet.

From the lack of moisture in the subsoil in the winter, many fruit and forest trees have died during the past few years. The rain that has fallen in these years, has kept the surface soil in a moist condition, sufficiently so to produce a growth, but the feeding rootlets having penetrated the dry subsoil, they could not supply moisture enough for the evaporation going on through leaves, and besides this the soil has actually taken moisture from the green roots in many instances in the winter time, thus starving the tree to death.

The soil needs water at all seasons. When evaporation is least it needs it to store it up for future use. During the summer months, while the crops of all descriptions are taking moisture from the soil, about all the water that comes to it as rain is used to replenish this loss, and in exceptionally dry seasons this loss must be made good by artificial means to realize a crop. From statistics gathered from those who have tried winter irrigation, not a single report has been received that does not speak in the most favorable terms of the great benefit secured by thoroughly wetting the subsoil in the late fall and winter months. Of its economy, its utility and its benefit to trees, spring crops and early vegetables, I am entirely satisfied. Let those who have not tried it, but have the means of doing so, try it at once by irrigating a piece of wheat in October, then sowing it; by irrigating during the fall and winter for oats, barley, potatoes, early vegetables and trees of all descriptions, and compare the result with the same crops on land not irrigated in the winter. Try it. Wet the subsoil thoroughly in your orchard to a depth of six feet, during the winter months, when there is no frost in the ground, and note the result in better fruit and thriffter growth of wood, but pray don't confine yourself to your orchard. N. F. DAUM.

Great Bend, Kas.

The meteorological and family paper, *Word and Works*, edited by Rev. Irl R. Hicks, of St. Louis, contains the most elaborate forecasts of the weather anywhere published. It is a large and elegantly gotten up paper on a high moral standard and is entertaining for its general family reading. The weather forecasts of Rev. Hicks are uttered with the utmost confidence and are explicit and entertaining. In addition to the paper, Rev. Hicks publishes an almanac, in which he prints his predictions for the entire year, with such explanations as interest and instruct the reader. The price of Mr. Hicks' paper, *Word and Works*, is \$1 per year. By arrangements just made we are able to offer *Word and Works*, the Hicks almanac, which is a book of 108 pages, and KANSAS FARMER, all one year, for \$1.60. Send subscriptions to this office.

There are about 17,000,000 cows in this country, or one to every four inhabitants.

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All new patients who apply before January 1, and all old patients who renew their treatment before that time will be treated until cured at the uniform rate of \$3 a month.

Mr. E. S. Triggs, engineer, Nineteenth and Bell streets: "I had been a sufferer from catarrh of the head and throat for eight years. I became so bad that I could not swallow—my palate was eaten by the disease, so that I could swallow only warm fluids. I lost flesh and strength rapidly. Being told that Drs. Copeland and Branaman would not treat any diseases that they could not cure, I went to them for examination, and being told that they could cure me, began a course of treatment at the institute. I improved rapidly from the very beginning. I can now swallow any food, my throat is well and I am gaining in strength. I cannot say enough in praise of this quick cure."

Mr. Jas. Neeson, 808 Penn street, this city: "I had a severe headache, pain in the eyes, stopped up nose and a dry throat. I coughed all day long, and felt miserable. At times I could not work. After taking a course of treatment with Drs. Copeland & Branaman, I am now enjoying good health."

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Every one interested in improved stock should have the *Breeder's Gazette*, of Chicago, as well as the KANSAS FARMER, which we furnish for the price of one—both papers one year for only (\$2) two dollars; or we will supply the *National Stockman and Farmer*, of Pittsburgh, Pa. (the best general farm and stock journal in this country, price \$1.50), and the FARMER, for \$1.50. Send for sample copies to the papers direct, and save money and get a big benefit by sending your subscription to KANSAS FARMER, Topeka, Kas. No progressive farmer or breeder can afford at this low price to be without this great trio of farm magazines.

"Among the Ozarks."

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

Meals on the "Order" Plan

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

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

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

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

The Apiary.

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

"No Breath, No Sting."

KANSAS FARMER APIARY:—In reference to the article in FARMER of December 10, as to robbing bees without risk of them stinging, by holding a person's breath, I will say that I have personally seen it tried by one of our "smart Ales" here at Junction City, with some of my bees, and can tell you that he dropped it quicker than he took hold of it, and I think those two editors would do the same. If a person wants to be stung that is a sure way to get it.

LEWIS E. MAYER.

Junction City, Kas.
—We very well knew, at the time we gave the clipping, that it was a "fake." We gave our opinion that we thought to hold the breath "long enough," one would not feel the sting—so long that the last spark of life was gone. But we still hope those editors will make the test. May be an editor's hide is more sheet-iron like. At any rate, if they make the test at our apiary, we will give them a good fat colony to experiment on, and if they succeed, it will be all the honey they can eat, and all, perhaps, they can carry away, unless they can eat about fifty pounds at one sitting.

Locating an Apiary.

If it is the intention to make bee-keeping a business, for the dollars and cents that are in it, it is certainly of great importance to consider well the location of the same. There are localities, even in a radius of a few miles, that are much better than others. There are localities where white clover is very abundant and where a crop is sure every season, whether it is long or short, while there are others that are not so, and occasional years only furnish a crop. Basswood is another principal honey resource, and where this and clover both abound is a desirable locality for an apiary. Basswood, or linden, is a good timber to cultivate. It is very hardy and makes a rapid growth and might take the place of cottonwood, so extensively grown in the West. In a valley where fall flowers are plentiful is a good point to seek for, as a late flow of honey is very desirable for placing bees in good wintering shape. Alfalfa is one of the best honey-producing plants we have at present, and it would be a safe place to locate, even if no other honey plants are in reach, but it would be all the better if other honey plants are present.

There is a long list of honey-bearing plants, but we will give but a few of the principal ones: Millot or sweet clover, crimson clover, alsike clover, mammoth or pea-vine clover, tulip tree or poplar, black or sour gum, wild asters, goldenrod, willows, maple, buckwheat, cleome or spider plant, all kinds of berries and all kinds of fruit trees, whether wild or domesticated.

Carniolan Bees.

"These are the gray bees from the elevated Alpine province of Carniola, Austria; are the gentlest of all races, and besides their other good qualities, they winter the best of any, and it is not surprising to see that they have steadily grown in favor," says Frank Benton. "Their sealed combs are exceedingly white, as they do not fill the cells so full that the honey touches the cappings, and they gather but little propolis, qualities that are highly appreciated by the producers of comb honey. They are quite prolific, and if kept in small hives, such as have been used of late in the United States, are somewhat more inclined to swarm than the other races introduced here. This tendency becomes more pronounced when their hives are not well shaded, as they have been bred for centuries, with only slight introduction of outside blood, in a climate where the summers are short and cool. Moreover, the practice in Carniola is to place the long, shallow hives, used almost exclusively there, in bee-houses and side by side, one above the other, with in-

tervening air spaces, so that at most only the front ends are exposed to the sun. This management long continued has doubtless tended to develop and fix more or less permanently in this race certain characteristics which should be taken in account in their management elsewhere. With these precautions they do well in any part of the United States."

Candied Honey.

It should be borne in mind that all strained or extracted honey will candy or become solid, resembling sugar. This occurs at the approach of cold weather during the fall. In some instances comb honey will also harden and turn to sugar in the cells, and it is impossible to liquefy it again without destroying the comb. Extracted honey may readily be brought back to liquid by heating it. After it is candied and thoroughly melted again by artificial heat and sealed up while warm, it will remain in a perfect liquid form. The use of honey in its candied state is in no way objectionable, and many prefer it thus, but when not preferred it can easily be melted for present use, when it will remain in liquid form some time before again granulating. In liquefying honey, it should not receive too much heat, and the proper way to do it is by steam. But it may be done on a small scale, or for home use, by setting the receptacles containing the honey into some larger pail holding boiling water. Boiling honey will destroy its flavor, hence it should only be well melted.

American Chester White Record Association.

EDITOR KANSAS FARMER:—The thirteenth annual meeting of this association will be held at the Upton hotel, Columbus, Ohio, Wednesday, January 13, 1897. A swine breeders' institute will be held by this association, at same place, on evening of January 12. Breeders and feeders of all breeds of swine are invited to attend this institute.

CARL FREIGAU, Secretary,
Dayton, Ohio.

The Harned Sale a Success.

Last week, on Thursday, the sale of Short-horn cattle, as had been previously announced, was held at Buncheon, Cooper county, Missouri, by W. P. Harned. The day opened up clear, warm and pleasant, and by 10 o'clock about four hundred prospective buyers and onlookers were on the ground. The cattle, mostly yearlings, were in good condition and the admiration of every lover of high-class cattle. Mr. Harned had stated in his sale announcement, "You will not be disappointed when you see the stock," and it was remarked on all sides, "They are sure good cattle" to have been raised outdoors and never in a barn until the day before the sale. Promptly at 10 o'clock the veteran auctioneer, Col. J. W. Judy, mounted the block, and, after the usual preliminaries, proceeded with the sale. Buyers were present from Missouri, Texas, Indian Territory and Kansas. Bids from half a score of States, but not high enough to secure a single animal. B. W. Gowdy, of Garnett, Kas., topped the sale on the five-year-old bull, Ambassador 110811, at \$210. M. C. Vansell, of Muscotah, Atchison county, Kansas, secured the yearling bull, Duke of the Roses, by Grand Victor 2d 115753 and out of Butterfly of Rose 5th (Vol. 40), for \$100. F. M. Gifford, of Medford, Geary county, Kansas, secured the yearling, Lord Elmer by Prince Victor 120646 and out of Almeda (Vol. 41), for \$85. Thirty-three head went to Missouri buyers; eleven head of bulls were secured personally by the well-known Texas ranchman, Mr. W. B. Slaughter, for his Goff Creek herd in Oklahoma; J. J. McAlester, of McAlester, I. T., secured two bulls that suited him. The forty-nine head brought \$3,585. Thirty bulls averaged \$78.83, and the nineteen heifers \$64.21. One car lot of high-grade bulls were sold at private sale. There are about 180 head of yearlings and two-year-old high-grade bulls yet on the farm from which car lots can be selected and at reasonable prices.

Unequaled Service

Denver to Chicago via Kansas City is given via the UNION PACIFIC and Chicago & Alton railways.

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

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

Gossip About Stock.

Our readers interested in Poland-Chinas should keep in mind the sale, next Monday, at the Rose Creek farm, in Republic county. The offering is a first-class one and the sale should be a success.

W. L. Brown, of Kingman, Kas., a stockman, editor and Populist statesman, is authority for the statement that more cattle are being fed for market in his county than at any time in its history.

Lawrence Nation, owner of the Standard herd of Poland-Chinas, Hutchinson, Kas., says that he has been very successful in disposing of all his boar pigs, also that he and Willis E. Gresham will hold a bred sow sale in February, 1897.

T. A. Hubbard, proprietor of Rome Park stock farm, Rome, Kas., authorizes us to state that during the month of December he will sell thoroughbred Poland-China and Large English Berkshires as follows: One-half cash and a good bankable note drawing 10 per cent. for one year for the balance. The hogs are extra quality. Males, either breed, \$25; gilts bred, \$25. Send orders at once and get the benefit of this special offer.

Mains' herd of Poland-Chinas, Oskaloosa, Kas., is once more represented in the KANSAS FARMER. Mr. Mains has quite a number of young boars old enough for service, by Moorish King, bred by J. W. Williams & Son, Bryant, Ind., a large, heavy-boned hog, as well as a remarkable breeder. He also has a number of sows bred to him that are now for sale. Most of the sows in this herd are loaded with Tom Corwin blood.

C. J. Huggins, of Wamego, Kas., recently advertised one week a public sale of Chester White swine, but only succeeded in securing a local attendance and to them sold the "odds and ends" of his herd, reserving his choicest breeders for private sale, which he now proposes to close out at taking prices which will afford numerous breeders a chance to add some extra good Chester White hogs to their herd at a small cost. It will be worth while to make him a visit.

Carl Freigau, Secretary of the Ohio Poland-China Record, Dayton, O., is now asking for pedigrees for Volume XIX., and to breeders suggests that they give "exact description of the pigs in pedigrees. Black with white points, is not sufficient; state if most white is on left hind leg, or least white on right fore leg, or if white is mostly on left side of nose, or stripe of white running up toward right eye, or a few white hairs on left flank, or small speck of white behind right shoulder, etc.; also give ear-mark. There are many different marks on a pig by which it may be identified, and one can readily describe such in twenty words. In shipping pigs they may get accidentally exchanged or substituted on the road, and the buyer has no way of knowing that he got the pig for which the pedigree was given. Where animals passed through hands of dealers in stock, pedigrees have been rejected for want of description, or for incorrect description of the pigs. Hence, give in twenty words as many distinct marks of any kind as can be found on the pig."

BREEDERS' COMBINATION SALE OF REGISTERED SWINE.—At no time since the introduction of pure-bred swine into the State of Kansas has there been a more important announcement than that by the Kansas State Swine Breeders' Association, found elsewhere in this issue of the KANSAS FARMER. At the last regular meeting of the association it was decided to hold a representative combination sale of all the leading breeds found in the State, to the end that breed characteristics and individual merit might be compared and give the prospective buyer an opportunity to secure some of the best with which to recruit and reinforce his herd or lay the foundation for a better one. The offerings will consist of about fifty head, all selected tops, two from each of the established herds of the State. Of course it is to be expected that each breeder will consign what he thinks is the best, whether Poland-China, Berkshire or Chester White. This sale ought to bring out a host of swine breeders and up-to-date farmers, and its being held in the city of Topeka, on Wednesday, January 13, 1897, during the week of the annual meeting of the State Board of Agriculture, the Kansas Improved Stock Breeders' Association and the Kansas State Swine Breeders' Association, it promises to be an event never before equaled in the history of Kansas swine husbandry. For further particulars consult the announcement and write Mr. O. P. Updegraff, Secretary, Topeka, Kas., for a copy of the sale catalogue.

Great Rock Island Route Playing Cards.

Send 12 cents in stamps to John Sebastian, General Passenger Agent C., R. I. & P. railway, Chicago, for the slickest pack of playing cards you ever handled, and on receipt of such remittance for one or more packs they will be sent you postpaid. Orders containing 60 cents in stamps or postal note for same amount will secure five packs by express, charges paid.



The secret of happiness is health. The secret of woman's attractiveness is health. Health is responsible for the ecstasy of a lover's kiss—of a husband's love. Health makes plump, smooth neck and shoulders—full cheeks, bright eyes, red lips, breath like flowers. Ill health brings out the bones, deadens the eyes and skin, whitens the lips, makes the breath unbearable. No woman likes to be hideous—no woman likes to see the love light fade from her husband's eyes. No woman need be unhealthy or unattractive. Ill health in women is nine times in ten directly traceable to some disease or disorder of the organs distinctly feminine. These things are serious, but they can be cured—sometimes quickly and easily—sometimes slowly, but always surely by Dr. Pierce's Favorite Prescription.

This wonderful medicine is designed for one single purpose,—to make women healthy in a womanly way. To stop the burning, aching pain and debilitating drains common to diseased womanhood. The almost miraculous help it gives is best told by those who have used it. The following letter is only one chosen at random among thousands:

Mrs. James Schaffner, of Freemansburg, Northampton Co., Pa., writes: "It is with pleasure that I write to let you know the great good I have received from your medicines and the local self-treatment at home. I was troubled with female weakness, had pains in my back all the time, sometimes so severe that I could not lie still in bed at night. I tried different doctors but they could not help me. Then my husband got Dr. Pierce's Common Sense Medical Adviser, and induced me to try Dr. Pierce's medicines. After taking six bottles of the 'Favorite Prescription' I feel like a new woman."

Homes for the Homeless.

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

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

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

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

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

Ask agent for tickets via the Burlington Route.

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

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.

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.

The Home Circle.

CHILDREN.

Of such is the kingdom of heaven.
No glory that ever was shed
From the crowning star of the seven
That crowned the north-world's head;

No word that ever was spoken
Of human or god-like tongue,
Gave ever such god-like token
Since human harps were strung.

No sign that ever was given
To faithful or faithless eyes
Showed ever beyond clouds riven
So clear a paradise.

Earth's creeds may be seventy times seven
And blood have defiled each creed.
If of such be the kingdom of heaven
It must be heaven indeed.
—A. C. Swinburne.

WOMAN'S WAYS.

The bravest battle that ever was fought,
Shall I tell you where, and when?
On the maps of the world you'll find it not;
'Twas fought by the mothers of men.

Nay, not with cannon or battle shot,
With sword or nobler pen!
Nay, not with eloquent word or thought
From mouth of wonderful men!

But deep in a walled-up woman's heart—
Of woman that would not yield,
But bravely, silently bore her part—
Lo! there is the battlefield.

No marshaling troop, no bivouac song,
No banner to gleam and wave!
But oh, these battles? they last so long—
From babyhood to the grave!
—Joaquin Miller.

Written for KANSAS FARMER.

WHAT ONE MOTHER DID.

BY CODA OLMSTED, LONE ELM, KAS.

(Continued from last week.)

O, sleep! how many tired hearts are eased and comforted by thy blessed balm. How pure and sweet is thy stealing unconsciousness to the tired brain and limbs. How mysterious, how beautiful, how holy, how comforting is sleep, blessed sleep.

She was awakened from her sleep by the entrance of the children after their hats and bonnets to take their leave. She felt fresh and rested and relieved by her short nap, and arose to speed the departing guests with a lighter heart than when she had welcomed them.

After they had all gone, and the sun was nearing the horizon, Fred came into the kitchen where she was quietly preparing the evening meal, and said:

"Oh, mother, I want to go down to Sam Lawer's to see his pet bear his uncle has sent him from Washington. May I?"

"Yes, dear," answered his mother, "after you have done your chores."

Fred looked surprised and hurt. Heretofore his mother had always let him go and did his work for him.

"I am tired to-night. I have worked very hard to-day, and want to rest," she added.

Fred turned away with a queer look on his face, but without a word he hurried through with his work and then made his visit.

She resumed her work with an earnest, determined look on her face. "A butterfly touched an apple and it fell," she said to herself. "Little things sometimes accomplish much, and I must do what I see to be right." When Mrs. Slader once decided to do a thing, she put her whole soul into it, so that if a thing was right or wrong she soon discovered it. Now, instead of working all day in soiled clothing, she did all her kitchen and dirty work during the forenoon, and always managed, when possible, to appear clean and neat at dinner, and be clean and neat the remainder of the day.

Fred did not ask his mother to do his chores for him again, but he noticed the transformation in his mother, and in his heart he felt glad; for now, whenever a friend dropped in, his mother welcomed and entertained him the best she could.

"I believe you've got the nicest mother around," said one of the boys, Jim Ball, to him one day as they were talking and planning in the back yard. "She is always so neat and sweet. She seems like a mother to us all. I never was acquainted with her till the last month or two—I scarcely saw her, but now she almost takes my mother's place," and there was a suspicious moisture in the boy's eyes.

Fred, boy-like, turned from him, and pretended to be fixing something about his shoe, that he might not see his friend's tears, though his heart was full of sympathy.

"I think my mother is the best woman I ever saw," he said, clasping his hands around his knee and looking at the ground. "I tell you, she's a mother. She sympathizes with a fellow, doesn't make any difference whether he's mean or good."

"Didn't you feel awful this morning when Mrs. Lawer was scolding Sam so?" asked Jim, as he took out his penknife and commenced whittling a stick that was lying near.

"My! I should think I did. Felt like she meant me as much as Sam," responded Fred.

"We felt just about as cheap, too," added Jim.

"I tell you my mother wouldn't do that," said Fred, an unconscious proudness in his voice and look.

"Do you remember that time Mr. Welch whipped Dick when we were there?" said Jim, picking up another stick to whittle. "My! but I would have just as lief he had loked me."

"Yes; and Dick said afterwards he was going to be just as mean as he could be, too; his folks didn't care anything about his friends."

"Some people don't seem to think a fellow has any feelings. I tell you what, Fred—"

At that instant the tea bell sounded and Fred, rising, said:

"Come in, Jim. Supper's ready, and father and mother will be glad to have you."

"I believe I will," answered Jim, rising and brushing the dust from his clothing. "I always have such a nice time here. Aunt and Uncle won't care," he added, a little bitterly, as they walked toward the house.

Mrs. Slader welcomed them with a smile and a pleasant "Good evening, boys," and assigned them their places at the table.

Mr. Slader was a grave, thoughtful man, but he made the boy feel at home by his kindness, and Mrs. Slader chatted with them understandingly, for she knew about their ball, cricket and other games, and took an interest in everything her boy did. And she felt repaid by the way he talked with, and looked at her. She felt now, that her boy really loved her without any of "that feeling."

"Jim said this evening that he believed I have the nicest mother around," said Fred to his mother, during the meal.

Jim looked guilty, and so funny, that Fred laughed outright, and Mr. Slader smiled.

"I'm glad he likes me," said Mrs. Slader, with a tender ring in her voice. "We have jolly times together, and I think Jim is one of the nicest boys around."

"I agree with both of you," said Fred, still smiling.

"O, mother," he said, after a while, "Sam Reed said I was the best cricket player here."

"I am glad of that, returned his mother; and they continued talking about games and boyish things till tea was over, when Mr. Slader had to transact some business down town, and Mrs. Slader arose and piled up the tea things.

"Come on, mother," said Fred, as she finished. "Let's have some music."

"Help me wash the tea things, then," she answered, smiling.

"I'll tell you what let's do," said Jim. "Let's make her sit in the big rocker while we wash them."

"All right; come on," said Fred, delightfully. And they escorted her to it and placed a footstool at her feet.

"Now you can oversee," said Fred; "and if we don't do it right, why pray don't mention it," ending with a funny imitation of one of the girls, at which they all laughed, and the boys went about the dish-washing.

"I tell you I'd get good and tired of washing dishes three times a day," said Fred, as he splashed the water over the dishes.

"You ought to help your mother wash them often, then," replied Jim.

"Guess I will," answered Fred, looking sideways at his mother, who watched them smilingly.

"I move mother gives us some music to wash dishes by," said Fred, as he leaned a plate against in the dripping-pan.

"I second that motion," said Jim, delightfully.

Mrs. Slader arose, and going to the piano, in the parlor, played a number of her liveliest pieces.

"Now we're actually ready for business," said Fred, a short time after, unrolling his sleeves as they entered the parlor. And they played and sang. Fred was learning to sing bass, and was very proud of it. "Not many of the boys can," he said, proudly.

"Cause they haven't got your mother to teach them," said Jim, rocking back and forth in his chair in keen enjoyment. It was not often he spent such an evening as this. His mother was dead, and he lived with his uncle and aunt in the town, who clothed and fed and sent him to school, and thought that they had done their whole duty by him, and they felt sometimes that he wasn't as thankful as he should be. They had household, church and much other work to do, and did not bother to study his character and guide him understandingly and lovingly. But Jim was blossoming out in this atmosphere. He was enjoying this evening hugely.

"Why, my dear little boy," said Fred, "if you want to learn you have only to drop in and sing with us, hasn't he, mother?"

"To be sure," she answered, willingly.

"He can come whenever he likes. We shall be glad to have him. What is that?" she asked, turning around on her stool as a great racket and din was heard from the outside.

ONE AS GOOD AS ANOTHER



It is easy to say that one preparation is as good as another, and it is easy to waste money by buying something you know nothing about, and receiving no benefit. When the body is weak and you want to give it strength, when health is failing, what wisdom is there in experimenting with a substitute, when, for a few cents more, you can buy the original article. For more than twenty years,

SCOTT'S EMULSION

has been the standard Cod-liver Oil emulsion. It contains more pure Norwegian Cod-liver Oil than any other emulsion in the world and will stand the test of time as being a perfect, inseparable emulsion. You can't afford to take a substitute for it. 50c. and \$1.00 at all druggists.

CLEANING FURNITURE.

Naphtha Must Be Literally Poured On to Be Effective.

One reason why people fail in cleaning furniture coverings is that they are too economical in the use of naphtha. It must be literally poured on to be effective. Standing in the breeze it will evaporate very quickly, and will destroy every vestige of moths. If the articles are to be left in the house they may be wrapped in sheets tightly pinned around them. This keeps a certain amount of the odor in furniture for a long time, and renders it doubly safe.

It cannot be too strongly emphasized that no light of any kind must be taken into the rooms while the naphtha-cleaned articles, recently finished, are there. The inflammable nature of naphtha vapor makes it exceedingly dangerous when brought near a flame.

Cushions, carpets and wool draperies may safely be cleaned in this way, and all that is necessary is to throw all draperies over a line in the yard, open the windows, remove the wrapping from the furniture, and let the breeze have a full sweep though the room for a day or two. Then there will be no offensive smell, and the furniture may be used with perfect safety so far as danger from fire is concerned.

I CURE FITS

When I say I cure I do not mean merely to stop them for a time and then have them return again. I mean a radical cure. I have made the disease of FITS, EPILEPSY or FALLING SICKNESS a life-long study. I warrant my remedy to cure the worst cases. Because others have failed is no reason for not now receiving a cure. Send at once for a treatise and a Free Bottle of my infallible remedy. Give Express and Postoffice address.

Prof. W. H. PEEKE, F. D., 4 Cedar St., New York

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

ELY'S CREAM BALM

OPENS and cleans the Nasal Passages, Allays Pain and Inflammation, Heals and Protects the Membrane from Colds Restores the Senses of Taste and Smell. Is quickly absorbed. Gives relief at once. 50 cents at Druggists or by mail; samples 10 cents by mail.

ELY BROTHERS, 56 Warren Street, New York.

Webster's International Dictionary

Invaluable in Office, School, and Home.

A thorough revision of the Unabridged, the purpose of which has been not to display nor the provision of material for boastful and showy advertisement, but the due, judicious, scholarly, thorough perfecting of a work which in all the stages of its growth has obtained in an equal degree the favor and confidence of scholars and of the general public.

The Choice of Gifts for Christmas.

IN VARIOUS STYLES OF BINDING. Specimen pages sent on application to G. & C. MERRIAM CO., Publishers, Springfield, Mass., U.S.A.

Mention KANSAS FARMER.

Is't so? Don't idle and ask, BUT USE St. Jacobs Oil for NEURALGIA, and you'll find out how quickly and surely it SOOTHES and CURES.

The Young Folks.

THE SPORTSMAN'S CODE.

Now these are the laws of the athlete,
That stretch the length of the field.
They make the code of the runner fleet
Who has never yet learned to yield.
They tell you how to lay your plan,
And how to carry it through.
They help the man, who's done what he can,
To bear his Waterloo.

You shall give the foeman all his due,
And let him win if he can;
But keep all rights that belong to you,
For that is the law of man.
You shall hold the ground that is yours by
right,
And yield not a foot you have trod.
But grant his right in a stand-up fight,
For that is the law of God.

If you row with the crew in the boat,
It's a wretched thing to spy.
There's plenty of work when you leave the
boat,
But little to do for the eye.
There's plenty to do to swing and slide,
And steady the fragile shell,
But to gain your strength from the other
side
Is a method sent from hell.

No man shall yield on the football field
Till the final whistle sounds.
No man shall show by a single blow
That he has no place on the grounds.
But when the foe is in racking pain
And cannot move or fight,
You shall help him up to his feet again,
And chafe his bruise and bind his strain,
To show the make of your own good grain,
For that is fair and right.

The strength of the team, or nine, or crew
Is not the strength of the "star."
'Tis what the body together can do
That carries the victory far.
So you shall give your mite to the rest
To bring the whole team through.
And then at the time of your single test
They shall give their strength to you.

And these are the laws of the athlete.
You can heed them or not as you like.
But they make the code of the runner fleet.
And they check a man when he'd strike.
They tell you how to lay your plan,
And how to carry it through.
They help the man, who's done what he can,
To bear his Waterloo.

—Harper's Round Table.

THE LOVESICK SPIDER.

Assumes Attitudes When He Catches Sight of a Female.

Some interesting experiments have been lately carried out on the range of vision and sense of color possessed by spiders.

Twenty species of attidae were selected, and their study and observations were extended over eight successive summers. Apparently when their prey, which consists of small insects, is motionless, they perceive them at a distance of five inches, but when they are moving they can sight them at much greater distances, while each other they can see distinctly up to at least 12 inches.

Apparently sight, not smell, guides spiders, and we are told how the males in the mating season throw themselves into quite different attitudes, according as they catch sight of a female or male spider. It was by this mode of expressing their emotions that the range of sight as well as powers of distinct vision possessed by these insects was tested.—N. Y. Journal.

Boy Frightens Policemen.

A small boy got into the habit of flying his kite nightly from the roof of a police station in New York city, unknown to the guardians of the peace. They heard his footsteps, but, strange to say, when they went to investigate they never found anyone. Then terror took possession of the police force at the station, and they declared that a ghost was haunting them. At length one, braver than the others, lay in wait and captured the little fellow. He was then hauled before a magistrate, who, after hearing the case, discharged him with a reprimand to the effect that it was very wrong to frighten policemen.

Making a Hole in Glass.

Everybody who has tried understands how difficult it is to bore a hole in a strip or sheet of thin glass. The following method is said to be successful: Press a cake of wet clay upon the glass and then make a hole through the clay of the desired size, laying bare the glass at the bottom of the hole. Then pour melted lead into the hole, and it will drop through the glass, making a round aperture. The explanation is that the sudden application of heat cracks the glass in a circle corresponding in size with the hole in the clay.

The proprietors of Salvation Oil will pay a large reward, if any certificate published by them is not found genuine.

LIVELY GOLF GAME.

Requires Little Room and is Played by Sides from One to Four.

More than a score of years ago square and circle or small golf was a popular outdoor game in England. It has, however, never been played in this country.

The game has some of the characteristics of golf, and offers an excellent opportunity for training to a mastery of the latter favorite pastime. Not the least of its advantages is found in the fact that, like golf, it admits of variation in the area of the ground played over, while a smooth surface is not essential.

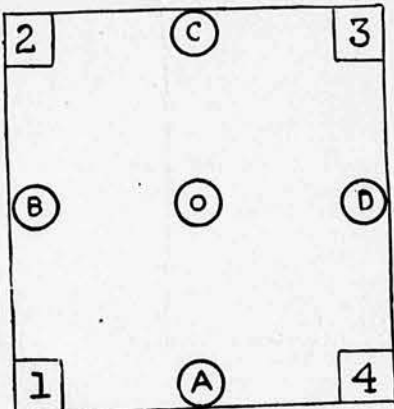
Whatever the size of the ground determined, it must be laid out as nearly as possible in a square. The diagram shows the method used in marking the ground.

For example, the space chosen might be ten yards square. In that event, the center circle would be about a half yard in diameter, the others of the same size. Each of the squares would be one yard square. In any other extent of playing surface the relative area of the parts would be the same.

Each of the players must be equipped with a mallet, as in croquet, a hockey stick or a golf stick. There is no necessity for uniformity among the players. One may prefer the mallet, another a curved stick.

There is one ball only, which must be hard and about the size of the regulation baseball.

The number of players may be any number from two to eight. An expla-



FIELD DIAGRAM FOR SMALL GOLF.

nation of the game as played by the last named team will be easier.

The eight are divided into two sides of four each. The "in" side then occupies the circles, A, B, C and D, the "out" side taking the four squares.

When all are in position the player at A strikes the ball toward B, trying to drive it within the circle. If he is successful in this attempt, the player at B, in his turn, drives the ball toward C. The player at C, if the shot be accurate, sends the ball to D, if possible. The player at D must then drive it to O. If this is done, the game is won. In the following games the positions of the two sides are reversed.

If the player at A fails in his shot the player at 1 has the ball, and, taking it to his square, drives it toward 2. If the ball gains that square, the "out" side continues with it, endeavoring to send it from square to square until the center is reached, when the game is won by that side.

The rule is that whenever a player fails in a shot, the player of the opposite side, whose location is nearest the ball's stopping place, gains possession of the ball for the next shot.

The most important positions are those of the players at 4 and D, since if, when they gain the ball, they fail to place it in O, they lose the winning stroke, and the player on the opposite side nearest whom the ball is gains the mastery of the ball.

The ball must never be touched after it is driven until it is fully stopped. If it is interfered with while in motion the last player may repeat his shot.

If the ball passes beyond the limits of the course at any time it is next played from the square or circle nearest the point where it left the ground.

Any number less than eight apportioned two or more squares or circles to each player, as may be necessary. The game can be played by an odd number by a proper allotment of squares.

Three games constitute an ordinary set on a large ground, five on a smaller

one. The fact that it can be played on rough ground, without the even lawn necessary for croquet and tennis, is of importance.—Boston Globe.

SANDY BROWN'S OWL.

Caught by Means of a Very Cleverly Constructed Trap.

Some one was stealing Sandy Brown's chickens. Every morning when Sandy went out to scatter screenings there was at least one of the younger roosters or hens missing, usually the very fattest and finest of the flock. Sandy couldn't understand at all where they went to. He knew every man in the neighborhood, and every chicken, too, for that matter, and he knew that some stranger must be guilty of the thieveries. Now, it was no small matter to Sandy to have his plump pullets stolen, for he was only a boy, and he was depending on the money that the eggs and chickens would bring him to help pay for a certain handsome little rifle that he longed to possess. So he determined to watch and see if he couldn't catch the thief.

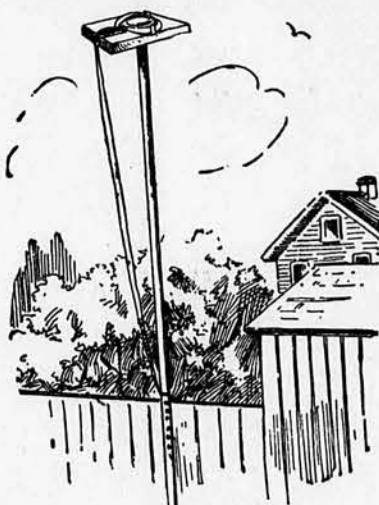
Before daylight the next morning he was up and out, hiding in the corner, where he could see and not be seen. Not long afterward the chickens came clucking into the barnyard. For a time everything was quiet, and then the old red-top rooster straightened up and began to grumble and turn his head from side to side and blink his eyes. There was a sound of wings in the air, and a huge bird lighted on the corner of the barn. The next instant the chickens began flying about and clucking excitedly, and then, before Sandy could open his mouth to shout, the owl, for an owl it was, darted down, and Sandy saw one of his favorite pullets carried away over the hill. "So you're the thief," exclaimed Sandy. "I'll fix you."

But, although Sandy hid in the corner for several mornings with his father's old shotgun double loaded, the wary old owl didn't come near. Sandy's father said he smelled the gun

"I'll get him yet," said Sandy, with determination.

That very afternoon a bright plan popped into Sandy's head. He cut a long pole in the woods, sawed off the top square and smooth, nailed a board on it, and set it up firmly in a corner of the fence near the barn. On top of it he placed a steel rat trap, already set, and fastened by a long chain to the post below.

Next morning he was awakened by a terrific commotion in the chicken yard.



SANDY'S TRAP.

He rushed outside, and there was Mr. Owl flying wildly about with the trap close fastened to one of his feet. He had come along early, and thinking that the post was an excellent place to light while he picked out the best pullet in the flock, he had stopped there to rest. In a minute Sandy was pulling him down, and although he scratched and fought Sandy succeeded in conquering him. He was a huge horned owl, and the next week, when Sandy went to town, he took him along, and a dealer in stuffed birds told him that it was the finest specimen of an owl he had ever seen. Sandy, being of a practical turn of mind, offered on the spot to sell the big bird. The dealer promptly gave him four dollars for it, and Sandy at once paid it over to the man who had rifles to sell.

"I hope some more big owls will come along and steal my chickens," he said to himself on his way home. "They're more profitable than pullets."—Chicago Record.



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FARMERS

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Electros must have metal base.
Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.
To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.
All advertising intended for the current week should reach this office not later than Monday.
Every advertiser will receive a copy of the paper free during the publication of the advertisement.
Address all orders—
KANSAS FARMER CO., Topeka, Kas.

If 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.

KANSAS FARMER and the *Advocate*, both one year, for \$1.50.

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Remember, you can get KANSAS FARMER and *Breeder's Gazette* both for one year for \$2, saving \$1 by the combination.

Remember, you can get the KANSAS FARMER and the Topeka Semi-Weekly *Capital*, both one year for \$1.50, sent to this office.

KANSAS FARMER and *Leavenworth Weekly Times* both for one year for \$1.25. KANSAS FARMER and *Leavenworth Daily Times* both for one year for \$3. Send to this office.

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.

We have left on hand a small number of KANSAS FARMER binders. Any one sending \$1.05 and requesting the binder will receive KANSAS FARMER for one year and a binder. Until the demand becomes very strong for binders we shall not make a new supply.

The KANSAS FARMER has received Volume XVIII. of the *Ohio Poland-China Record*, price \$2. Also Volume V. of the *Chester White Record*, price \$1. Any information desired by swine breeders concerning either of these records should be addressed to the Secretary, Carl Freigau, Dayton, O.

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.

This is the time of year to make up your list of periodicals for next year's reading. Every family should have at least one home county paper, one agricultural paper and one magazine. Many will add one State political paper and one of the great city papers. Others will want a more extended list. Whatever your wants, we can save you money on the purchase. We have wholesale rates on everything published and will give the advantage to every subscriber to KANSAS FARMER. Send in your list get our estimate.

SENATOR QUAY SOUNDS AN ALARM.

The proposition to form a "business men's organization to control elections and appointments to office," has received something of a shock in the vigorous denunciation of Senator Matthew Stanley Quay, of Pennsylvania. The details of the proposed guardianship of the government have not been given fully to the public. But it appears that certain persons of large wealth or controlling large capital have become distrustful of the wisdom of the mass of the people and propose to organize themselves into a directory, which, by bringing to bear the power and various influences which may be made active by concentrated wealth, shall determine the results of elections and shall exercise the rights of proprietorship in directing the appointment of Cabinet and other officers and the policies of the government. This great prerogative is, according to the proposition, to be exercised as to the newly-elected national administration and as to some of the State administrations, notably that of Pennsylvania.

A more monstrously dangerous proposition cannot be conceived. In the entire history of governments there is not found an instance in which such prerogative has been or could have been exercised without abuse, without tyranny. Selfishness is as preponderant in this proposition as in any ever submitted. There is scarcely an attempt to disguise the fact that the proposed plan has for its object the exploitation of the people under the forms of popular government.

The guardianship proposed for the government is avowedly one of the "business interests" or of "business men." What are the "business interests" and who are the "business men" included under this plan? (1) The great banking institutions, whose valid reason for existence is the aid they afford to exchanges among the people. (2) The great transportation facilities, the necessity of which cannot be doubted. (3) The great manufacturing industries, which at marvelously small cost transform crude into finished products suitable for use. (4) The great mining companies, whose efficient organization of forces for bringing mineral wealth from its hiding places in the earth entitles them to existence. (5) The merchant princes, whose department stores apparently know no limitations. (6) Speculators in every form of value, only so they operate largely.

These have always had a fair and equal chance—perhaps better than an equal chance—in the struggle for possession of the good of earth. They are not threatened with less than a fair chance. Many of them have formed combinations and trusts with the avowed purpose of "limiting production" and thereby "maintaining" prices. Another purpose often vigorously pursued has been to kill off competition, even at considerable cost, a cost sure to be recouped when the trust shall have secured control of the market. Illustrations are not needed. They have been in the public prints *ad nauseam*. Whenever and wherever any of these "business interests" has found itself possessed of sufficient power to oppress it has used that power oppressively.

There is manifest a disposition among people to oppose the power of the government to oppressions of trusts and other aggregations of "business interests." The boldness of the proposed plan of the business interests to counter by taking charge of the government at least challenges admiration for its audacity. Does any one contemplate with serenity government at the dictation of a junta of these notoriously selfish and grasping business interests—government controlled by an irresponsible and intangible combination, a body without an entity, incapable of receiving punishment or discipline.

But can such thing be?
Let the reader imagine an aspirant for public office. He is first confronted with the expense of making his candidacy known. Time and money are consumed. He needs help. He finds friends ready. But some of those whom he had supposed would favor

him are indifferent. Secret and open foes are encountered. What a refuge for such a candidate to find a junta with plenty of money and well organized and influential agencies ready to investigate his "claims," and, if they find him strong and resourceful and influential and willing to "stand by those who put him in office," ready to promise victory and able to deliver it! What "show" has "the other fellow" against such a combination?

Cannot such a junta decree the election of Congressmen and Senators and the President?

If there is not sufficient conscience, patriotism, independence and foresight in the American people to unite against such usurpation, then, indeed, must American equality give way to an aristocracy and a peasantry.

Of trusts in general, President Cleveland said in his message to Congress:

"Their tendency is to crush out individual independence and to hinder and prevent the free use of human facilities and the full development of human character. Through them the farmer, the artisan and the small trader is in danger of dislodgment from the proud position of being his own master, watchful of all that touches his country's prosperity, in which he has an individual interest, in all that affects the advantages of business, of which he is a factor, to be relegated to the level of a mere appurtenance of the great machine, with little free will, with no duty but that of passive obedience, and with little hope of opportunity of rising in the scale of responsible and helpful citizenship."

But what shall be said of the junta of trusts, such as Senator Quay has found it necessary to denounce as a junta proposing not to legislate but to control legislation; not to administer the executive departments of the government, but to control the executive; not to elect but to control elections?

THE QUESTION OF BREAD.

Since the world has become one market—made so by modern means of transportation—there is required a comprehensive review of the supplies, crop prospects and demands of the entire world for a basis of judgment as to prices likely to be realized for the long-keeping staples, such as wheat and corn. The *Liverpool Corn Trade News* of November 24, 1896, contained such a review as to wheat. It is as follows:

"The tone of the wheat market has been exceedingly weak, and the fall in prices somewhat severe since last Tuesday. The principal cause of the depression has been the improved crop prospects of Argentina and India.

"From the South American republic it is estimated that there may be an exportable surplus of about 1,000,000 tons, say 4,500,000 quarters, compared with 2,500,000 in 1896 and 5,000,000 in 1895 and 7,500,000 in 1894. Admitting that Argentina may have 4,500,000 quarters to export next year, the question arises next, what portion of this may be expected to arrive before the expiration of the present European cereal year, ending 31st July, 1897. Last season, in the period mentioned, there arrived from Argentina 1,500,000, and it will be fair to assume that, should the present improved prospects be realized, almost double that quantity will come to hand this season; say, roundly, 2,500,000 quarters.

"As to India it will be simply guess-work to try to estimate her exportable surplus next season; a third serious failure of crops next spring was not anticipated by very many; the early districts were expected to suffer, but a general failure over wide-spread areas was, of course, extremely unlikely; had it occurred there is no saying where the effect would have ended. Now that rain has come there will be an opportunity to sow in many districts, and should the rainfall extend to the Punjab there is every possibility of there being a wheat crop to harvest next March-May. The sown area will, of course, be less than in an average season, and therefore the crop will probably be a small one, as the yield per acre in India amounts to only about nine bushels, and a curtailment in area is rarely ever made up by an excess in the average yield. Whatever may be the final result, the portion of the crop that matures first is likely to be deficient, hence the exports to Europe, if any, will commence late, and therefore during the remainder of the present European cereal year it is unlikely any material volume of Indian wheat will arrive, probably 500,000 quarters to 1,000,000 quarters would be an outside figure at which to reckon it.

"Australia may now be reckoned on as an importer during the remainder of the season, for the united return of the crops of Victoria and South Australia is now placed at 12,000,000 bushels, or practically the same figure as last season; as these colonies consume

9,000,000 bushels between them, and as New South Wales and Queensland require 5,000,000 bushels in addition to what they have grown, it is evident that our colonies in the Southern Hemisphere, with which we include South Africa, will be steady buyers for another twelve months. We are, therefore, now compelled to raise our earlier estimate of ex-European requirements by 1,000,000 quarters, in which will be included all the wheat already bought by India or to be still bought. Another country which will be reaping a crop in about ten weeks will have some influence on this season's source of supplies—we refer to Chili. As shipments are not usually heavy before March-April, not much wheat arrives in Europe during the fore part of the calendar year. Last season 140,000 quarters arrived by the 31st of July, and in 1894 rather less. We may perhaps reckon this season upon receiving 200,000 quarters.

"It may be worth while, now that a faint idea can be formed of what quantity of wheat the Southern Hemisphere has grown this season, to make a survey of the general situation.

"Russia, according to our reading of the late official report, has raised a crop about 3,000,000 quarters less than in 1895, and 7,000,000 quarters less than in 1894, and 12,000,000 quarters less than in 1893. The shortage as compared with 1895 is, unfortunately for the shipper's interest, largely in the districts whence he draws his chief supplies. Hence the actual exportable surplus is unduly affected. In spite of this shortage, however, the total shipment hitherto made this season is nearly equal in quantity to that exported in either of the two previous years, and therefore it would be reasonable to expect that the movement during the remainder of this season will be light as compared with the quantity shipped in the latter parts of the preceding seasons.

"The Danubian Principalities have been shipping equal quantities to the Russian, but are now showing decided signs of exhaustion. For the remainder of this season we may perhaps depend upon the Euxine supplying 90 per cent. of the quantity received from that quarter during the same quarter last season; this would give us 12,500,000 quarters, or a trifle less than 400,000 weekly for fifty-three weeks.

"Austria-Hungary at the end of next month will lose her privilege of exporting flour made from foreign wheat in bond, but we will allow that by one method or another the dual empire may export 500,000 quarters during the next thirty-five weeks.

"There are a number of sundry importers, such as Algeria, Tunis, Asia Minor, Persia, and certain quantities of flour made in bond in France, Spain and Germany that together form a respectable total, amounting to about 45,000 quarters weekly, and although we are aware that exportation from Syria is forbidden, and that from the Persian gulf ports and from Algeria and Tunis the movement is almost over for the season, yet we think it will be safe to depend upon these sundry sources for about 1,500,000 quarters of wheat, and flour reckoned as wheat, before the end of next July.

"There is another channel of supply that must not be overlooked; we refer to the 'quantity afloat' for Europe, which already exceeds 4,000,000 quarters, and could be depended upon to furnish 1,500,000 quarters, and then not appear unduly attenuated.

"The world's requirements per week may now safely be reckoned at 1,000,000 quarters, comprising 450,000 quarters for the United Kingdom, 460,000 quarters for the continent, and 90,000 quarters for ex-European countries. This rate has been exceeded during the first sixteen weeks of the season, but it will be prudent to allow for some falling off, as probably second-hand reserves have been recently reconstituted at the expense of visible arrivals.

"We will now marshal these figures in column and ascertain what space remains to be filled by North American supplies.

"Forecast of requirements and supplies for remainder of the cereal year, from November 31, 1896, to July 31, 1897, thirty-six weeks:

	Requirements.	Supplies available:	Quarters.
Requirements, 1,000,000 qrs. per week for thirty-six weeks	36,000,000		
Supplies available:			
By reduction of "quantity afloat"	1,500,000		
Shipments to arrive by 31st July, 1897:			
Austria-Hungary	500,000		
Chili, France, North Africa, etc.	1,500,000		
Argentina, Uruguay	2,500,000		
India	1,000,000		
Euxine 10 per cent. less than last year	12,500,000		
Total without U. S.	19,500,000		
Balance required from U. S. and Canada	16,500,000		
"Can America furnish such a quantity as 16,500,000 quarters during the ensuing thirty-four weeks after having parted with 8,000,000 in sixteen weeks, equaling annually 25,000,000 quarters, or 200,000,000 bushels.			
"There can be only one answer to such a query, and that clearly in the negative. We have heard of estimates of 20,000,000 quarters, but no one has ventured to credit North America with a bigger total than 160,000,000 bushels, and there are scores of			

reliable and clever observers who look upon 15,000,000 quarters as a more reasonable estimate than either of those already mentioned. We are bound to admit that the market was never in a more critical position, when viewed from the standpoint of statistics alone, than it is at the present moment. However little may be thought of the strength of our figures no one can pretend that it is an easy matter this season to point out the way how the requirements of importing countries are to be filled, even after allowing for a further reduction of stocks in every quarter. In importing centers they are still perilously low; in one great exporting country they are already waning. The outlook at the start for next season is not bright in France, Russia, the United Kingdom, India, Argentina and Australia, and to-day we learn by cable of the first complaint as to the state of the American winter wheat crop, about which glowing reports have hitherto been spread."

The estimate indicates that American farmers will be asked, during the next six months, to furnish 40,000,000 more bushels of wheat than can be spared. Fortunately we shall be able to substitute corn. This will not be accepted willingly until wheat reaches a price considerably above the present range. It must, therefore, advance. It is a noticeable fact, however, that exports of corn last week were very heavy, more than twice as heavy as for the corresponding week last year.

OFFICERS OF THE STATE HORTICULTURAL SOCIETY.

The election of officers of the State Horticultural Society resulted in the choice of Judge F. Wellhouse, of Topeka, for President; Col. J. W. Robinson, of El Dorado, Vice President; Wm. H. Barnes, of Topeka, Secretary, and Maj. F. Holsinger, of Rosedale, Treasurer. These are all, except the Secretary, their own successors. Mr. Barnes has been the acting Secretary for the last two years. Under the new constitution, adopted at this meeting, seven Trustees were elected, one from each Congressional district, as follows: First district, E. J. Holman, of Leavenworth; Second district, B. F. Smith, Lawrence; Third district, H. F. Coley, Oswego; Fourth district, Geo. M. Munger, Eureka; Fifth district, Wm. Cutter, Junction City; Sixth district Martin Mohler, Osborne; Seventh district, Geo. W. Bailey, Wellington.

KANSAS IMPROVED STOCK BREEDERS.

The next annual meeting of the Kansas Improved Stock Breeders' Association (which also includes the Kansas Swine Breeders' Association) and the first annual breeders' combination sale, will be held at Topeka, January 12 and 13, 1897. This will be the greatest occasion for fine stock breeders ever held in Kansas, and each member of the association is expected to do something for the good of the order. This may be the only warning given. Prepare yourself accordingly, so that when the Executive committee calls you will be properly equipped for action.

The Committee on Program and Arrangements will shortly issue the annual program, and meantime it is expected that each member will immediately send suggestions by return mail to the Secretary, so that this annual meeting shall by far surpass all previous ones.

The year 1897 should be a great year for breeders and the improved stock business generally, and this convention will probably start the ball rolling. Address, H. A. HEATH, Secretary, Topeka, Kas.

Remember that \$1.85 sent to this office will pay for one year's subscription to the "old reliable" KANSAS FARMER and the *Cosmopolitan Magazine*, one of the brightest, best and most artistic magazines published.

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.

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

The Strawberry in Folk Lore.

A writer in the *Strawberry Culturist* gives the following:

"Old Isaac Walton tells us that one may say of anything as Dr. Boteler said of strawberries: 'Doubtless God could have made a better berry, but doubtless God never did.' No one can tell for how many centuries the strawberry has tickled the palate of mankind. Virgil in his *Eclogues* and Ovid in his *Metamorphosis* both mention it. It plays a conspicuous part in Shakespeare's *Othello*. Iago calls the Moor's attention to the handkerchief spotted with strawberries often seen in the hands of Desdemona. Gloucester asks the Bishop of Ely for the good strawberries that grow in his garden at Holborn.

"In the fourteenth and fifteenth centuries the garden at Holborn was one of the chief gardens in England, but the strawberries which grew there we have every reason to believe were wild ones transplanted from the roads. Tusser, who wrote in the sixteenth century, in his 'Five Hundred Points,' says:

"Wife, into thy garden, and set me a plot
With strawberry roots, the best to be got;
Such growing abroad among thorns in the wood,
Well chosen and picked prove excellent good."

"Spencer, in his 'Fairy Queen,' speaks of going into the road to pick strawberries, and in one of his sonnets he compares his mistress' bosom to a bed of strawberries. Even a hundred years later Sir Hugh Platt, in his 'Garden of Eden,' tells us that strawberries which grow in roads prosper best in gardens.

"In folk medicine strawberries are supposed to prove fatal if eaten by one who has a wound in the head. In the doctrine of signatures they were thought to cure all diseases of the heart, because they were red and shaped like that organ. Linnæus, the father of botany, cured himself of the gout by eating them. To dream of them is a most excellent omen, especially to a young bachelor, as such a dream will insure him a wife who will be not only angelic in temper but the prolific bearer of boys.

"Our ancestors had a curious superstition regarding plants. They imagined that like men they were affected by the company they kept. Thus they planted sweet-smelling flowers near fruit trees, thinking that the flavor of the fruit would thereby be improved, and they banished all ill-odored things for the same reason: but the strawberries were so fresh and innocent that nothing could taint them, not even the trail of the venomous serpent. Shakespeare speaks of this virtue of the strawberry in Henry V. Bacon tells us that the odor of the dying leaves of strawberries is next to that of violets and musk roses. In Pagan Germany, the strawberry was the fruit of Frigg, who presided over marriage and who was supposed to go strawberrying with children on St. John's day. When Germany became Christianized the Virgin Mary was installed in the place of the Scandinavian Goddess, and she too was thought to take little children on that day into the fields to pick the fruit, which was the symbol of all who died in their infancy. Before St. John's day all mothers who mourned little children abstained from eating strawberries, as it would deprive the Virgin of her fruit, and she would refuse admittance to all little ones who came to her in this disguise.

"There is a pretty Thurington fairy tale of a poor child who went into the wood to gather strawberries for her sick mother. When she had filled her basket there appeared to her a little woman dressed in golden moss and who asked for some of the fruit, which was gladly given. When the little girl reached home she found all her berries turned to gold. Another tale, located in Bohemia, tells of a mother one mid-summer day taking her child into the woods to gather strawberries. When she plucked some plants, a cavern opened before her, and when she entered she found heaps of gold scattered around, guarded by three white maidens. They gave her permission to take as much of the treasure as she could with one grasp. In her greed she grasped three times and rushed out forgetting her child; then the entrance immediately closed on her, and a warn-

ing voice told her she could not see her child again until St. John's Day. When the time arrived she found her child awaiting with a rosy apple in her hand. Disregarding the treasure the mother clasped her child to her bosom and was allowed to take it away.

"Among the English nobility the coronet of a Duke or an Earl bears eight strawberry leaves while that of a marquis has only four. Such leaves with the flower-delus are used on the coronets of the royal family. Don John, of Portugal, adopted the device of a strawberry leaf to show his fealty to St. John the Baptist, who lived on fruit. "The name is said to have been given it because it was the universal custom to serve it laid on straw, and from the ancient practice of selling the fruit strung on straws, a usage which is mentioned by Browne in his 'Britannia's Pistoral.'"

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:

Hackney, Cowley county—December 29 and 30; Profs. Fallyer and Mason.
Hiawatha, Brown county—December 30; Dr. Mayo.
Pleasanton, Linn county—January 7 and 8; Profs. Georgeson and Walters.
Effingham, Atchison county—January 14 and 15; Profs. Popenoe and Hood.
Overbrook, Osage county—January 21 and 22; Profs. Mayo and White.
Wellsville, Franklin county—January 22 and 23; Profs. Georgeson and Will.
Peabody, Marion county—January 28 and 29; Profs. Mason and Walters.
Stockton, Rooks county—February 4 and 5; Prof. Hood and Assistant Burtis.
Hutchinson, Reno county—February 4 and 5; Profs. Hitchcock and Nichols.
Berryton, Shawnee county—February 11 and 12; Profs. Graham and Walters.
Haven, Reno county—February 11 and 12; Profs. Popenoe and Lantz.

Free to Our Readers—The New Cure for Kidney and Bladder Diseases, Rheumatism, Etc.

As stated in our last issue, the new botanical discovery, Alkavis, from the wonderful Kava-Kava shrub is proving a wonderful curative in all diseases caused by Uric acid in the blood, or disordered action of the kidneys and urinary organs. The *New York World* publishes the remarkable case of Rev. A. C. Darling, minister of the gospel at North Constantia, N. Y., cured by Alkavis, when, as he says himself, he had lost faith in man and medicine, and was preparing himself for certain death. Following is his letter in full:

NORTH CONSTANTIA, OSWEGO CO., N. Y.
GENTLEMEN:—I have been troubled with kidney and kindred diseases for sixteen years and tried all I could get without relief. Two and a half years ago I was taken with a severe attack of La Grippe, which turned to pneumonia. At that time my Liver, Kidneys, heart and Urinary Organs all combined in what seemed to me their last attack. My confidence in man and medicine had gone. My hope had vanished and all that was left to me was a dreary life and certain death. At last I heard of Alkavis and as a last resort I commenced taking it. At this time I was using the vessel as often as sixteen times in one night, without sleep or rest. In a short time, to my astonishment, I could sleep all night as soundly as a baby, which I had not done in sixteen years before. What I know it has done for me, I firmly believe it will do for all who will give Alkavis a fair trial. I most gladly recommend Alkavis to all.
Sincerely yours,
(Rev.) A. C. DARLING.

Similar testimony to this wonderful new remedy comes from others, including many ladies. Mrs. Mary A. Layman, of Neel, W. Va., twenty years a sufferer; Mrs. Sarah Vunk, Edinboro, Pa.; Mrs. L. E. Copeland, Elk River, Minn., and many others join in testifying to the wonderful curative powers of Alkavis in various forms of Kidney and allied diseases, and of other troublesome afflictions peculiar to womanhood.

So far the Church Kidney Cure Company, No. 420 Fourth avenue, New York, are its only importers, and they are so anxious to prove its value that for the sake of introduction they will send a free treatment of Alkavis, prepaid, by mail, to every reader of KANSAS FARMER who is a sufferer from any form of Kidney or Bladder disorder, Bright's Disease, Rheumatism, Dropsy, Gravel, Pain in Back, Female Complaints, or other affliction due to improper action of the Kidneys or Urinary

Organs. We advise all sufferers to send their names and address to the company and receive the Alkavis free. To prove its wonderful curative powers, it is sent to you entirely free.

Publishers' Paragraphs.

Send \$1.85 to KANSAS FARMER office for one year's subscription to KANSAS FARMER and Chicago Weekly *Inter-Ocean*.

Every reader of this paper should notice the advertisement of Haggood Plow Co., on page 12, which will interest every practical farmer.

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

We can furnish you KANSAS FARMER and *Peterson's Magazine*, each one year, for \$1.75. Or KANSAS FARMER and *Arthur's Home Magazine* for \$1.65. Send to this office amounts above named.

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

The *Home Magazine*, published at Washington, D. C., is brighter and better than ever. One dollar and 20 cents sent to KANSAS FARMER Co., Topeka, Kas., will pay for one year's subscription to both KANSAS FARMER and *Home Magazine*. Drop us a card and we will send you a sample copy of the magazine.

The knowledge, how to make a profitable as well as beautiful garden, would be a valuable acquisition to any farmer or farmer's wife. The excellent magazine called *American Gardening* will impart the desired information. Send to KANSAS FARMER \$1.15 and it will pay one year's subscription to KANSAS FARMER and *American Gardening*.

"Winning the Victoria Cross," by Rudyard Kipling. "Any of the officers or men of the British army or navy, from a duke to a negro, can wear on his left breast a little bronze Maltese cross, with a crown and a lion on top, and the inscription, 'For Valour' below, if he has only performed some signal act of valor in defense of his country, in the presence of the enemy. Neither rank, nor long service, nor wounds, nor any other circumstance whatsoever, only the merit of conspicuous bravery, is held to establish a sufficient claim to the order. Seven hundred thousand men can compete for it, but only 411 have ever won it." Some of the bravest deeds for which it has been conferred are described in Mr. Kipling's vivid style in an article which he has written for *The Youth's Companion*.

NO PLANT DISEASES OR INJURIOUS INSECTS.—After two days' inspection of the nursery stock of J. G. Harrison & Sons, Berlin, Md., State Entomologist Prof. W. G. Johnson officially certified to the entire freedom of the stock from plant disease and injurious insects. He highly complimented the Messrs. Harrison upon their progressive methods of culture. At Harrison's nurseries may be found the largest aggregation of seedling peach trees in the United States. Over 1,500,000 of peach and plum trees were budded there in four months. The Harrisons are also growers and sellers of small fruits, strawberry plants and asparagus roots. Their great leaders for 1897 are the Greensboro peach, Ocean City strawberry and Donald's Elmira asparagus roots. Descriptions of these, and their general catalogue, will be sent free by mail upon request.

Memphis Route Holiday Excursions.

On December 21 and 22 excursion tickets will be sold to points in Tennessee, Alabama, Georgia, Mississippi, Florida and the Southeast generally, at rate of one fare, tickets good thirty days for return.

On December 24, 25 and 31 and January 1 excursion tickets will be sold between all stations on the Kansas City, Fort Scott & Memphis railroad and branches (where regular rate exceeds 50 cents), with return limit January 4.
J. E. Lockwood,
General Passenger Agent.

Popular Low-Price California Excursions.

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

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

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

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

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

Horticulture.

KANSAS STATE HORTICULTURAL SOCIETY.

Thirtieth Annual Meeting.

The Directors of the State Horticultural Society met at the rooms of the society, in the State house, on Tuesday, December 8, and received the report of the officers and transacted other routine business.

Prominent horticulturists of the State had been invited to a conference, for the purpose of considering the interests of the society. The preparation of a new constitution engaged the attention of the meeting. The horticulturists are a jolly lot of gray-bearded men, and the amount of fun they got out of the usually dry routine of making a new constitution was an astonishment to those unacquainted with the merry old fruit-growers.

The first regular session of the society convened in Representative hall, in the State house, at 9 o'clock, December 9. After the call to order, prayer was offered. A brief review of the history of the society was given by President Wellhouse, in which it appeared that during the thirty years the society has progressed with the progress of the State. Forty-nine State meetings have been held.

Communications were read from the former Secretary, G. C. Brackett.

Maj. Holsinger spoke of the destructive effects of insects observed by him during a recent visit to the Pacific coast. People there seem not to be alive to the situation and the prospect of utter destruction of their fruits is alarming. The subject was referred to the Committee on Resolutions.

Fruit reports from the various localities were the next order.

T. A. Stanley, of Miami county, reported light crop of fruit. Apples generally poor crop. Blossomed well but when the wet weather came it seemed to blast the fruit. Peaches started in well in spring but made a poor yield of poor quality. Pears blighted worse than ever before. Blight struck trees in later part of season and killed them. A stormy spell in early part of the season damaged all fruits, small fruits not escaping. Has not observed prospects for next year. Apple trees suffered generally with twig blight. Two or three of his trees appear to be entirely killed. Arkansas Black worst affected. Missouri Pippin, Ben Davis and Winesap appear to hold their own pretty well. Fair crop on Missouri Pippin and Winesap. Has had some trouble with caterpillars and other foliage-eaters, but has never had any trouble with borers.

Dr. Staman, of Leavenworth, reported fruit in general only about half a crop. Apples variable. Pears hardly an average. Thinks there need be no alarm about blight. Some fifteen years ago there was trouble with blight in his county, but lately there has been no serious trouble with it. Thinks blight runs out in about ten years. Has Duchess pears on his place thirty-six years old and bearing well. Strawberries nearly a failure this year.

Major F. Holsinger, of Wyandotte, reported his county more favorably situated than any other as to fruit crop this year. Crops not uniform but the fruit man is the only farmer who has a balance on the right side of the ledger. Berries have been spotted. Kansas raspberry has done so well that too much cannot be said in its favor. Blackberries were an immense crop. Several new favorites. Ancient Briton and Erie prominent. Currants have not done well. More money in gooseberries than any other crop. Dye House, Montmorency, Early Richmond, English Morello and Wragg cherries have taken the lead. Plums not profitable; Wild Goose still in the lead. Of all fruits the peach is most satisfactory; produced a wonderful crop this year; people are surprised at their success. Get high-colored and hardy peaches. Crawfords stand less cold weather than Elberta and Salway, both of which sell well in the market. Has some experience with seedlings. Some six years ago planted

seed of Salways. Has forty-six trees. Time of ripening extended over six weeks. All good enough to propagate from. Rather too many clings among them. Would not recommend the expert horticulturist to plant seedlings. Apples in some orchards pretty good. Some, especially where crop was light, badly damaged by codling moth. Does not believe spraying ever killed a codling moth. Quince in some elevations does very nicely. Orchards in splendid condition. Thinks they are prepared to stand low temperature better than usual. His Seckel pears all died of blight last year. The Seckel is usually the pear for money.

Geo. W. Bailey, of Sumner county, reported nearly all orchards dying from dry weather. The past four years have been exceedingly dry. Cherry crop nearly a total failure, pear a failure. Had his first experience with pear blight this season. Out of 200 pear trees not a dozen unaffected. Small fruits poor crop. Younger orchards in fair condition.

Wm. Cutter, of Geary, was glad to be able to report better condition of trees this season. Good care will bring crops in spite of unfavorable circumstances. An orchard unfavorably situated was last year subsoiled and was this year loaded. Have had the usual insects and usual failure with London purple and usual success with Paris green. Has been used as strong as six ounces to fifty gallons of water without hurting foliage. Prospect for next year good. Blight has been worse than common on apple and very bad on pear. Peaches were a good crop, this being the fourth peach crop in six years.

Geo. M. Munger, of Greenwood county, reported that they had almost no fruit in his county this year. Grow a good many fat steers but ship in their apples.

Geo. W. Glick, of Atchison county, reported orchards very full and large amount of fruit sold at low price. Codling moth bad. Two hundred hogs ran in his ten-acre orchard this year until picking time.

Mr. Gardner, of Republic county, reported half of the apple trees in his county dead this year from the several years drought of the recent past. Small fruits a failure on account of unfavorable season.

Mr. Holman, of Leavenworth county, reported the interest greatest with the apple. In the extensive planting of apples a halt is in order on Ben Davis. Crop this year brought \$1 a barrel and down to 40 or 60 cents. Michigan, New York and New England crop was so immense that the price was run down. Cold storage house is about full. A good many Black Twigs being planted, but discouraging reports are received on account of insufficient coloring of fruit. Maj. Holsinger stated that this variety is especially liable to bitter rot. The tree is the most vigorous grower of all apple trees. It has been suggested to use the Black Twig for top-grafting with other varieties. Have had plenty of peaches. The Elberta is the most profitable of all peaches. Crosby is an immense bearer and is of the highest quality. Yellow peaches are coming into great favor. In white varieties the old sorts are the dependence. The Japan plums afford an improvement on old varieties. Hat Tokio and and Bat Tokio were recommended. Kelsey's Japan, if sufficiently hardy, is an excellent plum that will surprise the people. There is a good deal of study in the plum line just now. Expects some of these Japan plums to take a place similar to that occupied by the Crescent strawberry—take the whole country. Interest in small fruit growing has been lessened on account of the early berries from the South.

A. H. Griesa, of Douglas county: Arkansas Black is being dug up but Mammoth Black Twig is being extensively planted in southern Missouri.

Mr. Williams, of Jackson county: Apples are only an ordinary crop but Jonathan, Missouri Pippin, Jenning and Winesap were very full. Apple trees generally in a healthy condition. Has not much alarm on account of twig blight. A man, in southern part of

county sprayed frequently and had fine crop, almost free from codling moth. Pear blight worst ever seen. Remedies failed this year. Peach crop good. Seedlings did not do well. Plums almost entire failure. Cherries fair, ordinary crop. Gooseberries and currants almost entire failure. Strawberries fair, ordinary crop. Blackberry crop numerous. Present prospect good.

E. P. Diehl, Johnson county: Apples did not pay freight. Plums about half a crop. Strawberry and raspberry about a half crop. Pear blight never as destructive as this year. Would not recommend any one to plant pear on this black land.

Mr. McClure, Johnson county: Trees planted this year made a splendid growth.

Dr. G. Bohrer, Rice county: Cannot boast of a large crop this season. Hail storm struck early and later hot winds. Jenning did fairly well. Pear trees damaged by blight and will grub them up. Thinks they are on the point of revolutionizing matters by irrigation and subsoiling. Small fruits have done poorly on account of lack of moisture. Grapes which have had water during the last few years have done well.

T. W. Harrison, of Shawnee county, believes the apple the king of fruits. His crop this year was about half as large as last year but fruit was excellent. Thinks the Arkansas Black ought to be blighted, and the earlier the better. His choice of varieties are Jonathan, Winesap, Missouri Pippin and York Imperial. Thinks it a waste of time to plant too many varieties. Prunes very little. Seeds ground with red clover. Takes no crop off but the apples. Mows clover once a year and leaves for mulch. Peaches grow among the apples. Seckel and Kieffer pears bore very well this year.

B. F. Smith, Douglas county, thinks apple crop about one-third and peach crop about two-thirds, cherries a light crop. Pears in old orchards not blighted, about one-third crop compared with last year. Young pear orchard, badly blighted. Small fruits promised a large crop but strawberries gave about one-third.

F. W. Dixon, Jackson county: Strawberries best of all fruit. At Holton, about one-third crop; in northern part of county about one-sixth crop. Low prices worse than low yields. Of raspberry, the Early Kansas is the only variety worth planting. Cherries two-thirds crop. Apricots and plums failure, except Botan and Burbank plums. Peaches on old trees a failure, on two-year-old trees good. Kieffer and Bartlett the only pears that did not blight—did well. Grapes a fair crop. Apples variable, according to location and attention.

A. Chandler, of Wyandotte: Strawberries promised well but yielded about one-third crop. Raspberries about two-thirds crop. The leader was the Kansas; Gregg does well; Progress doing well. Blackberries, an enormous crop of Snyder and Taylor. Grapes, good crop. Plums, good crop of Wild Goose. Several of the new varieties are doing well. Apple crop not over 50 to 60 per cent. and poor quality. Condition of orchards good. Not much blight. Have one hundred varieties of apples in county, which is ninety too many. Kieffer pear has not blighted.

S. S. Ferris, of Osage county: Some apple orchards had 25 per cent. of crop. Trees bloomed full but dwindled until gathering time. Hail was bad. Quality is rather poor. Peach about half crop; seedlings quite scabby. Cherries about one-tenth crop. Cherry trees planted last spring generally died. Small fruit received little attention.

A. B. Smith, of Shawnee, had more questions to propound than experience to give. These will appear in the question-box.

Prof. S. C. Mason, for Riley county: The season started with a scourge of canker worm. Apple crop very spotted—one-fourth crop. Peaches heavy crop. Growers much encouraged. Seedlings scabby. Grape crop good, blackberries good, raspberries fair, plums light.

Eugene Tilleux, of Greeley county: Planted first trees four years ago—

cherry, plum, apricot, pear, gooseberry—and irrigated. Trees have grown well. Cherry trees bore second season; has had plenty of cherries, some plums, few pears, a few apricots and some grapes. Storm last spring destroyed much fruit. Strawberry as hardy as hardiest kind of weeds and immensely productive. Is 3,500 feet above sea and 150 feet to water.

R. M. Mackey, of Jefferson county: Apple not a full crop, pear fair, cherry medium, other small fruits medium.

W. B. Williams, Cloud county: Apple and peach trees in good condition. Apple and peach fair crop this season. Varieties, Jonathan, Winesap and Missouri Pippin. Last several years of drought has killed small fruit except where irrigated or on very low bottom. Strawberries do well. Has had as much trouble and as poor success in trying to grow blackberries as he had in trying to kill them in Kentucky, when a boy on his father's farm.

At the opening of the afternoon session a letter was read from Hon. Geo. C. Bracker, Secretary American Pomological Society, asking that the State society make its Secretary a life member of the American Pomological Society. A motion by Maj. Holsinger that this society seek a life membership in the American Pomological Society, was carried.

County fruit reports were continued. James Sharp, Morris county: Trees and orchards not what we would like to have them. Trees have dried up and died without ever bearing. Orchards in favorable situations are doing well. Small fruits not much tried.

Capt. Henry Booth, Pawnee county, thinks Arkansas valley as good a fruit country as is to be found. On some of the higher lands trees have done well under irrigation. His orchard, in the

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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.

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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.

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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.

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bottom, has done very well—as well as any he has observed anywhere. With him have borne a good crop every year but one, when a late frost caught them. Of late years there has been some loss from dropping. From 230 trees he has gathered over 1,000 bushels of apples in a season. Ben Davis, Winesap, Missouri Pippin and Jenneting—latter very small and never drop—are preferred. Only had ten old pear trees, have borne well, never blighted until this year. Varieties, Bartlett and Duchess. Latter has not blighted. Has made more from his orchard than all the rest of the farm. Orchard is sheltered by a hedge and row of cottonwood on south and west. Other winds seem to do no harm. A good many people are planting orchards now—small orchards to be taken care of by pump and pond irrigation—with success. Has trees on the bottom eighteen inches in diameter. Has never trimmed much. Never had any trouble from sun-scald.

Samuel Reynolds stated that he has a Vandevere Pippin, planted in 1858, which measured twelve feet in circumference of trunk and the branches spread 100 feet. It bears every year. Got a big wagon-load last year.

Martin Mohler, of Osborne county, stated that it is twenty-five years since he went to the county. Planted third orchard in 1882; got a good growth of apple and cherry trees. In good condition now. Have been bearing for three years. There is not enough moisture in fall and winter to keep trees in condition to bear a good crop of fruit. The older orchards are dying. Three trees watered had four bushels per tree. Three not watered bore nothing. Without irrigation in that country it is no use to plant an orchard. With irrigation, can grow fruit as well as in other parts of the State.

Mr. Williams, Cloud county, spoke of sun-scald. Has a preventive. Takes tarred paper cut into strips just broad enough to form a tube around the tree and ties it with strings or small wire. Sinks the bottom half-inch in the ground. It prevents sun-scald. Used tubes to keep rabbits from trees. Prevents borers also. Tube may be made large enough to remain on trees three years.

S. J. Baldwin, Nemaha county, reported crops of fruit this year. Apples medium; Winesap best, Missouri Pippin second, Jonathan third. Trees in orchards thoroughly cultivated or on northerly slope have not dropped as bad as others. Some of the old orchards have been ruined in last four years by the dry weather. Kieffer pear best this off year. First year home-grown pears have sold in the markets. Peaches a good crop this year. Alexander and Amsden did well. Champion has also done well. The past year was not a good plum year. His crop of plums did very well. Fair crop of raspberries, with Gregg and Kansas in the lead. Red sorts not satisfactory, year after year. Blackberries have been a failure four years in five for the last fifteen years. Drought ruins them when about two-thirds grown. Of strawberries, Greenville, Warfield and Robinson most successful.

J. W. Robinson, Butler county: In early spring there was a magnificent show until dry weather came. Very few apples at gathering time. Some were sun-burnt. Have been sending east for apples. Trees are in fair condition. Practiced wrapping trees to prevent sun-scald, but it starts roots all the way to top of wrapping. Has since used screen wire and experienced the same trouble when leaves collected inside the screen. Peaches a fine crop this year. Large peaches are best for southwestern Kansas. Withstand hot sun better than small. Have had fire-blight to some extent. Smith Cider produced more apples than any other. Ben Davis, Winesap, Missouri Pippin and others set plenty of apples but dropped them badly. Wealthy ripened a pretty full crop this year, and Whitney No. 20 ought to be in every orchard. Plums a light crop. Strawberry crop good. His orchards are always cultivated. A dust mulch is the cheapest mulch we can get. Has considered



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Entertaining Articles.

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FUNNY DARKIES. Frank R. Stockton.
SCHOOL LIFE IN FRANCE. Max O'Rell.
A PASTOR'S EXPERIENCE. Dr. Lyman Abbott.
AMONG THE IMMIGRANTS. A. F. Sanborn.
KINDER-SYMPHONIES. Gustave Kobbe.

Eminent Contributors for 1897.

Hon. Hilary A. Herbert.	Hon. Henry Cabot Lodge.	Edward Everett Hale.	Mrs. Burton Harrison.
Hon. William L. Wilson.	Hamlin Garland.	Hon. Theodore Roosevelt.	Elizabeth Bisland.
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THE YOUTH'S COMPANION, 201 Columbus Ave., Boston, Mass.

alfalfa a robber to trees, but is not sure this is correct. Of cultivated crops, peas and beans are best for orchard. Trims trees. Sets out two-year-old Kansas or three-year-old Illinois trees. Cuts back and trims to make top balance roots and sets so trees cast no shadow at 2 p. m. in summer. Cherries were a good crop. Peas better in proportion than apples.

Report of transactions of the annual meeting will be continued next week.

If the care of the hair were made a part of a lady's education, we should not see so many gray heads, and the use of Hall's Hair Renewer would be unnecessary.

To St. Paul and Minneapolis via Burlington Route.

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

Little Farms in Japan.

Japan, and not France or Belgium, would appear to be the land of petite culture. According to a recent American bulletin a couple of acres is considered a large tract for farming purposes. Most of the farms are smaller, and on a little plot a surprising variety of crops is cultivated—a few square feet of wheat, barley, maize and millet; a plot of beans, perhaps ten feet wide by twenty feet long, a similar area of potatoes and peas, and a patch of onions "about as big as a grave;" beetroot, lettuce, turnips, sweet potatoes and other crops occupy the rest of the area. The farmer examines his growing crops every morning, just as an engineer inspects his machinery, and if anything is wrong he puts it right. If a weed appears in the bean patch he pulls it up; if a hill of potatoes or anything else fails it is at once replanted. When he cuts down a tree he always plants another. As soon as one crop is harvested the soil is worked over, manured, and forthwith re-sown to another crop. It is estimated that nine-tenths of the agricultural land of Japan is devoted to rice, and as this is a crop requiring

much water, the paddy fields are banked up into terraces, one above the other, and divided off into small plots twenty-five feet to thirty feet square, with ridges of earth between them to prevent the water from flowing away when they are flooded. All farming lands are irrigated by a system that is 1,000 years old. Some of the ditches are walled up with bamboo wicker work and some with tiles and stone. Nearly half the total population of Japan is engaged in agriculture. Silk and tea, the two chief exports of the country, are raised almost by the work of women.—*London Times.*

Singers, public speakers, actors, auctioneers, teachers, preachers, and all who are liable to over-tax and irritate the vocal organs, find, in Ayer's Cherry Pectoral, a safe, certain and speedy relief. A timely dose of this preparation has prevented many a throat trouble.

Union Pacific Route.

What you want is the through car service offered between Denver and Chicago via the Union Pacific and Chicago & Alton railroads, which is unexcelled by any other line. Magnificent Pullman sleepers, dining cars and chair cars, run through daily without change, Denver to Chicago via Kansas City.

In the Dairy.

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

Dairy Education.

Minnesota gives her Dairy Association \$2,000 yearly, also \$200 yearly to what is called The Minnesota Butter-makers' Association; Nebraska gives \$2,000 and Wisconsin \$2,000. Is not the dairy industry of Kansas of enough importance to receive a like amount in the way of an appropriation from the State? Such a sum, judiciously expended by the Dairy Association or the State Agricultural college, in the way of disseminating dairy knowledge, such as housing, rearing and feeding dairy cows, handling milk and cream, using the separator and Babcock tester, churning and working butter by competent and expert instructors in the dairy districts, would bring more lasting and permanent results than \$2,000 given to any other enterprise.

Kansas has plenty of good feed, water, and all the facilities for making a great dairy State, but her farmers lack in that most important element, feeding and housing their cows. Secretary Coburn, at Abilene, stated that the average income from cows used for dairy purposes was less than \$8 per head a year. Minnesota, although less favored as a dairy State, is far in advance of Kansas in the management and value of her cows. To reach the class most in need of information, dairy institutes should be held at school houses and other convenient places all over the State. Such a movement kept up for four years, at a cost to the State of \$8,000 or \$10,000, would raise the income from the Kansas cow more than 50 per cent., and the farmers once educated and made to see the real benefit derived from such instruction would be willing to follow where there was an extra dollar in sight. The dairyman should be taught that the stalk field for feed, and the wire fence as shelter, are not promoters of profit in even the best of cows.

Let the question be agitated and see if an appropriation cannot be obtained from the next Legislature to be used for the better diffusion of dairy knowledge among our people.

What is a Good Cow?

What quantity of butter or cheese ought a cow to yield in a year to be rightly regarded as profitable for the dairy? This question, propounded by Secretary Coburn, in "Cow Culture," was answered by the following dairy-men:

Hoard:—Not less than 250 pounds of butter or 500 pounds of cheese.

Haecker:—300 pounds of butter and 400 pounds of cheese.

Wallace:—At least 200 pounds; strive for 300.

Wilson:—It depends upon locality and cost of feed; 200 is tolerable.

Dean:—The standard of production in our dairy is 6,000 pounds of milk, or 250 pounds of butter, or 600 pounds of cheese.

Wing:—Of butter 250 pounds, and cheese 625 pounds.

Goodrich:—250 pounds of butter or 570 pounds of cheese, though 200 pounds of butter or 450 pounds of cheese would probably pay for the keeping and work.

Alvord:—From 250 to 300 pounds of butter and 550 to 600 of cheese.

Gurler:—The minimum of butter should be 250 pounds; of cheese, 600 pounds.

Gould:—Of butter, 250 pounds and above; of cheese, 600 pounds and above.

Curtiss:—Not less than 200 pounds of butter, or 350 to 400 of cheese.

Dodge:—Of butter, 250 to 350 pounds.

Dawley:—This depends much on the cost of keep and the prices of the product. I cannot afford to keep a cow that makes less than 300 pounds of butter per year, and I set the standard at this and 5,000 pounds of milk.

Mathieson:—Not less than 250 pounds of butter, or its equivalent in cheese.

Carlyle:—A good dairy cow not above average size should produce, when liberally fed and carefully managed, at least 250 pounds of butter or from 500 to 600 pounds cheese annually.

Adams:—It depends on the cost of

feed. Ordinarily the minimum should be 250 pounds of butter and 500 pounds of cheese.

Boardman:—The value of feed and the price of butter would enter in, but I would not consider a cow that produced less than 250 pounds of butter per year profitable enough to be permanently retained. The mark should be for 300 pounds or more.

Brandt:—Butter, 250 pounds, and up to as much more as she will make.

Nisley:—About 275 pounds of butter.

Jones:—From 250 to 300 pounds of butter and 500 to 600 pounds of cheese.

Eyth:—Not less than 200 pounds of butter or 450 pounds of cheese.

Gathered From Many Sources.

From Report of Kansas State Board of Agriculture ("Cow Culture").

There is a moral side to dairying. Regular habits are required. Men who keep cows must be home at milking time; home is a good place. Very few good dairymen are whisky drinkers. Dairying communities, as a rule, furnish but little business for lawyers. Dairying is educating and elevating, if intelligently followed. This is especially true of home dairying.—F. W. Moseley.

There is scarcely a dairy farm in Wisconsin where partial soiling may not be practiced with great profit, and when once adopted it will never be neglected. Those who learn of the value of this system will gradually extend its use, and, as the price of land increases and the price of labor comes to a lower level, we may expect on some farms to see full soiling established.—Prof. W. A. Henry.

An ice-house is a necessary adjunct to every creamery. It should be built separate from the creamery. A house twenty feet long, sixteen feet wide and ten feet high will hold about 100 tons of ice. If an abundance of very cold water is at hand less ice will be needed. It is always best, however, to have plenty of ice, and for the ordinary creamery 100 tons is a safe quantity.—Prof. John M. Trueman.

Gravity creaming in the private dairy loses more fat than most farmers dream of. If ice is used at once after milking, to reduce the water around the cans to about 40° Fahrenheit, the fat will rise, leaving not more than one-fifth of 1 per cent.; but if the water is at 50° more will be left—perhaps one-half of 1 per cent.; and if the water is at 60° or above, 1 per cent. or more will be left in the skim-milk. This 1 or more per cent. is a third or a half of all the fat in the milk. This suggests the putting up of ice by the private dairyman. The climate of Kansas provides for this, and it is a greater boon than many imagine.—Prof. James Wilson.

The greatest point in favor of the separator is its ability to get practically all the cream of the milk, which no other system of creaming does so thoroughly. Just as good butter can be made from cream obtained in other ways, but the fact that the separator takes the cream from new milk before disagreeable or injurious odors or taints (bacteria) have become present explains in a large measure the reason for better butter. There is not so much time for the cream to spoil or get off flavor before it is churned as there is when raised by the gravity process, where it stands for twelve to fifty hours before skimming.—Practical Dairyman.

"It makes no difference as to the time of the year in setting the milk in deep pails in cold water. But it will not do to set the pails in the air expecting that the same results will be gained as if set in the water. It is the rapid cooling and not the mere low temperature that causes the cream to separate quickly from the milk, so that the water setting must be continued just the same in winter as in the summer. Water cools the milk much more rapidly than air will do, and on this account the water setting must be used in the winter as well as the summer. It would be a simple matter to set the water to be used out of doors to get cold before putting it in the tank."

A MOTHER'S PRIVILEGE.

It Also Involves a Duty.

A mother's pride and delight in her children's robust energy is one of the most satisfying enjoyments which comes into a woman's life; yet many a mother unknowingly robs herself of this joy and satisfaction through her own ignorance or neglect of the natural laws of life.

A mother's duty to her children begins before they come into the world. A mother who wants her child to be strong and healthy and able to fight its own battles, ought herself to be as strong and healthy as possible during the time when the little one is expected.



A prospective mother who forgets this fact or ignores it, wrongs both herself and her baby. It is her double duty during the expectant time to maintain her physical vigor and condition at the highest point by every means which nature and enlightened medical science affords.

Thousands of mothers have been made stronger and happier, more capable of bearing the trials of motherhood, and better able to give their children an inheritance of vigor and cheerfulness by the use of Dr. Pierce's Favorite Prescription. It imparts direct health and elastic endurance to the delicate organism concerned in motherhood; it gives special tone and recuperative energy to the nerve-centers, and creates thorough constitutional vitality and power.

Taken as early as possible during the expectant time, it frees motherhood from all its dangers and most of its pain; makes the coming of baby comparatively easy and fortifies the mother against prostration and all those dangerous mental disturbances and nervous complications which so frequently follow.

It provides an abundant secretion of healthy nourishment for the child, and a directly increased stock of physical force to start with in his battle with the world.

It is the only medicine of its kind devised by an educated and skilled physician and eminent specialist in the treatment of women's diseases.

It is a positive specific for all the delicate complaints and weaknesses peculiar to the feminine organism. It strengthens and heals and cures. It was devised for this one purpose by a doctor who has had thirty years of successful experience in this particular field of practice.

A woman suffering from any weak-

ness or disease ought not to risk her life and health to the advice of a mere nurse or any incompetent person. There are so-called remedies in the market, prepared by unskilled, unscientific persons who lack the necessary knowledge to prescribe safe and proper remedies for the complicated ailments of women.

Every woman who hopes sometime to be a happy mother ought to read Dr. Pierce's great thousand-page illustrated book, "The People's Common Sense Medical Adviser," containing the fruits of his thirty years' experience as chief consulting physician to the Invalids' Hotel and Surgical Institute, of Buffalo, N. Y. This magnificent volume was formerly sold at \$1.50; but for a limited time a paper-bound copy will be sent absolutely free to any one sending twenty-one 1-cent stamps, to pay the cost of mailing only, to the World's Dispensary Medical Association, Buffalo, N. Y. For a handsome cloth-bound copy send ten extra (thirty-one stamps in all) for postage and extra expense.

Did You Ever See an Indian?

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

Full Suit

Made of genuine English Clay. Warranted pure worsted, extra long and fine selected stock. No shoddy or other impurities used in its make-up. Full 18 ounces, soft and rich shade of black, made up and trimmed in the style of the finest custom-made garments. Send for sample. Sizes 34 to 42. In square or round sack or three-button cutaway. Our price, \$9. Sent FREE. Our mammoth catalogue, quoting everything, on receipt of 10 cents for postage. H. R. EAGLE & CO., 68 and 70 Wabash Ave., Chicago, Ill.

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The Peterson Magazine
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Both for the Year \$1.60!

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Gen. Southwestern Agts., Kansas City, Mo.

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our cure for hard times. See last week's picture, then look at this. Which will you be? Send for big catalogue, free, and buy your goods direct from the factory at Dealer's prices. 12-in. S. B. Plow \$7, 14-in. \$8.25, 16-in. \$9. We want a farmer agent in every township. HAFGOOD PLOW CO., ALTON, ILL., Box 8.

When you write mention Kansas Farmer.

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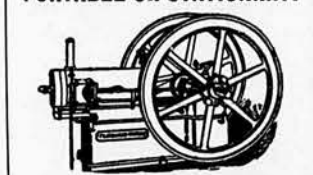


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FAIRBANKS-MORSE GASOLINE ENGINES. PORTABLE OR STATIONARY.



CHEAPEST POWER KNOWN.

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.

SWOLLEN SHEATH.—I have a stallion, 9 years old, that is affected with swelling of the sheath. I have washed it with soap and water, but that doesn't seem to help any.

Answer.—Grease the inside of the sheath thoroughly with fresh (unsalted) lard once a week for two or three weeks. Don't wash the sheath.

ACTINOMYCOSIS OF THE TONGUE.—I have a cow that has been ailing about three weeks. Her tongue and throat are badly swollen.

Answer.—Your cow may be suffering from an ordinary abscess of the throat, which would require a skilled veterinarian to open, if it is deep.

BLOODY MILK.—I have a cow that gives bloody milk from one teat, occasionally.

Answer.—Bathe that quarter of the bag with hot water for fifteen minutes at a time twice daily, wipe dry and rub well with an ointment made by dissolving half an ounce of gum camphor in two ounces of hot fresh lard.

QUESTIONS.—(1) A pig, eight weeks old, cannot pass urine properly. It collects in a sac just back of the navel, and then drips out.

Answer.—(1) From your description, I think it would be all right to open the sac. Commence at the opening and cut backward a couple of inches.

To Correspondents.

Please state the symptoms and conditions in full. I condense them for publication. Be sure and state that you wish a reply through the KANSAS FARMER.

Why throw away your money for every new cough syrup, when you can buy that standard remedy, Dr. Bull's Cough Syrup.

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

A Look Through South Missouri for Four Cents.

The Kansas City, Fort Scott & Memphis Railroad Company has just issued a magnificent book of sixty or more photo-engraved views of varied scenery in south Missouri.

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

Horse Owners! Use



GOMBAULT'S Caustic Balsam A Safe Speedy and Positive Cure

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING.

THE LAWRENCE-WILLIAMS CO., Cleveland, O.

MARKET REPORTS.

Kansas City Live Stock. KANSAS CITY, Dec. 14.—Cattle—Receipts since Saturday, 8,343; calves, 1,673; shipped Saturday, 2,826 cattle; 51 calves.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include SHIPPING AND DRESSED BEEF STEERS, TEXAS AND INDIAN STEERS, NATIVE HEIFERS, NATIVE COWS, NATIVE FEEDERS.

Chicago Live Stock. CHICAGO, Dec. 14.—Cattle—Receipts, 15,000; market steady; good grades strong, quality poor.

St. Louis Live Stock. ST. LOUIS, Dec. 14.—Cattle—Receipts, 6,000; market active on good only.

Chicago Grain and Produce. Dec. 14. Opened High 'st Low 'st Closing. Wh't—Dec... 77 77 76 78 78 1/2

Kansas City Grain. KANSAS CITY, Dec. 14.—Receipts of wheat to-day, 53 cars; a year ago, 170 cars.

Chicago Live Stock. CHICAGO, Dec. 14.—Cattle—Receipts, 15,000; market steady; good grades strong, quality poor.

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BROOMCORN ESTABLISH'D 1873 ON CONSIGNMENT OR SOLD DIRECT.

We carry the largest stock of Broom Manufacturers' Supplies in the United States. Corro spondence solicited.

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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 Southwest 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.

NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED. C. F. MORSE, E. E. RICHARDSON, H. P. CHILD, EUGENE RUST, V. Pres. and Gen. Manager, Secretary and Treasurer, Assistant Gen. Manager, Gen. Superintendent.

No. 2 mixed, 1 car soft 85c, 2 cars hard, 77c; No. 3 1 car soft 80c.

Receipts of corn to-day, 154 cars; a year ago, 160 cars.

Sales by sample on track: No. 2 mixed, 2 cars special billing 19c, 15 cars 18 1/2c; No. 3, 2 cars special billing 18 1/2c, 8 cars 18c, 7 cars 17 1/2c, 20 cars 17 1/4c.

Receipts of oats to-day, 39 cars; a year ago, 36 cars.

Sales by sample on track, Kansas City: No. 2 mixed, nominally 17 1/4c@18 1/4c; No. 3, 2 cars 16c; No. 4, nominally 15@15 1/2c.

Hay—Receipts, 88 cars; market is steady. Choice timothy, \$8.00@8.50; No. 1, \$7.00@7.50; No. 2, \$6.00@6.50; clover, mixed, No. 1, \$5.00@5.50; No. 2, \$4.50@5.00; choice prairie, \$5.50; No. 1, \$4.50@5.00; No. 2, \$4.00@4.50; No. 3, \$3.00@3.50.

Kansas City Produce.

KANSAS CITY, Dec. 14.—Butter—Creamery, extra fancy separator, 21c; firsts, 19 1/2c; dairy, fancy, 13c; fair, 10c; store packed, 8c; packing stock, 6c; country roll, neatly packed and sweet, 12c; choice, 9@10c.

Eggs—Strictly fresh stock, 17c per doz; cold storage stock, 13c.

Poultry—Hens, 4c; roosters, 12 1/2c each; springs, 5c; coarse springs and roosters, 4c; broilers, from 1 1/2 to 2 lbs., 6c; turkeys, over 7 lbs., 7 1/2c; under 7 lbs. not wanted; old gobblers, 5c; ducks, 6 1/2c; geese, 5c; pigeons, 75c per doz.

Apples—Choice eating stock sells from 40 to 60c a bu.; inferior, 30@35c a bu.; cooking stock, 20@35c; Ben Davis, 20@40c; Wine Saps, 40@65c, according to quality; Huntsman's Favorite, 60 @75c per bu. for fancy stock in a small way; shippers are paying for Northern Spy \$1.00 a bbl. in car lots; for fancy fall and winter varieties, \$1.00@1.25 a bbl.; for Jonathans, \$1.50 a bbl. for fancy and 75c@81.00 for No. 2 stock; New York and Michigan stock, \$1.00 per bbl.

Potatoes—Home grown, 20c in a small way; 16@17c in car lots; Wisconsin and Minnesota Burbanks, 35@38c in car lots, 40c in a small way; Pearls, 20 less; Iowa stock, 25@28c in car lots, 30@35c in a small way; sweet potatoes, 20@40c in a small way.

GRASS AND FIELD SEEDS MITCHELLHILL & RAMSEY, ST. JOSEPH, MISSOURI.

When you write mention Kansas Farmer.

VETERINARY SURGEON.

D. E. U. B. McCURDY, Veterinary Surgeon. Graduate Ontario Veterinary College, Toronto, Canada. Can be consulted on all diseases of domestic animals at office or by mail.

The Baldridge Transplanter. Made of steel and iron. Earlier and larger crops.

Soil, roots and plants taken up together, preventing stunting or injury. Vegetables, flowers, strawberries, tobacco, small nursery trees, etc., can be moved at all seasons. Invaluable for filling vacancies. Transplanter with blade 2 inches in diameter, \$1.25; same with 3-inch blade, \$1.50. SPECIAL PRICE with KANSAS FARMER: By a special arrangement with the manufacturers we are able to offer the Transplanter and KANSAS FARMER one year for price of Transplanter alone.

THE STRAY LIST.

FOR WEEK ENDING DEC'R 3, 1896.

Montgomery county—J. W. Glass, clerk.

HORSE—Taken up by Wm. Adams, in Fawn Creek tp., one black horse, 4 years old, hind feet white.

HORSE—Taken up by R. B. Knook, in Caney tp., October 28, 1896, one black horse, 4 or 5 years old, hind feet white.

FOR WEEK ENDING DEC'R 10, 1896.

Lyon county—M. Q. Starr, clerk.

MARE—Taken up by Frederick Kluth, in Center tp., November 19, 1896, one black mare, about 4 years old, white spot in forehead, medium size, no brands visible; valued at \$15.

TWO STEERS—Taken up by J. E. Rathke, in Center tp., November 11, 1896, one red steer, white face, 4 years old, medium size, indistinct brand on left side; valued at \$25. And one blue-ruan steer, 4 years old, medium size, indistinct brand on left side; valued at \$25.

TWO MARES—Taken up by F. A. Layton, in Agnes City tp., November 30, 1896, one black mare, 4 years old, white spot on forehead and nose; valued at \$15. And one bay mare, coming 2 years old, white spot in forehead; valued at \$15.

Wilson county—T. D. Hampson, clerk.

MARE—Taken up by R. R. Brinkley, in Clifton tp., November 27, 1896, one brown mare, right hind foot white and white spot in face, 3 years old; valued at \$20.

FOR WEEK ENDING DEC'R 17, 1896.

Cherokee county—T. W. Thomason, clerk.

MARE—Taken up by C. N. Shigley, in Shawnee tp., November 21, 1896, one light bay mare, fifteen hands high, wire out on right hind leg, weight about 850 pounds; valued at \$15.

Chase county—M. C. Newton, clerk.

STEER—Taken up by M. G. Gomer, in Diamond Creek tp. (P. O. Strong City), November 10, 1896, one yearling steer; no marks or brands.

Coffey county—T. N. Bell, clerk.

STEER—Taken up by T. F. VanArzdale, in Pleasant tp., one red and white steer, no horns, branded I or (1) on left hip, weight 1,100 pounds; valued at \$20.

Norton county—D. W. Grant, clerk.

STEER—Taken up by Henry Shoaf, in Model tp., October 15, 1896, on red yearling steer, dehorned, small white spots on sides; valued at \$12.

Greenwood county—J. F. Hoffman, clerk.

MULE—Taken up by John Webb (P. O. Twinfalls), November 19, 1896, one brown horse mule, 2 years old, slit in right ear, no brands; valued at \$25.

MULE—By same, one black mare mule, 2 years old, no marks or brands; valued at \$25.

HORSES SOLD AT AUCTION

on Tuesday, Wednesday and Thursday of each week. Private sales every day at the Kansas City Stock Yards Horse and Mule Department. The largest and finest institution in the United States. Write for free market reports.

W. S. TOUGH & SON, Managers, KANSAS CITY, MO.

LADIES I Make Big Wages At Home

and want all to have same opportunity. The work is very pleasant and will easily pay \$18 weekly. This is no deception. I want no money and will gladly send full particulars to all sending 2c. stamp. Miss E. E. Stebbins, Lawrence, Mich.

THE FAMILY MONEY MAKER!

Worth \$100 a year and more to all who own land, a garden, orchard or conservatory; covers, in plain language, by practical men, the care and cultivation of flowers, fruits, plants, trees, shrubs, bulbs, etc., and tells how to make home grounds attractive.

3 AMERICAN GARDENING 10

America's brightest and most reliable gardening and family paper. Established fifty years. Illus. Weekly. \$1.00 a year. WITH HANDSOME PREMIUM.

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Or send \$1.15 to this office and it will pay for KANSAS FARMER and American Gardening, both for one year. Address

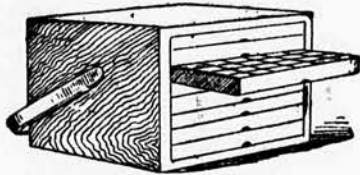
KANSAS FARMER CO., Topeka, Kansas.

The Poultry Yard

CONVENIENT EGG BOX.

Good Things Where Private Consumers Are Supplied.

Where one markets his eggs to private consumers or at the stores even, the egg box shown herewith will be found very serviceable. It is a box about half the length of a 30-dozen egg



BOX FOR MARKETING EGGS.

carrier, with a handle and fitted drawers, each drawer being fitted with pasteboard egg fillers. A drawer of eggs can thus be taken from the box and carried into the customer's house, the box itself being left in the wagon. The bottom of each drawer may be covered with coarse bran, and the pasteboard fitters placed on this, thus providing a soft resting place for each egg.—Prairie Farmer.

WINTER HATCHING.

Everything Considered, There Is Not Much Money in It.

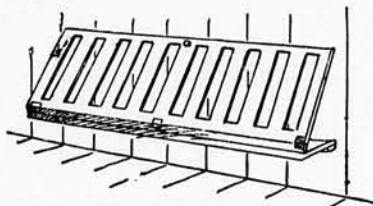
Eggs are too valuable in winter to be used for hatching purposes unless one is confident of securing good hatches and of raising the chick, says the Mirror and Farmer. To use a dozen eggs from which only six chicks come, and then lose three of them, means an expenditure of four eggs for one chick, and no one can afford the cost in that respect. The heaviest loss of chicks is with hens—not with incubators and brooders—and this fact should not be overlooked. It is admitted that in the spring and summer when the hen has everything in her favor she will be more serviceable than the brooder, but in the winter, when cold winds, ice, snow and rains prevail, the hen has a difficult undertaking to care for herself instead of attempting to raise a brood, and as a rule, the hens are fortunate if they raise one-half of the chicks hatched.

When a hen becomes broody make her nest in a warm place, and when she brings off her brood have a place prepared for her, under shelter and where the sunlight can come. Be careful that the chicks are not exposed or become chilled, and aim to raise everyone of them. In that case the chicks will pay because the expense of the eggs used will be reduced by reason of the larger number of chicks marketed.

FEEDING ARRANGEMENT.

It Prevents Hens from Soiling Their Food or Themselves.

When hens are fed in open dishes, they will persist in getting into their food, soiling it and themselves. A handy and cleanly feeding arrange-



POULTRY FEEDER.

ment is shown in the sketch. A board, with a rim in front, is nailed to the wall, six inches from the floor, and to this is hinged a slat-work arrangement that permits the fowls to feed through it, but will not let them get into the food. It opens out from the top when one is putting food upon the board, and remains closed when shut.—American Agriculturist.

A Hint for Beginners.

If you are beginning with fowls, don't think that your first step is to devise some new variety or cross that shall knock out all others at one crack. Take the breeds which others have experimented with and brought up to a state of strength and productiveness that cannot be questioned. This country has plenty of varieties. What it needs is more poultry raisers and less "fanciers."

Too close pasturing is ruinous to the pasture. It is throwing away money.

FOWLS IN WINTER.

Green Food Is the Best Thing to Stimulate Egg Production.

No other food is so absolutely necessary for the production of eggs in winter as the green-food ration. The cooping of hens during the cold months is a modern and rather unnatural condition of things. Our forefathers never considered it necessary to house a flock at any season of the year, except at night, and then only in cold climates. In the south, where the average temperature is mild throughout the year, fowls are left generally to themselves and roost in trees or on fences—any place where they can be higher at night than their prowling enemies.

Modern poultry culture has improved on all this, and to-day the successful breeder, whether for egg production or fancy points, houses his stock comfortably and confines them closely to their coops during the winter months. It is therefore necessary to supply them with all the variety of food they would otherwise gather, if left to their own inclinations. When the spring comes and your fowls are let out for the first time, watch them and you will see how eagerly they will rush to the nearest grass and devour ravenously every blade.

Everything that is of a vegetable nature is worth storing, therefore, to supply the place of the natural green article so much enjoyed by them—small potatoes, turnips, mangel-wurzels, cabbage, dried clover; in fact, anything of this nature that can be successfully kept over during cold weather.

The small vegetables and clover hay can be boiled or steamed and added to the morning mash, and the mangels and cabbage can be fed in the raw state. Many of our most successful egg farmers feed the last two as a separate midday ration, all that the hens will eat up clean, or suspend a cabbage about two feet above the litter in coops for them to jump and peck at, thus giving additional exercise in procuring a tempting green morsel.—Country Gentleman.

How to Tell Fresh Eggs.

A correspondent of the Dakota Farmer asks "Is there any sure way of distinguishing perfectly fresh eggs from tainted ones, or those that have been set upon by hens for several days? Candling is quite a sure method, but if there is any other I would be glad to know it." The following reply is given: "To the experienced eye the roughish or granulated surface of the perfectly fresh egg distinguishes it at once from the more shiny or polished surface of the one that has been under the hen a day or two. We can pick out every fresh egg among a nestful of those that have been sat on two days, even in the dark. The secret is very simple. Just scratch over the surface with the finger nail, if it grates the egg is fresh, but if the nail slides smoothly the egg is old. A little practice makes this a sure test."


Dry Earth on the Floor.

The poultry house is more easily cleaned in winter than in summer, as the cold freezes the droppings, rendering them easily swept up and shoveled, but this will depend upon how the floor is managed. If it is covered with dry dirt or sifted coal ashes, the cleaning is simply a matter of using a broom; but if no absorbent material is used, the fresh droppings become frozen and adhere to the wood, requiring considerable scraping for their removal.—Farm and Fireside.


\$100 Reward \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer one hundred dollars for any case that it fails to cure. Send for list of testimonials. Address, F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75 cents.

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




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Female
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FORTY-FIVE HEAD, including five mature sows, twenty spring boars and twenty gilts. The sows and about half the gilts will be bred and safe in pig. The greater part of the offering is the get of our herd boar, Kodak 15086, a grandson of Guy Wilkes 2d on one side and of Van Dee on the other. Kodak's daughters will be bred to Tecumseh the Great 16900 (by Chief Tecumseh 2d) and Domino 16734 (first-prize boar at Omaha, 1896). Send for catalogue. COL. F. M. WOODS, Auctioneer. JOHN P. TOLFORD, Manager. COME AND INSPECT OUR HERD OF JERSEY CATTLE.

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The offerings will consist of about fifty head, two each from the leading herds in the State, both sexes and all ages and all TOPS. The collection will be representative of the leading families of each breed, and will give the visitor an idea of the type required by the up-to-date breeder and afford him the opportunity of the year to buy new blood with which to recruit and reinforce his herd. Sale to be under cover and will commence at 1 o'clock p. m. TERMS—Cash or acceptable ninety-day bankable paper. For catalogue address

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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.