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KANSAS FARMER

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Agricultural Matters.

FARMING AMONG THE DUTCH.

AMSTERDAM, HOLLAND, Sept. 26, 1894.

EDITOR KANSAS FARMER:—Farming in the low countries of Holland and Belgium is an interesting study. To one whose home is on the boundless prairies of the West, it is a problem. To know that a country no larger than Maryland contains 6,000,000 of people who live chiefly by agriculture is interesting, but to see the little nooks and odd-shaped corners of land that pass for farms in Belgium is to doubt one's own eyes. The smallest farm lands of continental Europe are those of Belgium. As one passes into Holland the farms may be seen to increase in size until the Dutch province of Friesland is reached, where cattle-raising is the chief pursuit. There the flat grazing lands afford plenty of range for the herds of sleek black and white spotted butter-makers which are famous the world over.

In Belgium the produce of every farm is varied. A three-cornered piece of land containing about two acres, and hemmed by ditches filled with water, is the size and situation of a typical Belgian farm. As small as it is, it will contain a patch of wheat or rye and another of barley; another fair portion of it grows potatoes. A row of cabbage grows all around on the sloping sides of the ditches, with a row of onions just inside, leaving bare walking room between them and the grain. The rest of the tillable soil is planted with a great variety of vegetables, either for substantial food for the farmer's own table or a better-priced product for other men's tables. For shade, ornament and profit, a row of fruit trees, mostly pear trees, surround his house. There are no yards or stable lots, because they are not needed, and besides every inch of ground must produce. I have wondered how these little spots of ground could be made to furnish enough to feed and clothe a farmer and his family of seven or eight children. They all seem to have large families. I asked a farmer in Flanders how he could manage to support himself with two acres of ground. "I had the same crop last year," he said, "and I had barley and onions and cabbage to sell after selling my early vegetables. Then I had a few hogs, some chickens and eggs to send to market." I had not thought of live stock on the place, but he showed me where he kept his hogs and chickens and eggs. In a back room, under the same square tiled roof with himself, were six fine porkers. It was a clean and comfortable place for them, too, notwithstanding a score of chickens lived in the same room with them. I knew he did not have a horse. There was not room enough on the place for one of my little bronchos, not to speak of the big Belgian draft horses which pull the enormously big trucks in Antwerp and Brussels. In one corner of this room, which was his stable, two good-sized dogs were chained to a kennel. They were common looking enough, but as dear to him, no doubt, as my horses are to me. They served him as horses do farmers in America. These, then, were a couple of the famous Flemish "trekhonden," the draught dogs of Belgium and South Holland, where one may see them on the highways and in the streets of every village and city. They seem to be a mongrel breed with all sorts of strains noticeable among them. They draw those heavy little two-wheeled wagons loaded with everything—with milk, with vegetables, with lumber, and sometimes one may see two or three of these dogs rattling along over the paved country roads with three or four persons in the cart behind them. They are in every way cheaper than horses, and I believe this Flemish farmer when he said, that with his two good dogs he did not need a horse. Such dogs, he said, would bring 60 francs each in the Sunday morning dog market in Antwerp. In Zeeland, which forms that portion of Holland, with its low sandy soil, lying on both sides of the mouth of the river Scheldt,

dogs are not the only draught animals which seem odd to an American. There I have seen sheep and small cows driven between the shafts of carts. Horses, however, are used more on the farms there than in Belgium. The farms are larger but the soil is not the best except for potatoes. It seems particularly well adapted for that crop. Nearly all the potatoes sold in Antwerp and the larger cities of Belgium and Holland are grown in Zeeland. The favorite variety is a small, round potato with a yellow tint when boiled. They are dry and firm with an excellent flavor. Many of these were exported to America last winter. What horses are used in Belgium, however, are good ones. There are no finer draught horses, no larger ones, and none that draw heavier loads. They are no good, however, on soft ground, but that does not interfere much with their usefulness for all the roads and streets of Belgium are hard, chiefly paved with brick or Belgian blocks.

One day last spring I had a load of lumber brought into my show lot in Antwerp. It was drawn by two big Belgian horses. When they got onto the soft ground of the lot, which happened to be a little boggy just then on account of rain, they stopped. They could not be made to move the wagon. After the driver had given up trying, I had a span of American draught horses from my stables hitched to the wagon. They walked off with it without any trouble. The reason of this was, I suppose, that the Belgian horses are accustomed to hard footing, while my American horses were used to every kind of roads—mostly bad ones.

As horses are used on but few Belgian farms, so are plows scarce articles there. What plows are used are primitive things, made of wood with an iron share for turning the soil. The American cultivator is, of course, unknown either in Belgium or Holland. As to other improved farming implements, there is no place for them. The spade, the hoe and the reaping-hook are their implements. They cut the grain in the same manner that the reapers did in the fields of Boaz, and the women still follow the example of Ruth. They glean the fields after the reapers. They first do their share of the reaping, though, just the same as the men do, and there is no work on the farms which is considered too hard for the women to do. When the crops are harvested they are stored in the loft of the dwelling-house. In Holland I have seen a number of barns. These are more plentiful in the northern provinces, particularly in the cattle country of Friesland. Just now the foot-and-mouth disease is bad in Friesland and the other countries of Europe have quarantined against it. The price of Friesland milk cows has fallen from \$125 to \$75 in consequence. As Friesland cows are probably the best for milk, that province of Holland was long a great butter-producing country.

Twenty years ago the city of Leeuwarden was one of the biggest butter markets of north Europe. Friday is the day for the big butter market at Leeuwarden. The time was when over 250,000 pounds was the average market day sales for export alone. Now the amount of butter exported does not reach one-fourth of that quantity. Danish butter on the one side and Normandy butter on the other have almost crowded the Friesche butter out of the foreign market because they are better. The Frieslanders have taken, since then, to making more cheese. The light-colored cheese, with cloves and seeds in it, is the peculiar product of Friesland, with the Dutch name of "nagelkaas." It is not so good as the more famous "Edammerkaas." The little round cheeses which are painted red for the export trade and so well known in the United States as Edam cheese, are made by the farmers of the province of North Holland. They sell here for 10 cents a pound, or twice as much as the Friesland cheese with its black spices. A better cheese than either is also made in North Holland. It is more like New York cheddar, and is known as "Hollandschekaas." It is shaped like a grindstone, about fourteen inches in diameter and four inches thick. In both Holland and Belgium

cheese takes the place of meat at breakfast. The rule of these countries, like others of Europe, is that nothing is made warm for breakfast but coffee, and this rule has caused no end of trouble with the cowboys with my "Wild West show." In Antwerp I had an American cook to keep them in good humor, but since I have been touring Holland I have had to dispense with the American boarding-house for them and send them to hotels.

In the first three or four cities my contracting agents tried to find hotels that would prepare in American style breakfast. But he soon found that that was impossible, an absolute impossibility. They have about gotten used to eating cheese for breakfast, but I fear they will not quit kicking about it until I get back to America with them. It is not the rule of the country to serve a warm evening meal, either, and it is with great difficulty that I can find hotels that will furnish a warm supper for my company. Cowboys are human, however, and the way they are lionized by the Dutch makes up for a great many of the peculiarities of the country that they do not like.

Notwithstanding the appreciative and profitable audiences I find here, from what I have seen of the low countries, traveling from one end to the other, I have concluded that I prefer having my ranch in Kansas. It is true they never suffer from drought here for the seas, rivers and canals are higher than the farm lands, and with ditches everywhere irrigation is no trouble at all. There are no fences here to be kept in repair either, as the fields are divided by ditches filled with water. The only fences are the dikes to keep the waters back. These dikes, which are from one foot to fifteen feet high, made of dirt and about as broad as a single-track railroad dump, stands between the farmer and the destruction of his fields; in some places of his life. To cut one would be to flood the country, in some places with twelve feet of water. Canals run everywhere and the farm products are taken to market on the boats. At this season barges loaded with hay and cabbage may be seen in every direction in Holland. The farmers of Belgium and Holland work harder than they do in America because of the lack of labor-saving implements. They practice pinching economy all the year around, and from the little two-acre farmers of Belgium to the cattle-growers of Friesland, all lay by a few cents if not more to steadily increase the family savings.

G. W. LILLIE.
("Pawnee Bill.")

Potato-Growing and Subsoiling.

EDITOR KANSAS FARMER:—Allow me to give my experience in potato-growing this year. I will take one field. It contained thirty-five acres. It had been used as meadow and pasture for the last ten years. Last spring, as soon as the frost was out of the ground, it was plowed about two and one-half inches deep, just deep enough to turn over the sod. The last of May it was thoroughly disked and harrowed, which left it as fine as a garden. Then it was cross-plowed—plow set to run about six inches deep—followed right after with a subsoil plow, set to run about six inches deep in the bottom of the furrow, dropping the subsoil back in the furrow all loosened up. The first plow turned a furrow on top of this loose subsoil, and the subsoil plow followed again. I used three horses to each plow. I prepared twenty acres in this way. The remainder of the field was cross-plowed, but not subsoiled. The field was all harrowed. Commenced to plant the field to potatoes June 8 and finished June 18. There were ten varieties of potatoes planted on the field.

There was only one variety that was planted on both subsoiled and unsubsoiled land. This was Parson's Prolific. The yield was thirty bushels per acre more on the subsoiled land and a better quality. The cost of subsoiling was about \$1 per acre. Thirty bushels of potatoes, at 60 cents per bushel, will show a gain of \$17 per acre in favor of the subsoiled land, which makes a gain of \$340 on the twenty acres. This

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being an off year, I believe the difference would have been greater of an ordinary season, from the fact that after the subsoiling was done we did not have sufficient rain to saturate the subsoil. There was a marked difference throughout the season. The subsoiled land contained more moisture and could be told to the row. Nor is this all. It is left in a much better condition for any crop for years. A neighbor and I went to the field to-day and found that the soil was loose from twelve to fifteen inches and in the finest condition. He made the remark: "Wouldn't this fetch that big corn of yours?"

This twenty acres was the first that was subsoiled in this vicinity, and has been watched and examined by many. There will be considerable land subsoiled in this vicinity next season. Quite a bit has already been done.

I see that there is quite an effort being made to irrigate portions of your State. This is all right where it can be done, but where it cannot be done, why not use the subsoil plow and loosen up the ground fifteen inches deep to absorb the rain that does fall and prevent as much as possible the running off into brooks, etc.? It must be remembered that the land does not need to be subsoiled every year. The subsoil, I do not believe, would get as hard as it was in a hundred years.

I see that Mr. Chas. W. Galle, of Burlingame, Kas., gave his treatment for potato scab, in the FARMER last week. The half acre that he treated with a solution of corrosive sublimate he pronounced a success, and that the potatoes were free from scab and as smooth as a glass ball. Of my ten varieties above mentioned, none were treated and nine of the varieties are almost free from scab. The Early Ohios are considerably affected, in other words, are scabby. I claim that the scab is produced by the same grub that eats the roots off of corn. The reason that the nine varieties were almost free from scab, was that they did not set on until about September 8, and the time for the grub to get in his work was about past. Not so with the Early Ohio. They set on about August 5, and gave the grub a chance to get in his work on the outside of the potato while it was growing and make it scabby. These grubs do more than make the potato scabby. They eat off the roots and the small potatoes some seasons as fast as they set on. Last spring I sorted out the quite small and scabby potatoes and fed some of them when nearly done planting. I planted eight rows with small and scabby ones, and when I dug them no one could have told the difference. They were almost free from scab and as good a quality as those from selected seed. I do not claim that they would always do this. S. A. THOMAS.

Bingham, Iowa.

Beet Sugar in Kansas.

EDITOR KANSAS FARMER:—In Chino, California, is one of the most complete beet sugar factories in the world, not even excepting those of Germany and France, where the manufacture of beet sugar has been carried on for over a hundred years. This factory cost over a million dollars and turned out over nine million pounds of sugar during the last sugar-making season. It employs three hundred men, and with the farmers who raise the beets, the men who handle the sugar after it is made, the men who quarry the immense amount of limestone the factory uses, and the persons who make the filter-cloths and machinery, and the mer-

chants who supply the factory employes and farmers, make a total of over three thousand persons who are either directly or indirectly dependent upon the Chino factory for support.

The great possibilities of this country for sugar-making may be partly understood when the statement is made that it would take 800 factories the size of the one at Chino to supply the United States with the sugar it consumes, and in all probability 1,200 will be needed by the time the factories are built. The country has every natural advantage for the culture of sugar beets, and as a matter of business sense and economy there is no reason why 90 per cent. of our sugar should be imported when it can be manufactured at home by American labor and American machinery. The action of the Democratic Congress in taking the bounty off of sugar has set back the industry to a small extent, but as there is every reason to believe the Republicans will be successful in 1896, there seems to be but little doubt that the bounty will be replaced and with a new impetus the success of beet sugar manufacture is almost a foregone conclusion.

The climate and soil of the United States are better suited for the raising of sugar beets than for any other agricultural product from which sugar can be made. Cane can be raised only in Louisiana and parts of Texas, and even in these States it does not attain the ripeness that it does in the West Indies. The sucrose in sorghum is not in a form which can be worked out easily enough to make it a successful product for sugar. The sugar beet has an advantage over both in the fact that it can be grown almost anywhere and the sucrose in it is converted more easily into sugar.

Mr. Henry T. Oxnard, "the father of the beet sugar industry" in this country, once said to the writer: "I have yet to see a place where sugar beets cannot be raised." While this is true, there are parts of the United States where the beets could not be raised successfully, though parts of nearly every State in the Union are well adapted to beet farming. The sugar beet is a particularly hardy vegetable and can be raised any place where other vegetables are raised. It is white in color and contains, on an average, more sugar than either cane or sorghum.

While the establishing of beet sugar factories will be of great advantage to capitalists, they will be of immensely greater benefit to the farmers who raise the beets; that is, in relieving the present agricultural depression. The large farms will be divided up, for twenty acres of good beet land will afford a living fit for any family, and the guarantee of a steady market at a fixed price will be an alleviation of the great distress caused by fluctuations in the price of farm products. The average net profit is from \$35 to \$60 an acre, and as this is counting in a man's work on his own farm, the real profit is considerably greater.

When the manufacture of beet sugar becomes one of the great industries of this country, as it undoubtedly will, Kansas will be one of the first States to be benefited. Experiments made in this State show that the soil and climate are both adapted to beet-raising. Two beet sugar factories are conducted successfully in Nebraska, and Kansas is equally, if not better, suited to beet-raising than her sister on the north. A gentleman who is interested in sugar says that if the bounty is replaced, at least twenty-five sugar factories will be built in this country within a year. That some of the factories must come to this State, there is no doubt, for, with the exception of California, Kansas can hold her own with any State in the Union in the raising of sugar beets. It would not be unwise for the farmers of Kansas to experiment with sugar beets. Any locality that proves conclusively to be well adapted for beet farming will surely draw to it some of the capital that must be and will be invested in beet sugar manufactories within the next few years. ELWOOD S. PEPPER.
Topeka, Kas.

In writing to our advertisers please say you saw their advertisement in the KANSAS FARMER.

The Stock Interest.

ABOUT THE BALANCED RATION.

Never before were stock-feeders throughout the West so much interested in the economy of stock-feeding as at the present time. The merits of the balanced ration is pertinently discussed by Mr. Wallace, of the Iowa *Homestead*, who says:

"In these days, when food is scarce and any waste of forage or grain involves double the usual damage, the question of the balanced ration, or the ration that may be used up without waste in the system, assumes unusual importance. We are quite well aware of the disposition of farmers to take up in a practical way the study of this subject. They are disinclined to master the terms 'carbohydrates,' 'albuminoids,' 'protein,' 'ether extract,' 'nitrogen free extract' and such like terms, and to say still further: Let the wise men first settle between themselves what is a balanced ration and when the doctors agree we will try to take their medicine. Speaking of the last point first, we are very strongly of the opinion that the doctors never will agree until there is a practical agreement among the farmers, for the reason that the theoretical conclusions of the chemist are after all only presumptive proof, and the cow, the hog, the sheep and the horse, together with the farmer who owns and feeds them all, and notes the profit and loss, must at the last tell whether the scientist is right in his theories or not. When it is fully determined what the forage and grains contain of the different elements and what the average animal requires in its various stages of growth, or when used for different purposes, in other words, when the principles underlying the science of balanced rations are determined, then the work of the farmer will be to determine the application of the principle under the various conditions that prevail in his stockyard. The question of balanced rations must be wrought out on both sides, from the farmer's side as well as from the side of the scientist, and the conclusions of the one will throw much light on those of the other. For example, it is now generally conceded that the German feeding rations, upon which we have been depending so long, are imperfect, even in their own country, and much more so in this, growing out of the difference in the quality of the grains and in the differences in the climate and conditions, and it is now generally conceded by the most thoughtful men that a wider ration is the most profitable. It will help very much if the farmer, while keeping in mind the technical terms, such as those we have mentioned above, will connect each of them with some plain, short, Anglo-Saxon word that is understood by everybody. He does not have much difficulty in determining what ash is when used by the scientist. It is simply ashes, or that which remains after you burn wood, flesh, bone or anything else. If he will take the hard word albuminoids and translate it into muscle-maker, or red meat-maker, or lean meat-maker, he will get a clearer idea of its meaning. When he reads protein let him say to himself that is simply what goes to make lean meat; it is the stuff out of which the white of an egg is made; it is the lean meat-maker. If he will take up the difficult word 'carbohydrate' and link it with 'nitrogen free extract' or 'ether extract,' let him say to himself, that is the stuff that makes fat meat and it is the cheapest stuff with which to make heat to warm up the animal, for it must be remembered that all food eaten is practically burned. You can burn flesh-formers in the system and keep up the heat with that just as you can burn dry wood or wet wood, but carbohydrates, like dry wood, are the cheaper and the man who feeds too narrow a ration or one with too little of the carbohydrates or fat-formers in it is burning green wood. Then, again, we read of fat as an element of food and when we speak of live stock we do not mean

fat meat, but we mean the fat as already formed in the grain. We rank this as worth from two and a half to two and a quarter times as valuable, because it is oil and it is worth just that much more as a food because it goes that much further as a heat-producer or fat-former. Then, again, they sometimes read in tables of food rations about woody fibre. Woody fibre is simply the bone-work of the plant, just such stuff as the woody strings which the boys find in corn stalks to make corn fiddles. It is just so much filling, and that is about all. Hence it is ordinarily left out in calculating rations. If our readers will, therefore, keep these things in mind when they read what we have to say from time to time about balanced rations and remember that the experience of the best farmers, while not altogether coinciding, is practically in line with the most advanced teachings of science, they will find this whole question full of interest, and if they master it in their readings during one winter they will find it not merely interesting but highly profitable."

The Deadly Second-Growth Sorghum.

EDITOR KANSAS FARMER:—There has been considerable ill-advised criticism in some quarters because I made public a warning, backed up by our State Veterinarian and other intelligent observers, that under some conditions the green second growth of sorghum and Kaffir corn (a non-saccharine sorghum) were quickly fatal to cattle. The misunderstanding seems to have arisen largely over the supposition that the cured second growth was also equally dangerous—something that so far as I know has not been claimed by any one. There appear, too, many unquestioned instances of cattle living on or being "picketed" for weeks exclusively on this green stuff without harm to them, yet on the other hand there is abundant testimony that in many instances these kill cattle about as quickly as strychnine would. Why, I do not pretend to explain. Here is a recent experience by Mr. M. L. Briggie, an intelligent citizen of Sumner county, Kansas. He says:

"I raised a few acres of Kaffir corn, and cut the fodder when part of it was in the head. A few stalks were ripe and quite a good deal had not headed. I let the fodder cure in the field in shocks. November 24 and 25 I hauled out the fodder. There was some scattered, and there was also a little second-growth, and quite a good deal of crab grass. I turned in several head of cows, thinking they might eat the scatterings, and they were not in five minutes until they began to stagger. I took them out of the patch immediately, and they were better in a few hours. I never thought of the second-growth hurting them. I gathered the fodder out of the patch clean and the next morning I turned in all my cattle. In fifteen minutes two cows were down. One never got up again; the other I succeeded in getting up and out of the patch. She staggered a few rods and fell again, and in less than an hour both were dead. There was not much of the second-growth and it was only about six inches high. I do not think that each cow could possibly have had more than two or three handfuls of it. I had turned them in the second time to eat the crab grass. The three that were sick the day before would not touch the second-growth, but when I gave them the fodder they ate it as well as ever.

"I see the State Veterinarian thinks such disaster must be due to sorghum being with the Kaffir corn. This I am sure is not the case here, as there was not a stalk of sorghum on my farm. The animals suffered greatly, every muscle in their bodies seeming to be convulsed, and as much as a bucketful of green water ran from the mouth of each after they were dead. They had plenty of good water to drink whenever they wanted it. They did not bloat that I could notice."

F. D. COBURN,
Secretary State Board of Agriculture,
Topeka, Kas.

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

Feeding Crushed Wheat.

The Fort Worth (Texas) live stock market is sending out to stockmen of their territory the following result of an experiment in feeding wheat:

"P. D. Armour, Jr., has just completed an actual test of feeding wheat to hogs on his farm at Oconomowoc. September 15 he weighed eighteen pigs, 1,975 pounds; September 29 the same pigs weighed 2,500 pounds, gaining 525 pounds, and receiving nothing for feed except 1,650 pounds of crushed wheat. Taking the present market for hogs—5 cents—it would make the value received for the wheat \$26.25, or a little over 95 cents per bushel against the cost of about 53 cents for wheat."

Second-Growth Sorghum.

EDITOR KANSAS FARMER:—It is facts brought out by experience that we want. There is some danger and we want to know where it is.

In a symposium in an exchange a Nebraska farmer says that it will kill cattle if they eat it within ten days after a frost, provided it was green at the time. A Mississippi man says that if they are hungry and eat their fill of it at any stage of growth, either ripe or unripe, early in the spring or late in the fall, they will be dead in four to eight hours.

My cattle were turned upon it after the frost, but I cannot say how many days, except my calves were on it all the time and there has been no trouble. I would like to hear from many farmers as to the frost theory, either personally or through the FARMER. Please write a postal.

Winview, Okla. J. M. RICE.

National Swine Breeders' Association.

EDITOR KANSAS FARMER:—Following is the program of the twelfth annual meeting of this association, to be held in the Sherman House, Chicago, on Thursday, November 29, 1894, at 10 o'clock a. m.: Address, S. E. Morton, President, Camden, O.; reports, Jno. G. Springer, Secretary, Springfield, Ill.; "Swine Breeding," Theo. Louis, Louisville, Wis.; "Are We Improving the Poland-China?" W. M. McFadden, Secretary American Poland-China Record Co., West Liberty, Iowa; "To What Extent Does the Record Aid the Improvement of Stock?" Carl Freigau, Secretary Ohio Poland-China Record Co., Dayton, O.; "The Cheshire: Its Origin and Early History," R. D. Button, Secretary Cheshire Record Association, Cottons, N. Y.

The swine industry of the country has been for two years past, and is now in more prosperous condition than any other of our live stock interests. It is expected that the meeting of the National Swine Breeders' Association, to be held in Chicago, on November 28, during the "Fat Stock show," will be largely attended, and that its members will freely discuss ways and means for a continuance of the prosperity of this industry.

Swine breeders who have not united with this association, may now do so and thus give their individual aid towards the advancement of the great industry in which they are engaged. By the payment of \$1 for membership fee they will be placed on and published among the roll of members, and will be entitled to a copy of the proceedings of our coming meeting when printed, and in addition there will at once be sent to their addresses the proceedings for five preceding meetings of the association that contain most excellent papers, addresses and discussions on matters of vital interest to the swine industry, and are alone worth more than the amount required for membership fee. JNO. G. SPRINGER,
Springfield, Ill. Secretary.



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Irrigation.

Dates of Irrigation Conventions.

NOVEMBER 23-24.—Kansas State Irrigation Association, at Hutchinson.

A FEW OF THE RESULTS OF IRRIGATION.

EDITOR KANSAS FARMER:—As many of your readers know, the region round about Garden City has this season supplied vegetables to the people of the drought-stricken unirrigated lands over a wide scope of country. Teams have come, in some instances, upwards of 150 miles to carry back loads of potatoes, cabbage, etc. In some instances these have brought loads of grain, broomcorn or of stock hogs to be sold to get the means of purchasing the vegetables. But in many cases the wagons came empty. Our people have been glad to fill all such vehicles to overflowing at prices so low that, while they comfortably remunerated the grower, they brought the needed food supply within the reach of those who had not succeeded in producing for themselves. In addition to this "wagon trade," which has been so extensive, many car loads of produce have been shipped by rail, mainly to the mountains. The proprietor of the Richter farm (formerly the Worrell farm), for example, is loading a car of sweet potatoes to-day for Ogden, Utah, to which point he has already shipped several consignments of the same product. Most of this season's crop of apples from the same farm still lies in great "windrows," deeply covered with lay to protect from rain or cold. They have not been measured, or even carefully and authoritatively estimated in quantity as yet, estimates running as high as 5,000 bushels, though the true quantity is probably quite a little under that figure. Most of the trees in the orchard bore this season, and many of them, though the fruit was carefully thinned out, were still too full, so that the apples were smaller in size than could be desired. A good many were blown off the trees by high winds, when about three-quarters grown, the lighter-bearing trees suffering the greater loss because the branches were more violently shaken by the winds than were those which were bending down under a heavy load of fruit.

The alfalfa seed crop has not averaged so heavy as that of last year, though there are some exceptionally heavy yields in individual cases. Allen F. Lee, living near the western border of the county, one of our oldest settlers and best farmers, threshed 180 bushels of seed from twelve acres at a single crop, making fifteen bushels per acre—the highest yield, for so large a plat of ground, yet harvested in this locality. He sold the seed at \$4 per bushel, thus getting a return of \$60 per acre for the one crop. The same land yielded another cutting of alfalfa, beside pasture. It is second bottom land, twenty feet to water, and was not irrigated this season, the last irrigation being in the preceding September.

Doubtless your readers will be interested in having some detailed results of market gardening under irrigation by pumping. Mr. A. S. Parson, who cultivates five acres just west of town, irrigating with windmill and reservoir, furnishes your correspondent some interesting facts. He is a horticulturist of experience and good judgment and his methods might well be followed by a good many hurrying, slipshod, half-way cultivators who raise a little stuff on a good deal of ground. Here are sample items:

On a small plat of ground, one-sixty-ninth of an acre by measurement, "Prizetaker" onions were grown. The ground was well manured the year previous with stable manure, plowed under. In the spring 300 pounds of chicken manure was well raked in and the seed drilled in with a garden drill. The crop was well cultivated and thinned and where any were lacking in a row they were supplied by transplanting from thicker places. Result, 1,200 pounds of large onions, which sell on sight at the highest price to anybody who has any use for that sort of "fruit." Let the reader remember that

this was on one-sixty-ninth of an acre, figure out for himself what that would mean per acre and consider the queries below.

Another plat, one-fortieth of an acre, was devoted to growing three crops, as follows: Fifteen hundred pounds of stable manure was plowed under previous autumn. Early last spring the ground was replowed and treated to 600 pounds of chicken manure and forty-two pounds commercial celery manure. Half the tract also received four pounds nitrate of soda, which made no showing whatever on any of the crops subsequently grown. Then the plat was seeded by mixing radish and lettuce seed and drilling with hand-drill. From this Mr. Parson sold \$9.40 worth of lettuce and \$18 worth of radishes. As soon as these crops were off, the ground received 600 pounds of sheep manure, cultivated in with five-tooth cultivator, the whole being put in strictly first-class condition, and was set to celery, the plants being set five inches apart in rows which were ten inches apart. This required 3,136 plants. The plat was kept entirely clean with wheel hoe, and forty-two pounds more of the celery compound was cultivated in while the crop was growing. During the hot weather the ground was watered every forty-eight hours from the reservoir, which was right at hand and which the tireless windmill kept always ready to produce an ample shower at a moment's notice. This was done to keep the surface of the ground continually moist. The plants being set so close required no hilling up or wrapping to bleach them. The accompanying cut is from a photograph taken when the first rows were pulled for market. So far as known, not a bunch



FINNEY COUNTY CELERY.

was missing. Most of the crop stood a little over two feet high. The carpenter's square which shows at the side of the cut, being placed among the lowest bunches, shows these to be about twenty-two inches high. The varieties planted were White Plume and Giant Pascal. Mr. Parson advises not to plant the Giant Pascal when grown in this way, as it does not do well. He has marketed about half the crop so far at 40 to 60 cents per dozen bunches. Here, again, let the reader figure out such results on an acre of land. Take 3,000 bunches, in round numbers, as the product of the plat, and, say, 2½ cents as the selling price. I will not give the results, because they look "scary."

Queries: Why isn't it better to manure, cultivate and irrigate small tracts in this way and raise on an acre all that it will produce, than to work over ten acres, putting on at least as much work, much more water, and getting far less returns? Wouldn't it pay to cultivate to its full capacity one-tenth as much ground as we now "go through the motion" (pretty uncertain motions, too, sometimes) of cultivating, and devote the other nine-tenths to alfalfa, Kafir corn and other crops that would raise feed for cows, pigs and poultry to eat up refuse and help manufacture manure for the whole?

J. W. G.

Garden City, Kas., Nov. 10, 1894.

Wanted—Practical Experience With Subsoiling.

EDITOR KANSAS FARMER:—I have been reading the KANSAS FARMER for the last year or two, and have been interested in the articles on irrigation and retaining water in the soil. Here in Sumner county we have an average of about thirty inches of rain per year. Last year we had only 16.12. This year, up to date, we have had 23.21. We have had enough rain all the time except July and August, the months during which we needed it the most. If some method could be devised so

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that we could store up the surplus rain that falls during some of our heavy rains, when the greater part of the rainfall runs into the creeks and flows to the gulf, we would have enough to fully develop all our crops. At two different times this fall we have had over two inches of rain at one time, and a few miles from us they had four inches in one night.

I have been looking for more articles on subsoiling. There have been a few articles on this subject, giving in theory what can be accomplished by subsoiling. What we want is the experience of Kansas farmers who have tried these plows. How many horses did they use? How much ground did they stir in a day? How far apart were their furrows? What depth can three horses draw a subsoiler? What effect did it have on the crops? Have many farmers tried it? If so, do they all have the same results? Is it a tool that has come to stay, or will it soon be left to rest and rot in the fence corner? What time of year is the best to use it?

About forty years ago there was a great deal written about subsoilers. Some claimed that they would double the yield, and many large claims were made for them, but they did not come into general use, and those who did try them soon laid them aside. At the time I did not know the cause, but in the last few years have seen it stated that the reason that they were abandoned was that they got the ground loosened up so deep that it held water so long that it was difficult to get the ground dry enough to plant the crops early enough in the spring. This was in the clay lands of Ohio.

Last year I received a package of sugar beet seed from our experiment station to test. The directions were to break the ground deep as I could. We had a small plat that we had left for peanuts. While one was plowing around the land with a common two-horse walking plow, I run in the bottom of the furrow on one side of the land with a small one-horse shovel plow, going two or three times in a furrow while the team was going around, and so prepared more than enough for the beets. Planted the remainder in peanuts. The season was so dry that they did not make much of a growth until the middle of September, when we had good rains, which started them to growing. While the peanuts were growing we could not see any difference in the tops, but when we dug them those that grew on the subsoiled rows had twice as many nuts and a greater per cent. of the nuts were mature. This showed that they had begun to grow on the subsoiled rows sooner than on the rows next, where it was plowed in the common way.

Thousands of bushels of wheat are being fed to stock in Sumner county every week. The most of the stock is now pasturing on the growing wheat. There is a large acreage sown this fall and in this locality it looks well. The grasshoppers hurt some fields around

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the edges, but they quit in time so we sowed again and it is now up. Some did not finish sowing until the 5th of November. Have seen our hard wheat sowed as late as the 15th of November and make a good crop. D. M. A.
Rome, Kas., November 15, 1894.

The Irrigation Propaganda.

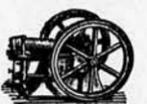
EDITOR KANSAS FARMER:—I have been making some studies of the conditions of the water supply of a region some thirty miles wide and extending on each side of the 102d meridian from the North Platte to the Smoky Hill river. There are some residents of the region who know that I have taken some part in diffusing information available by the would-be irrigators thereof, and my presence being known, I have had to address five irrigation meetings since the 1st of October. They were in the three States in which I have been working, viz.: At Norton, in Norton county, Kansas; at Holyoke, in Colorado; at Ogalalla and Haigler, in Nebraska, and at St. Francis, Kansas. At each place the meetings were well attended and the enthusiasm was considerable, and valuable results are promised since the election is over. People are awakening to the truth that the beginning of good things here must be made by the people now in the region, and that new-comers will not come—pardon the Hibernianism—if they cannot see the old-timers doing something. Those who have made a beginning are encouraged.

A man in the dry arroyo of the Frenchman, west of Holyoke, in Colorado, has scooped out the gravel till he got the water, of which he has now an acre, which with an eight-foot windmill he lifts to a 2,000-barrel reservoir at a higher level and irrigates five acres, besides cutting ice for the town

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supply. There are several ditches now irrigating lands in the lower Frenchman valley, and 2,600 acres are now productive where four years ago all was dry. In the valley of the North Fork of the Republican several short ditches make fields of emerald green and give products that keep the people alive. The Arickaree, which has but little surface water is yielding its underflow for the same purpose, and the South Fork of the Republican, both in Colorado and Kansas, is giving both surface and underflow to water the lands around. On the high prairie pumps are lifting water into wooden tanks and earthen reservoirs for the irrigation of the surface, and this is being successfully done where the water has to be lifted 100 feet and more. One man has erected a rude "jumbo" wheel which lifts water 106 feet. He has not yet tested its irrigating capacity, but it supplies his cattle tank fully. It is in the western part of Sherman county, Kansas, (northeast quarter, Sec. 36, T. 8, R. 42).

Those who are putting in pumping plants are closely watched by their neighbors, and this winter will see hundreds of them at work in the three States. Many are wetting all the land they can this fall. Last night was a bizzard here of a gentle kind, the thermometer going down to about 15°, and though the wind is still north the snow is melting in the sun and much of it will sink into the thirsty soil.

ROBERT HAY.

Goodland, Kas., November 16, 1894.

The Denver Congress.

We accepted your appointment to attend this congress without any adequate conception of its scope or importance to the country; it presented an apology for a few days of recreation—it was accepted in this spirit—but it is frankly admitted that it has proven to be the greatest and grandest lesson of our lives. We return to Oklahoma wedded to the proposition that irrigation is the great problem of the time, and that the useless waste of water is a crime against humanity. The subject of irrigation presents an illimitable field for intelligent thought, scientific enterprise, the employment of capital, profound, broad-gauged, patriotic statesmanship. The storage of water and its intelligent distribution, not only in the so-called arid West, but in every other portion of this country, is a problem the solution of which promises more profitable results than all the gold and silver mines of the Union.

One acre of land, subject to irrigation, can be made more profitable than ten acres which must depend entirely upon the whims of the seasons. The farmer who is able to control his own water supply is independent—rains are only an annoyance to him—they retard his work and disturb his plans. The only men we met who boasted of their prosperity were the farmers of the irrigated districts of Colorado. They were radiant and happy, their crops were abundant, prices fair—they had plenty and to spare—drought and hot winds had no terrors for them. While in the city of Denver over a hundred thousand pieces of real estate were advertised to be sold for taxes, the owners of irrigated farms had their tax receipts safely filed away. While Nebraska, Kansas, Iowa, Michigan, parts of Wisconsin, Missouri and Illinois have been practically consumed by the unfriendly elements, the corn, alfalfa, potatoes, cabbage, apples, peaches, pears and other products of irrigated Colorado have responded, as usual, to the husbandman's toil in the most generous manner.

Oklahoma is deeply interested in the subject of irrigation; its supply of water is ample for all its ordinary needs; as a rule the heavens are hospitable enough, but, occasionally, a season comes like the past one, when the innocent are obliged to suffer for the sins of the wicked. To meet emergencies of this kind every possible means should be adopted for the storage of its waste waters.—From J. V. Admire's Report to the Governor of Oklahoma.

Read our sewing machine offer—page 15.

The Family Doctor.

Conducted by HENRY W. ROBY, M. D., consulting and operating surgeon, Topeka, Kas., to whom all correspondence relating to this department should be addressed. Correspondents wishing answers and prescriptions by mail will please enclose one dollar when they write.

Sleep.

"I have an exposition of sleep upon me."
—Shakespeare.

A correspondent asks the Family Doctor, "How shall I sleep?" First, sleep with your eyes and mouth shut. That is not only proper, but comfortable. That is the way most of our forefathers slept. George Washington and Abraham Lincoln slept that way, and it is nowhere recorded that they regretted it. It is said of old Polyphemus, the Cyclops, that he never closed but one eye in sleep, though he slept very well, but then "he had but one eye, but that eye was a whopper, as big as the moon, and he closed it in sleep," so a dead historian tells us. Sarah Bernhardt is said to sleep with one eye closed and the other on her manager. That may be the reason she commands such a large salary.

Napoleon closed both eyes and his mouth and slept quietly for four hours, then leaped into the saddle and gave the other fellows a good waking up. He was considered such an exemplary sleeper that some one wrote a song about it, saying:
"The hero lies still while the war's thunders rattle,
No sound can awake him," etc.

That is the way you should do. Sleep while you sleep, and not let every little gust of wind or buzzing mosquito wake you. If you sleep as quietly as Napoleon did the whole world will applaud you as it did him.

It is a good plan to sleep with your mouth shut. True, you may not catch so many flies and mosquitos that way, and you may not amuse yourself by snoring through all the bars of the gamut. But then the music one makes snoring is not always a delight to other people who want to sleep and cannot on account of it. An all-night concert is not relished anywhere except in China, and Japan having tired of her snoring so loud and long is now trying to wake her up. When a garrulous barber once asked Mark Twain how he would like to have his hair cut, he said: "In silence, if you please." That is the way President Carnot slept, and they put \$300,000 worth of flowers on and around his coffin, and your neighbors will think more of you for sleeping that way, and they will give you a better turnout at your funeral. The man who sleeps like a threshing machine or an empty wagon over a stony road is very apt to take his last ride alone and his family will feel as though they had all suddenly lost their hearing when he goes.

Unless you are on board an ocean steamer in a blinding storm, it is not judicious to sound a fog-horn all night. Somebody else may want to sleep in your vicinity. Saxe says of one of his heroes:

"When he closed his peepers
Then he snored amain
Like the seven sleepers."

They slept two hundred years and then woke up, refreshed themselves and slept again, and Rip Van Winkle tried to do the same thing, but he snored so hard that he woke himself up at the end of twenty years. But I cannot advise you to go into any such experiments; you are too young. Try to sleep soundly, but not too soundly. It is often very inconvenient to sleep so soundly that you do not hear the call to breakfast. It is liable to make trouble in the family. A man named Adam, a good many years ago, undertook to break the record for sleeping soundly, and they actually pulled one of his ribs out trying to wake him. "In their sleep they cry aloud and spare not," says the Good Book.

It is a good plan to lie down when you sleep. Many people do that. One man who tried it became so infatuated with the plan that he wrote a poem on it, beginning:

"Now I lay me down to sleep"

But there can be no universal rule. It does not always work well. King Duncan tried that plan and lost his life by it. Mr. and Mrs. Macbeth came along and found the old fellow sleeping on his back and snoring and they executed him and terminated his reign and his refrain at the same time. If he had stood up to it, he would probably have been king a good deal longer. Of course, it is not so easy to sleep standing. But horses do it and why not men? You would be more likely to hear the cock crow and wake up in time to start the kitchen fire. A few people make a compromise between standing and lying and sleep sitting. Gladstone often does that while Parliament is droning and drowsing through the budget.

President Lincoln once pardoned a man who had been court-martialed and ordered shot for sleeping on a post. During the war the orders were very strict against sleeping on picket, though General Grant often ordered the troops to sleep on their arms. Of course, cannons, muskets, bayonets and swords are not comfortable things to sleep on. But the order was excused on the ground of a military necessity. It was

not nearly so comfortable as sleeping in arms—mother's for instance, or your best girl's.

Some people, like train robbers, cowboys and soldiers, sleep with their boots on. I tried it once while making a pleasure trip through Georgia with a man named William T. Sherman. But I cannot recommend it, for your feet are likely to go to sleep before your brain does and that makes trouble.

Again, if you really want to sleep, don't go on the bond or note of a friend. There is an old book with a chapter in it called Proverbs, where "wisdom cries out and understanding puts forth her voice," and one of those proverbs says: "My son, if thou besurety for thy friend * * * give not sleep to thine eyes nor slumber to thine eyelids." Then if you want to sleep peacefully and well, you must live peacefully with all mankind. Thieves, burglars, money-lenders and tyrants sleep badly, for one reason or another.

"The sleep of a laboring man is sweet whether he eat little or much; but the abundance of the rich will not suffer him to sleep." That was written by a wide-awake philosopher 2,871 years ago, and is just as true now as it was then. So you had better earn your sleep by a good fair day's labor. Wealth, with its poking-sticks of steel, will prod you out of sleep in countless bouts of revelry.

Finally, don't sleep in a barn if you can do better, nor in a corn field if you can find a house that will admit you. Don't sleep on the floor if you can find a good bed, and don't sleep on a poor bed if you can command a better one. One-third of your life should be spent in bed, and that third of your life should be easy and comfortable in order that the other two-thirds may be tolerable of men and acceptable of angels. Your bed should be soft and springy. A hard bed makes broken, restless sleep, and restless sleep brings physiological damnation. It breeds touchiness, spitefulness, irritability. It creates the crabbed man and the peevish, complaining woman. It produces the fault-finder, the kicker, the disgruntled politician and business man.

To sleep well you must have the right conditions. Your room should be at least one story off the ground. It should be of good size and light by day. It should be well ventilated day and night, but there should be no draft across the bed. It should be of an even temperature, as nearly as possible, day and night. Many people go to the grave with quick consumption from going quickly from a sitting-room in winter that is 75° or 80°, into a bed-room that is zero or below, and lying down to sleep there. They might almost as well break the ice and jump into the river. To go from a temperature of 75° or 80° to one of 15° or 20° or lower as quick as you can open and shut the door between and to remain in the low temperature all night, lying down without any exercise, is to court premature death and to court it hard. Cold air is no purer than warm air. The air in winter is no more wholesome than the air in summer, but is much harder on the constitution. So fresh air of a mild temperature is best.

Then don't pile all the thick quilts and feather-beds you can find on top of you. Better put some of them under you. Feather-beds and heavy comforters over the sleeper grew out of the other folly and crime of sleeping in very cold rooms, and both ought to be banished now and forever. One or two good clean blankets, that from the nature of their material are well ventilated, are a far more wholesome covering than comforters and feather-beds.

Then, again, if you want to get the best sleep, sleep alone. Herding like swine is not sleeping. No person can sleep well with some one else moving or turning over, or groaning or snoring in the same bed. Older people withdraw animal magnetism from younger people and rob them of their proper vitality, while the younger ones who are being robbed kick and thrash around as if they were aware that the robbery was going on and must make their strongest protest against it. Many a child has grown to be an invalid simply from sleeping with its grandmother.

Last of all, don't sleep too much. "How long wilt thou sleep, O sluggard? So shall thy poverty come."

"Sleep that knits up the ravell'd sleeve of care." "Oh, blessed sleep, from which none e'er should wake to weep." "He giveth his beloved sleep."

Word comes from all quarters that the neatest and most satisfactory dye for coloring the beard a brown or black is Buckingham's Dye for the whiskers.

Six Thousand Square Miles of Wealth.

The vast fertile valleys of the two Indian reservations in northeastern Utah, soon to be open to settlers comprise about 3,500,000 acres of the finest agricultural and grazing lands. The direct line to Uintah and Uncompahgre reservations is by the Union Pacific system via Echo and Park City. E. L. LOMAX, G. P. & T. A., U. P. system, Omaha, Neb.

Coughing.

For all the ailments of Throat and Lungs there is no cure so quick and permanent as Scott's Emulsion of Cod-liver Oil. It is palatable, easy on the most delicate stomach and effective.

Scott's Emulsion

stimulates the appetite, aids the digestion of other foods, cures Coughs and Colds, Sore Throat, Bronchitis, and gives vital strength besides. It has no equal as nourishment for Babies and Children who do not thrive, and overcomes

Any Condition of Wasting.

Send for Pamphlet on Scott's Emulsion. Free. Scott & Bowne, N. Y. All Druggists. 50c. and \$1.

Walter Griffin last week sold the corn standing and in shock on 300 acres of his farm to A. H. Maxwell, of Greenwood county, who will feed cattle on the place this winter. Mr. Griffin gets \$4,500 for the corn; this, with the remainder of his crop and the sale of 1,000 bushels of flax and \$500 for pasture privilege, runs this season's sales up to \$6,800 in good hard cash, besides leaving him a lot of odds and ends which he can use with profit. Mr. Griffin has a first-class bottom farm and raised a good average crop this year.—Garnett Plaindealer.

Pond's Business College,

Topeka, offers to give to farmers' boys three months' tuition, from December 1 to March 1, for only \$15. They will probably give the best instruction in the State during this course.

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

"Among the Ozarks,"

the Land of Big Red Apples, is an attractive and interesting book, handsomely illustrated with views of south Missouri scenery including the famous Olden fruit farm of 3,000 acres in Howell county. It pertains to fruit-raising in that great fruit belt of America, the southern slope of the Ozarks and will prove of great value, not only to fruit-growers, but to every farmer and home-seeker looking for a farm and a home. Mailed free. Address, J. E. LOCKWOOD, Kansas City, Mo.

WHAT YOU DON'T KNOW ABOUT

California

is told in a beautifully illustrated book entitled "To California and Back." Ask G. T. Nicholson, G. P. A., Santa Fe Route, Topeka, Kas., for a copy. It is free.

Personally - conducted weekly parties leave Chicago every Saturday evening, and Kansas City every Sunday noon, for Pacific Coast, via Santa Fe Route. Special agents and porters in attendance. Pullman tourist sleepers are used, furnished with all conveniences for comfortable traveling. Second-class tickets honored.

You have been planning that California trip for several years. Why not go now, and take advantage of cheap rates? Santa Fe Route is positively the only line with Pullman tourist and palace sleepers, Chicago and Kansas City to San Francisco and Los Angeles, daily without change.



"THERE'S NOTHING NEW UNDER THE SUN."

Long before the Page Fence people harnessed Elasticity and pressed it into their service for restraining animals, it had been used for that very purpose in this way: When the country was new, everybody rode horseback. If hitched to a post or tree, a restless or frightened horse was sure to break loose, but hitched to the end of a yielding limb the animal never discovered just where to exert his strength. The same puzzle confronts the animal behind the Collared Spring Fence. PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

The Home Circle.

To Correspondents.

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

OUR SHEAVES.

The time for toil has passed, and night has come.

The last and saddest of the harvest eyes; Worn out with labor long and wearisome, Drooping and faint, the reapers hasten home, Each laden with his sheaves.

Last of the laborers, thy feet I gain, Lord of the harvest! and my spirit grieves That I am burdened, not so much with grain As with a heaviness of heart and brain: Master, behold my sheaves.

Few, light and worthless—yet their trifling weight

Through all my frame a weary aching leaves; For long I struggled with my hapless fate, And staid and toiled till it was dark and late— Yet these are all my sheaves.

Full well I know I have more tares than wheat—

Brambles and flowers, dry stalks and withered leaves—

Wherefore I blush and weep, as at thy feet I kneel down reverently and repeat, "Master, behold my sheaves!"

I know these blossoms, clustering heavily, With evening dew upon their folded leaves, Can claim no value or utility.

Therefore shall fragrance and beauty be The glory of my sheaves.

So do I gather strength and hope anew; For well I know thy patient love perceives Not what I did, but what I strove to do— And though the full ripe ears be sadly few, Thou wilt accept my sheaves. —Elizabeth Akers Allen.

AUTUMN AND OLD AGE.

Now from the silent autumn woods The dry, sweet odors start, Like memories of a useful life From out an aged heart.

The little stream upon the hill Comes trickling soft and low, As though down a wrinkled cheek, Where tear-drops seldom flow.

The rainbow flowers of early spring, Prisms through April's tears, Make way for purple and the gold Befitting later years.

O God, make known thy ways to me In this, my summer prime, That I may gain the golden peace Of nature's autumn time.

—Mary McNeil Scott, in Detroit Free Press.

Written for KANSAS FARMER.

THE CLUB AND COLLEGE IDEA.

How a Dull and Commonplace Community Was Changed by a Bright Woman.

Several requests have come in regard to organizing clubs for women during the winter. In every request the thought is expressed regarding the trouble of organizing.

There is a farmer's wife in this State who came from a position of influence to a farm, where, for twenty miles, was not a congenial woman. Did she repine, grumble, sit still? She began by loaning her books and papers, then talking with her neighbors about what was in the books and papers. She opened her own doors to a Sunday school. Soon it outgrew her home and met in the school house. A minister came now and then. After a while somebody was ready to take charge of a regular religious service. The women began to think and to talk. It really was a club that was soon organized, but they only called it "our society." The mothers and grown daughters went and sometimes the babies. The woman at whose house they met presided. Several papers were read about some prominent historical character, one taking the youth, one the home and one the outside influence of the life. Others read up on the topic and then brought a new thought.

Their subjects have been such as King Alfred, Cromwell, Elizabeth, Charlemagne, Napoleon, great men and women of all times and ages, etc. Then one hour is given to papers and discussions on domestic science. A cup of tea and a sandwich closes the afternoon session.

The whole community has been changed where this bright woman lives, and it is now noted for its intelligence instead of its dullness.

If any woman wants to organize a "society" or "club," all she has to do is talk over the subject with other women. Think out what line of study they wish to pursue, who would make the best first President and Secretary and then ask the women to meet for work.

The Domestic Science club, of Manhattan, began fourteen years ago, and the first President and Secretary, after real work began, were retained for four years. The "domestic" part of this club is its pride. There has been a program made for this year, and in that department is a paper each month and two ladies chosen to experiment and to discuss along the same line as the paper given. The subjects are: "Most Imperative Needs of the Modern Home," "Climate and Brains," "How to be Independent" of the Daily Market, "Some

Cheap Neglected Foods," "Light House-keeping for Four Persons" (with report of experiments in time, trouble and expense for one week), "Waste of Food," "Best Food and Drink for Invalids and Children," "Recently Introduced Foods," "Best Method to Arouse Public Sentiment in Regard to Plain Living." It would not be a bad plan for women in every neighborhood all over our State to take up these same topics, one each month, till next summer. In our Domestic club we also have departments of natural science, sociology, literature, art, history and education, but we have been growing for fourteen years. We have music, discussions, object lessons and an annual supper. We have "good times" as well as profitable hours. The social part is charming. It is a matter of economy to the busy woman to belong. Twice a month she sees her friends and does not feel obliged to spend hours in formal calls or sit in state to receive.

The loneliness of life is lost, for one meeting of this kind gives food for pleasant thought until the next meeting. If a club or society met in the home the expense would be nominal. A few cents each would purchase the Secretary's book. At the beginning of a society it is well to send the reports of meetings to the county paper, as it is more apt to keep up the interest. We are beginning to think we are old enough to keep out of the paper.

There's another club in our city. It is a sort of esoteric club, like the one where Madame De Stael belonged. Different officers at each meeting; something original at each; always recreation; the study aesthetic or profound; always a surprise each time we meet; number limited and never to be enlarged; tea and wafers for refreshment.

The whole idea of these meetings is to make us better house-mothers, wiser, more intelligent women, better neighbors, truer friends, more careful mothers. When the home is all right, the nation is all right. How to make home that bit of paradise that was left after the fall is the aim and purpose. "The Best Method to Arouse Public Sentiment in Regard to Plain Living," seems to be the thought most active in the brains of the earnest women of our country to-day. This way to live must begin with one and double with two.

Perhaps no State can do more right along in this line than our State.

I have been charmed each time I have been to our State Agricultural college, when I have seen the influence exerted over the hundreds of girl students in that institution exactly along in line of this thought. Girls who never dreamed they had a spark of love for the domestic life, growing enthusiastic over the art of needle-work and the science of cooking. Not loving other arts and sciences less; not forgetting to get the literary education, but the domestic takes the place where it belongs, for, from the foundation of the world God made woman to be the home-keeper, the house-mother. Every one knows how blessed a thing it is to have a love and enthusiasm for the work given into our hands. There is a great deal of surprise expressed that these two most prominent departments do not have better facilities for work. They need a building by themselves for work-room, laboratory, recitation-rooms, designing-rooms, work-shop, kitchen, etc. Already six graduates from this college are in six different States doing the same work in educational institutions that is so well done here by Mrs. Kedzie and Mrs. Winchip, and each of these graduates boasts of better buildings and better facilities (with fewer students) for doing the same work, than we have in Kansas. Every one interested in our institution hopes the good time is coming for us when we can stand on equal footing, in regard to buildings, with other States in these departments as we now do in the quality of the work done.

For each girl in our State the best thing I can wish for her is that she may be able to attend next year this college. No sacrifice is too great. The expense is so limited. The opportunities so grand. Think about it; talk about it; plan for it.

Mrs. C. F. WILDER.

Manhattan, Kas.

[Mrs. Wilder is the Vice President for Kansas of the National Household Economic Association, (Mrs. Potter Palmer, President, and Mrs. Wilkinson, Acting President, Chicago). Of woman's work in the home she is greatly interested. Her interest in the Kansas State Agricultural college is simply because she lives at Manhattan, sees the good work done and desires all young people to avail themselves of the grand opportunities offered to them; wanting this institution, which stands at the head of all agricultural colleges in our land, to stand at the head in every particular.—THE EDITOR.]

About two years ago, the Rev. Mr. Surf, of Blue Springs, Neb., lost his hair after fever, and became nearly bald. He finally resolved to use Ayer's Hair Vigor, and now has as fine a head of hair as could be desired. This is certainly a fact worth remembering.



THE PROCTER & GAMBLE CO., CINTI.

Written for KANSAS FARMER.

WELCOMING GUESTS.

Much of the Pleasure for Both Visitor and Host Depends Upon It.

With some it is natural tact, with others an acquired grace, this ability to make welcome every friend that comes to our door. We cannot always be prepared for unexpected guests, we may even be inconvenienced many times, but there is no need to intrude an awkward situation upon our friends, to make them feel ill at ease.

Especially, in rural neighborhoods, where company comes to spend the day—from town, perhaps—a busy wife and mother cannot always keep things at "company pitch." But we can give a hearty welcome and make the best of the situation. If they came to see us, individually, we are here, ready to do our part at entertaining them. If they came for something good to eat, they deserve to be disappointed, unless we are given notice in time to prepare an elaborate bill of fare.

It always seemed to me an insult to a guest to act upon the supposition that the table was the chief attraction. I well remember of visiting a lady, years ago, where I had anticipated a pleasant afternoon. I had been there but a short time when my hostess excused herself and disappeared in the kitchen. A book afforded me entertainment, and, of course, I enjoyed the delicious supper provided in my behalf. Yes, the supper was a success, but my visit was a failure.

I always avoid extra cooking if possible, for I never could make an equal success of both cookery and conversation, and I take my company with me, if obliged to make a protracted stay in the kitchen.

A guest never likes to feel that she is giving trouble and would rather put up with anything than to be the cause of annoyance to another. One doesn't feel just right to be met at the door with: "I wasn't looking for you at all. Why didn't you let me know you were coming?" "I had no chance, and thought it would make no difference," replies the already chilled visitor. "But it does make a difference to me," responds the hostess, and the atmosphere grows still more chilly. It takes all day to thaw out the frigid reception, which was really not intended at all, but only an awkward expression of embarrassment.

How different is my friend's welcome: "Just caught me house-cleaning! How fortunate! Many hands make light work, you know. Come right in if you can escape the pitfalls of buckets, soap, scrubbing-brushes, etc. Lay off your bonnet while I clear a place to sit down." House-cleaning utensils disappear as if by magic, and with no further ceremony my friend seats herself for an old-fashioned visit. All in a miff? Yes, but what a good time we had for all that. There was good bread with butter, jelly and cold ham for mid-day lunch; and then we sewed the carpet together ready to be put down on the morrow. And if my coming had been anticipated for a month I couldn't have enjoyed my visit more.

Welcome, under any circumstances. That is the way we like to feel when we go to a friend's house. That is the way we want them to feel when they come to ours. Giving a winning welcome is not natural to all, but it may be acquired. Don't understand that I would affect what I did not feel; but my guests are really welcome. I would not invite them otherwise, and they are not apt to come often uninvited.

Then let us ever be ready to meet our friends with a welcoming smile, not a half-hearted, puckered-up sort of a smile that everybody knows is put on for the occasion; but a broad, whole-souled, how-do-you-do smile that means just what it says. If circumstances are not the best, we'll make the best of them. It matters less what the entertainment may be, if it is preceded by a cordial reception. A parting smile may

be a long-remembered benediction but it does not carry with it the genial warmth, impart such a feeling of good cheer, as does the smile of welcome. IDA KAYS.

The Youth's Companion has just published a calendar for 1895 which is a work of art—indeed, three works of art in one. Scenes typical of three seasons of the year, winter, summer, autumn, are shown. The first picture represents a mother and son pausing in their walk in a snowy field, across which a rabbit is running, much to the amusement of the boy. The artist in the summer scene has pictured three children rowing down a winding river; and were it not for the apples which fill the pan in her arms one would scarcely imagine that the graceful girl in the third picture was typical of autumn. Around the pictures are grouped the monthly calendars, tied together by ribbons. This attractive calendar and a full prospectus for 1895 will be sent free upon application, to any one considering a subscription to The Companion. From no other paper can so much entertainment and instruction be obtained for so little money (only \$1.75 a year). If you subscribe now you will receive the paper until January 1, 1895, and for a full year from that date, including the Thanksgiving, Christmas and New Year's Double Numbers. The Youth's Companion, Boston Mass.

INCUBATORS We warrant The Reliable... Reliable Incubator and Brooder Co., Quincy, Ill.

HANG YOUR DOOR WITH STANLEY'S Corrugated Steel Hinges. They are Stronger, Handsomer and cost no more than the old style.

CONSUMPTION SURELY CURED. To THE EDITOR—Please inform your readers that I have a positive remedy for the above named disease.

W. L. DOUGLAS \$3 SHOE IS THE BEST. NO SQUEAKING. \$5. CORDOVAN, FRENCH & ENAMELLED CALF. \$4.35 FINE CALF & KANGAROO. \$3.50 POLICE, 3 SOLES. \$2.50 \$2. WORKINGMENS EXTRA FINE. \$2.125 BOYS SCHOOL SHOES. LADIES. \$3.25 \$2.125 BEST DONGOLA. SEND FOR CATALOGUE W. L. DOUGLAS, BROCKTON, MASS. You can save money by wearing the W. L. Douglas \$3.00 Shoe.

ST. JACOBS OIL IS THE KING CURE FOR BURNS LUMBAGO CURES

The Young Folks.

ONLY DO YOUR BEST.

I've found some wisdom in my quest
That's richly worth retailing;
I've learned that when one does his best
There's little harm in falling.

I thought to gather wealth untold,
And made my boat about it;
My wit and toil bring little gold—
But I am rich without it.

I said, "The world shall bear my name,
And down the ages shout it!"
I shall not win the bauble fame—
I'm just as great without it.

I thought to know philosophy,
And teach the world about it;
My plummet will not sound the sea,
My ship sails on without it.

Another thing I've had to prove,
Though much I used to doubt it;
One can't be sure of human love,
But one can live without it.

I saw the world with wrong o'ergrown,
And bravely thought to rout it;
Some age will see it overthrow—
So I can die without it.

I may not reach what I pursue,
Yet will I keep pursuing;
No'ing in vain that I can do,
For soul-growth comes of doing.

But wherefore tell you what I know,
Since you will not receive it;
When you have lived and learned, I trow,
You're certain to believe it.
—Rev. Charles G. Ames.

AS HIS MOTHER USED TO DO.

He criticised her puddings and he found fault
With her cake;
He wished she'd make such biscuits as his mother
Used to make;
She didn't wash the dishes, and she didn't make
A stew,
Nor even mend his stockings, as his mother used
To do.

His mother had six children, but by night her
Work was done;
His wife seemed drudging always, yet she only
Had the one.
His mother always was well dressed, his wife
Would be so too,
If only she would manage as his mother used
To do.

Ah, well! She was not perfect, though she tried
To do her best,
Until at length she thought her time had come
To have a rest;
So when one day he went the same old rigmarole
All through,
She turned and boxed his ears, just as his mother
Used to do. —Germantown Telegraph.

A MISCHIEVOUS BEAR.

He Was a Clever Cub, But He Stole Bread
and Flew.

Tappan Adney, in St. Nicholas, tells
the story of a bear cub, captured by a
backwoodsman named Ben Lawson,
and saved as a pet for his children.

Ben's little girl, about eight years
old, took a fancy to the young orphan,
and called him "Billy." Billy looked
like a big Newfoundland pup, black
and shaggy, but with a tail conspicu-
ous by being "hardly a tail at all," as
Ben said. He was as playful as a young
dog or kitten, and used to romp on the
floor with the children, hugging them
and pretending to bite them.

But the good woman of the house
viewed the little fellow with suspicion,
and was not easily persuaded that all
bears were not equally dangerous. It
was plain from the first that even a
baby cub was hardly welcome. So



Billy was provided with a small leather
collar that could be let out as he grew,
and a small chain, which, however,
was never used. He was fed at first on
milk, and afterward on bread and
buckwheat pancakes. Indeed, he was
confined to a strictly vegetable diet,
because they thought his savage nature
might be developed by eating
meat.

Billy throve and soon needed a bigger
collar. It was never thought necessary
to keep him chained up, because he
was so gentle. He had, therefore, the
run of not only their own farmyard,
but those of their neighbors as well.
He was bent upon every sort of mis-
chief; but it was not until long after-

wards that he began the series of dep-
redations that led to his untimely end.
Summer came and passed. In the
autumn, when Ben dug his potatoes,
Billy followed behind, watching what
was going on, and, it is said, as the
children picked the potatoes up, Billy
himself learned to look for them and
paw them out of the soil. Be this as it
may, every bear uses its paws with
great cleverness—and Billy was a
clever bear.

When the days grew colder, at the
approach of winter, he commenced to
dig a hole under the side of the barn,
and soon he had a great cavity under
the floor of the cow stable. Into this
den he began to carry all sorts of stuff,
and Ben thought Billy was getting
ready for winter in his natural way.

One day when bread was being
baked, Billy hung about the kitchen
with a make-believe indifferent air.
After the bread was carefully laid
away under a white cloth upon the
pantry shelf, Billy waited until the
mistress' back was turned. In an
instant, the cub made for the pantry.
There was a shuffle and rattle of claws,
followed by a scream. "The bear,
quick! The bear's got the bread!" cried
the wife in distress, as she turned in
time to see the rascal running out of
doors with several fine loaves in his
arms.

Ben, as it happened, was close by,
and heard the hubbub. He sprang to
the door of the house just in time to
intercept master Billy. Billy reared
on his hind legs, and, as Ben caught
him by the back of the neck, he
growled savagely and struck back at
Ben with one free paw, but never quit-
ting his hold of the bread.

Finally, after getting a good shaking
and a cuffing about the ears, Billy
broke away, carrying off the middle
loaf of the three. He disappeared into
his den, where he ate it at leisure.

THEY SHOOK HANDS.

Story of a Frenchman Who, Though a
Soldier, Was Still a Man.

A story has lately been told by an
old soldier of the French army as a
souvenir of the Crimean war. In one
of the attacks of the French left upon
the Russians in the neighborhood of
Sevastopol, the retreat was sounded on
both sides, and the Russians retired to
their fortress, the French to their
trenches. On the way a French ser-
geant of the line encountered alone a
Russian sergeant, also alone. The two
men were face to face, and enemies.

Their guns were empty. Simultane-
ously they took cartridges from their
pouches and began to load, methodi-
cally, like well-drilled soldiers, but as
swiftly as possible. The guns, like all
others in that campaign, were muzzel-
loaders. The cartridges were forced
to place with a ramrod. Simultaneous-
ly the two ramrods entered the guns,
and simultaneously they were with-
drawn, but the Russian, accustomed
by inflexible discipline to do every-
thing in a set way, put back his ram-
rod in its place along the barrel, while
the Frenchman threw his away with
the movement that withdrew it.

This gave him the needed moment's
advantage over his antagonist. Clapping
his gunstock to his shoulder, he had
the Russian's life in his hands. The
Russian stopped still, awaiting the
shot that should be his death. Then
the French sergeant dropped his gun
from his shoulder and put out his right
hand. The Russian grasped it, and
the two soldiers shook hands without a
word.—Harper's Young People.

Has a Farm All in White.

On his Dorsetshire (England) estate
Lord Alington has a "white farm." It
is so called because every animal on it
is white. There are white horses,
white cows, white donkeys, white
hares from Siberia, and a white pygmy
bull. The dogs and the cats are white,
and so are the rats and mice.

Little Edith's Explanation.

Edith was giving a birthday party
and there was some slight delay in
providing seats for her little friends,
when she spoke up, quite soberly:

"You see, it isn't that we have not
chairs enough, but I have asked too
much company."—Youth's Companion.

A Lesson in Gender.

I said to Johnnie, one day in class:
"The masculine form of 'duchess' give;"
And what do you think his answer was?
"Twas 'Dutchman'—just as true as you live."
—Helen W. Grove, in Judge.

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

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THE BIRD OF WISDOM.

A Little Lesson on the Habits of the Owl
and His Family.

The owl has always been called the
bird of heroism and the emblem of wis-
dom. Perhaps it is because he looks so
solemn, perhaps because he flies about
in the night and makes a curious, mel-
ancholy noise, that sounds like a per-
petual "Who! who! who!"

There are many different kinds of
owls, from the great horned owl, two
feet high, to the little bits of fellows;
and the burrowing owl, which is about
as large as a pigeon, and which makes
its home underground.

This last owl is not very honest in
the way he acquires his home. Instead
of taking the trouble to dig out a house
for himself he goes to the cozy little
residence, already made, of some quiet
little prairie-dog, who is too peaceful
and timid in disposition to dispute the
matter. There he selects a snug cor-
ner for himself with the prairie-dog's
family in a curious fellowship.

But the usual home of owls is in some
old, ruined building, or in the hollow



trunks of trees. There they sleep all
day, and at night go out on a forage in
search of something to eat. The owl
does not seem very particular about his
food. Any small animal he can catch
makes a meal for him. Rabbits, rats
and mice, even frogs, toads and such
such small fry, he will eat and carry
home to his nursery of hungry little
owlets.

Most owls are of dark, grave colors,
brown, gray or black. But the owl of
Greenland, the cold region, is sunny
white. Naturalists tell us that that is
so that he can travel about the coun-
try unseen to search for his food. Owls
live over almost the whole world. The
commonest kind is that which all coun-
try boys know well enough, the barn
owl or screech owl. This creature
makes a very unpleasant noise, and
certainly merits his name. Farmers
dislike him, and take every occasion to
kill him. But in spite of his unpleas-
ant hootings he does them good service
in clearing the house where he lives of
rats and mice. It takes a great many
rats and mice to supply himself and all
his family, and Mr. Barn Owl is an
industrious hunter. The mouse is pret-
ty smart who can outwit him.—N. Y.
World.

Capt. Carter's Monkey.

Capt. Carter, who lived in Washing-
ton, D. C., when on land had a great
fancy for fine fowls, and among his
collection prized a fine old king gob-
bler. On his last cruise he brought
home a mischievous young monkey,
which gave him so much trouble it was

a good deal like "an elephant on his
hands." One day, hearing a terrible
squawking in the henery, the cap-
tain found Jocko with king gobbler
under his arm, while he was deliber-
ately pulling out the poor bird's last
tail feather. The captain rescued the
turkey and punished the monkey se-
verely, who knew very well why he
was chastised. The next day, again
hearing a commotion among the feath-
ered tribe, he went to the scene of ac-
tion, and there sat Jocko with the
much persecuted gobbler between his
knees, while he was trying to put his
feathers back. His intentions of re-
pairing the mischief done were good,
but the turkey did not appreciate
them.—Harper's Young People.

Chicken Surgery in Florida.

A marauding hawk made an attack
on a Lakeland (Fla.) fowl yard, and suc-
ceeded in ripping a chicken's craw en-
tirely from its body, so that it dragged
on the ground; and also cutting a hole
through the craw, so that it would not
hold food. A day or two afterward the
owner caught it and one of the ladies of
the family performed a surgical opera-
tion. The craw was sewed up, the
chicken was soaked in hot water until
the wounded and dry skin was made
elastic again, the craw was restored to
its place, the wound sewed up, and now
that is about the healthiest chicken in
the yard.

A Curiosity Among Colors.

It is a curious fact that the color of
yellow, whether it be vegetable or an-
imal, is much more permanent than
any other hue. The yellow of a flow-
er's petals is the only color known to
botanists that is not faded or entirely
discharged upon being exposed to the
fumes of sulphurous acid. Take the
viola tricolor (heart's ease) as an illus-
tration. If exposed but a moment to
these fumes the purple tint imme-
diately takes its flight, and in the
wall-flower the yellow shines as
brightly as ever after all other colors
have fled.

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The President of the United States and the Governor of Kansas have each designated and duly proclaimed Thursday, November 29, as Thanksgiving day.

Any present subscriber who will send us one new subscriber and \$1, can have his or her present subscription extended thirteen weeks for this good act.

The government crop report for November indicates a corn crop for the entire country amounting to 1,200,000,000 bushels for 1894, against 1,619,496,000 bushels last year.

The Kansas Farmers' Alliance has been asked to meet in Topeka, December 5 and 6, 1894. Delegates are expected from each county, and from present indications a large attendance is anticipated and much of interest will transpire.

Write to Secretary Geo. C. Brackett, Lawrence, Kas., for program of the forthcoming session of the Kansas State Horticultural Society, to be held in Fort Scott, December 11, 12 and 13. Everybody invited. Tickets on the certificate plan.

The season of farmers' institutes is at hand, two being held simultaneously at Oneida and Hays City, November 22 and 23. The Agricultural college will be represented at Oneida by Professors Popenoe and Hitchcock, and at Hays City by Professors Mason and Mayo.

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

THE SUNFLOWER CLOCK.

The famous "Sunflower clock," seen and admired by thousands in the Kansas building at the World's Fair, has, according to the *Industrialist*, found a permanent abiding place on the east wall of the library reading-room at the Agricultural college. This clock is a Riley county product, and is presented to the college by the ladies of the Riley County Columbian club. It is enclosed in a beautiful case of quarter-sawn oak, and bears on a large silver plate the following explanation:

PRESENTED TO THE KANSAS STATE AGRICULTURAL COLLEGE.

THE SUNFLOWER CLOCK.

Made from one piece of native walnut, with petals inlaid of Osage orange, used in the Kansas Building at World's Fair, Chicago, 1893.

DESIGNED AND PRESENTED BY

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AN IRRIGATION SURVEY WANTED.

The State Irrigation convention, which is to be held at Hutchinson, on Friday and Saturday of this week, will mark an important era in the material development of Kansas. Heretofore more or less desultory efforts at irrigating have been made in various parts of the State and valuable results have been attained, with satisfactory profits to the irrigators in some cases. The uncertainty of the supply of water which has been available for the ditches has been a discouraging feature and has caused the more or less complete abandonment of enterprises after the expenditure of large sums of money, and has led many once enthusiastic as to the immediate future of irrigation to despair. While there are no insurmountable engineering obstacles to supplying large volumes of water to ditches from the underflow of the Arkansas, the financial aspects of the case are at least formidable. The result has been to turn attention to the methods of supplying water for irrigation by means of individual and independent plants, by the use of which each irrigator booms, so far as the experiment has gone, as independent of his neighbors as to the water he uses as with reference to soil and sunshine. This is fully in accord with the American farmer's hereditary desire for independence, and it presents many real advantages, as well as some disadvantages, to the individual irrigator which it is not proposed to discuss here.

The wide area in western Kansas and adjacent territory, under which the subterranean waters prevail in quantities varying from the greatest abundance to a sufficient supply for domestic purposes and for live stock, opens vistas of irrigation areas of great magnitude, most of which must, under the most sanguine hopes for the ditch systems, have been consigned perpetually to semi-sterility. But the question of thus extending the areas to be irrigated has also opened some problems for the solution of which there are already importunate demands. The settler on lands near the surface of which exists the abundant supply, has indeed many questions to ask when he begins planning his irrigation plant. But his case is reasonably well cared for by the machinery man and will be looked after by the engineer when irrigators shall have progressed so far as to employ engineers to direct their irrigation improvements. But the case changes by almost imperceptible degrees in the situations of their neighbors, and the task of lifting water ten feet becomes the problem of lifting it thirty, forty, fifty, one hundred or one hundred and fifty feet on the one hand, while in another respect the supply of water declines from an abundance and more than can be used to enough—sufficient—necessity for economy—scant—enough for only a few acres or a garden—none to spare for irrigation.

Were the lines of demarkation between the areas where these various conditions prevail well defined the citizen might know whether or not it were worth while for him to undertake the expense of an irrigation plant. Without a knowledge of what to expect, the settler, who has already suffered the loss of crops for lack of moisture, cannot make the experiment, even if the alternative be the abandonment of the home which he has tried for many years to make.

Against this situation there is the fact that an irrigation survey of the State, one which can be made without great expense if started from the fund of information already at hand, can very soon make such available knowledge as to enable the owner of land in any part of the State to determine in a satisfactory manner whether and to what extent he would be justified in undertaking to irrigate.

Should the action of the Hutchinson convention be such as to so commend to the Legislature soon to convene the importance of providing for a speedy and thorough survey of the State, beginning in the western half, such as shall remove as much as possible the elements of uncertainty as to the feasibility of irrigation in any region, and

describing the hydrographic characteristics of the various sections, the era of rational and general irrigation development will have been ushered in with its high agricultural development and generous prosperity.

LAWMAKERS GET THE FARMER.

Beginning with this number the KANSAS FARMER will be sent to each member of the Kansas House and Senate until the adjournment of the Legislature in 1895. This is done, not because we have any patent remedies for the ills of society, but because it is desirable that the lawmakers of the State shall be acquainted with the thought, desire and purposes of the most progressive farmers of the commonwealth. It should never be forgotten that, while legislators hear less from the farmers than from any other class of their constituents, they are the most numerous, and their industry is not only the foundation of the State's prosperity, but it is, and must always remain, our greatest industry, and upon its success must depend the progress and development of all others. These facts are usually well remembered during a campaign for votes and are dwelt upon at length and with great eloquence before election. It is, perhaps, not strange that they are, sometimes, in large measure lost sight of after election and during the session of the Legislature, when every other interest is forced with great persistence upon the minds of the lawmakers, while the farmer, almost without organization, remains at home to make the material wealth by virtue of which there is something for schemers to scramble for. The FARMER will make its weekly visit to each of the men who have by the voters been honored with a seat in the law-making body, and by carrying to them the thoughts and the interests of the tillers of the soil will remind them that Kansas has other interests besides those of making a United States Senator, the selection of a State Printer, or the division of the spoils of victory among place-hunters. The KANSAS FARMER is not in politics; if it ever was in that line of business it has succeeded in getting entirely out and proposes to stay out. But its interest in public affairs is none the less intense because it is not fighting any party's battles for spoils, and it will have an eye on the servants of the people and will appreciate their honest efforts to do well, and will remember any who sell out the people.

THE POSITION OF WHEAT.

The long looked for upward turn in the wheat market appears to have come at last. Whether the change is to be temporary or is to continue in favor of better prices is dependent upon other matters than simply supply and demand, but indications favor continuance. It has at last been realized on the great markets that about 100,000,000 bushels of the present crop will, by the end of the cereal year, have been fed to live stock. Estimates for 1894 may be made as follows:

	Bushels.	Bushels.
The crop.....	442,000,000	
In store July 1.....	54,650,000	
Total.....		496,650,000
Requirements.....		
Bread and seed.....	365,070,000	
Feeding stock.....	100,000,000	
Total.....		465,000,000
Balance for export.....		31,650,000

In addition to this must also be considered the unknown quantity of wheat which remained in farmers' hands at the beginning of the cereal year, July 1.

Up to November 1 the amount exported since July 1, as wheat and flour, amounted to about 50,000,000 bushels, so that to meet the home requirements, as usually estimated, and to supply what will probably be required for stock feed, will necessitate a reduction of farmers' holdings considerably below the limit of the beginning of the year, besides the entire consumption of the visible supply. But the visible supply is never entirely consumed. The lowest level it has reached in the last ten years was 13,590,000, on July 1, 1891, and a reduction below 20,000,000 is unusual. It thus appears that, without reference to further exportation, prices must be such as to call out a

large part of the usual quantity held by farmers and known as the invisible supply. Further than this, there are no indications that Europe can discontinue importations from this country. On the contrary, a considerable part of the bread, of Great Britain especially, must come from the United States.

The statistical situation, both at home and abroad, has recently caused a decided change in the tone of expert writers, and is beginning to be reflected in the markets.

The new factor of this substitution of wheat for corn in stock feeding is mainly to be credited with this change in the situation. The unexpected removal of 100,000,000 bushels from the usual channels has taken the "bears" by surprise, and its full results are not even yet fully realized.

GETTING ON IN THE WORLD.

Occasionally an editor finds in his voluminous reading such an expression of thoughts which he has intended at some time to present to the public, that he feels an almost irresistible impulse to give them to his readers. Such is the circumstance and such is the reason which impel the publication here of the following from the pen of Secretary I. D. Graham, in the *Industrialist*:

"In these latter days, when the youth has attained a sufficient degree of maturity to cause him to seriously begin to contemplate the duties and responsibilities which lie before him in life, he is always confronted by the difficult question of what vocation to choose. Being a man implies some sort of success in life, and, as the bread and butter question is always an important one, the temptation comes, only too often, to let it become the paramount problem, if not the only one to be solved in attaining success.

"Provision for daily necessities is an imperative duty, and the selection of any vocation which does not have this in view is a mistake which may cost years to rectify. The selection of a calling with this one object only in view, would be a much more serious mistake in attaining real success, and may never be rectified.

"Success in life means more than mere eating and drinking (a mule can be successful in this way), and a most important element in providing for any future success will lie in the proper selection of the life work. Only too often is this selection made at haphazard and a vocation chosen which appears a pleasant one, or one which differs from anything before experienced—one in which growth beyond the elementary stage is impossible. The result of such a selection is and must be failure.

"In this busy, buzzing, bustling world in which we now live the young man who would succeed must be prepared; not only this, but he must be thoroughly well prepared or he will go down in the struggle to which he was born. The old days when a young man could succeed to his father's vocation without regard to capability, and be sure of at least a reasonable degree of success, are gone. The days when a vocation could be selected at haphazard and without natural ability or proper preparation are also gone, as are the days when marked success waits on plodding effort without intelligent special training.

"The very foundation of success in after life, then, must be in a proper selection of a vocation. To accomplish this one needs a thorough, all-round education, an education that will serve to develop all the powers with which the individual has been endowed; that will develop the mental, moral and physical natures equally, harmoniously and at the same time. Without such a development the young man is unable to select for himself that which should be his life work; with it, he may choose; without it, his life will be a long, continuous struggle to avert disaster; with it, he can command success. This kind of an education has been named "industrial," because it develops the hand and eye as well as the mind, and does it in such a manner that the product is not lopsided.

"With a good industrial education

obtained in a few years and at little cost, the young man is fitted to select his life work as he could not otherwise have been, and, should circumstances compel him to abandon any thought of the special education which should follow this, and which is so desirable to marked success in life, he will find himself vastly better off in all that goes to make true success than his neighbors who have not had his advantages.

"Even should one of the so-called learned professions claim him, he will be a better minister, a more successful physician, or an abler attorney by reason of the hold on humanity which comes to him through his training of all his abilities and capabilities in a harmonious manner in an industrial education."

A SUBSTITUTE FOR CORN NEEDED.

The following letter from a Saline county farmer, and the answer to it by Professor Georgeson, may be of interest to many readers:

Permit me to trespass upon your time to ask a few questions for information and make a suggestion. The experience of the past few years has taught us in this part of Kansas that the day has gone by when a farmer can employ labor, raise wheat and corn and sell it and make any money. We are here and must stay. We can't all go to the Strip—where it is no better. We can raise some stock, hogs and cattle, but these must be fattened to make any money out of them. Now, what shall that fattening material be? We have raised but one good crop of corn in the past seven years (1889). The other years have not been total failures, but the corn produced throughout the country has cost too much to make it profitable feeding material. It has cost the raiser, on an average, much more than the market price of the grain. This year our corn is practically a total failure. We are all feeding wheat, and a very satisfactory feed it is. But as to the cost of wheat. The Secretary of the Kansas State Board of Agriculture has pretty clearly shown that the cost of wheat, ten bushels per acre, is 50 cents; fifteen bushels per acre, 48 cents; twenty bushels, 36 cents. Now, the first two catch most of our Kansas wheat. It requires a pretty good price for hogs and cattle to give the feeder and raiser a margin sufficient on what he can practically handle on his farm to support himself and family, and when he cannot get this margin then the business is a failure. Hogs are a good price now, but can we count that these prices will be maintained in the face of low prices for everything else? I think we cannot depend upon raising ten or fifteen bushel per acre wheat for the purpose of feeding. We want a grain that is as sure of production as wheat, that will yield much more and will be equally good for feeding. There is no trouble to obtain forage. Sorghum will produce that; so will alfalfa. It is a cheap, sure grain that we want. Can it be found in some of the varieties of cane, either the saccharine or non-saccharine? It is necessary to consider its susceptibility of being harvested cheaply and preserved for grain feeding. We may have to sell hogs for 3 cents, instead of 5 cents, and we must produce these cheaper or we will be out of the race.

I am told that Kaffir corn will produce from forty to sixty bushels of grain per acre, weighing sixty pounds per bushel, but I have had no experience with it. I believe there is a red and a white variety. Then there is the Jerusalem corn—the rice corn—perhaps the same thing. I understand these to be varieties of non-saccharine cane. I am told that one objection to Jerusalem corn is that the seed shells off so easily that there is great waste in handling. I have now made made my suggestion and I desire to ask for information. What do you think of it? Now, in view of all this, what plant can you name that will fill or nearest fill the requirements of the situation? What are the feeding qualities of these grains? How much is required per acre, and what is the best method of planting, and cultivation and harvesting for seed, bearing in mind that the object is bushels of cheap grain of good fattening qualities?

The information herein sought will be valuable over the State; it reaches a live question that we must solve. A. P. C.
Salina, Kas.

Answer by Prof. Georgeson:

The question you bring up is a most important one; one that is of general interest, and if it can be solved it will have a useful bearing upon the future prosperity of the farmers over a large area of the West. Our farmers have been and are still in the habit of placing too great dependence upon a single crop, and that crop is usually either corn or wheat, whichever the farm is best adapted to. Whenever this is the case, hardships must necessarily follow when a disaster overtakes that crop.

I have, both in my writings and lecturing, repeatedly inveighed against this system of farming. There are many reasons why there ought to be changes, but I cannot now consider more than the one here made promi-

nent, namely, that corn is too frequently more or less of a failure in the central portion of the State, and that it is, therefore, of vital importance to find a crop with the qualifications you name; one that will produce a grain suited to fatten live stock and which will not suffer so severely in dry seasons. You suggest that possibly among the varieties of non-saccharine canes something may be found which will answer the purpose. There are many varieties of this class of cane. We have grown upwards of forty here at the station in a single year. They were reported upon in Bulletin No. 18. All have the power to resist drought to a much greater extent than common field corn, and several of them yielded largely of grain. Among them all, the variety known as red Kaffir corn is, in my judgment, the best and the one most likely to fill the place that corn is unable to fill. In 1889 we raised seventy-one bushels of clean seed and nine tons of dry fodder to the acre of this variety; in 1890, which was a dry year and the corn on the college farm was almost a complete failure, our red Kaffir corn crop yielded nineteen bushels of seed and 4.2 tons of dry fodder to the acre; in 1893 we raised fifty-six bushels of clean seed of this variety when corn in the same field only yielded about thirty bushels, and this, too, after the birds had eaten a good portion of the seeds in the heads. During the present year we raised but little seed. Several acres were planted of this crop, but, unfortunately, it was on a hillside with a southern slope, on poor soil and very dry. Alongside of it corn was planted. The latter dried up and was cut long before it showed any signs of tasseling. The Kaffir corn, which was on still higher ground, remained green through the entire disastrous drought, and a portion of it, where the soil was somewhat better than the rest, headed out and produced seed. This is nearest to a failure that red Kaffir corn has ever come on this farm. But in spite of the very severe drought and its unfavorable situation, it yielded some three tons dry fodder per acre, and I have no doubt but that if it had been in better soil the entire crop would have yielded a fair crop of grain.

We have never yet had seed enough of this grain to use it for fattening cattle on a sufficiently large scale to determine its feeding value in comparison with corn. But it has occasionally been fed to hogs, and from its results as a hog feed, as well as from its composition, which is almost the same as that of corn, I am of the opinion that it will prove to be fully equal to corn as a feed stuff. It should be ground fine before it is fed. The grain is small, hard and brittle, and if it is fed whole a large per cent. of it will pass through undigested.

The plant matures here usually by the first of October, or before, depending on the season. It has never been injured by frost, while milo maize and the white Kaffir corn have failed to mature seed several times. It has this peculiarity, which is decidedly to its advantage, that the plant remains green for some time after the seed matures, and for this reason it can stand until the seed is ripe and still make a first-class article of fodder. In this particular, then, it is superior to corn, also. Summing up its qualities, we find that we have a grain which rarely fails to produce seed, even in severe droughts, when corn is a failure; it matures before frost; it out-yields corn, even in a good corn season, both in fodder and grain; the grain is probably fully equal to corn as a feed stuff; and the fodder is superior to corn fodder in that it has a larger percentage of leaves and can be cut and cured while green without sacrificing the seed.

Now, there are several others of the non-saccharine sorghums which have points in their favor. The white Kaffir corn has a larger grain than the red variety, and it is white, the seed coat containing less tannin than the red variety. But, on the other hand, it shells out readily in handling and it yields less of both grain and fodder. In the dry year 1890, it produced six bushels of seed and three and a half tons of fodder to the acre, while the

red variety yielded nineteen bushels of seed and over four tons of fodder, as noted above. Moreover, it is somewhat later than the red variety and occasionally it is nipped by frost before the seed matures.

Milo maize is a vigorous plant with a white seed, but it is later still and it is not as good a yielder of seed, although it will yield as much fodder as red Kaffir corn.

Jerusalem corn stands drought well and has large white seed, but it is not a heavy yielder and the fodder is decidedly inferior to that of Kaffir corn. Moreover, the heads bend down, forming a "crooked neck," which makes it rather troublesome to handle. So, all things considered, I know of nothing better than red Kaffir corn to recommend as a crop to take the place of corn, at least in part. I may mention, in this connection, that I have seen red Kaffir corn grown very successfully in western Kansas in a region which had never produced even a partial crop of field corn.

A note may be added in regard to culture. If grown for seed it will not do to sow it broadcast or to put it in with a grain drill. It must be planted in rows about three feet apart and the stalks from four to eight inches apart in the row. It will produce a good crop of seed even with a thicker stand than four inches, but the heads are small and the total yield will not be as great when too thick. It requires the same care and culture that corn requires. It takes about four quarts of seed to plant an acre. We cut it with a one-horse, corn-cutter, shock as we would corn, and when the fodder is cured cut the heads off by hand with corn knives and run them through the thresher, while the fodder is hauled in and stacked or otherwise preserved for winter feeding. C. C. GEORGESEON.
Kansas Experiment Station.

GOVERNMENT CROP REPORT FOR NOVEMBER.

CORN.—The November returns to the Department of Agriculture of the rates of yield per acre make the average of corn 19.7, which is about one and one-half bushels above the yield indicated by the condition figures in October. This is the lowest rate of yield that has occurred since 1881, when it stood at 18.6 bushels per acre. Last year the yield was 22.5 bushels upon a much larger harvested acreage. The rates for the years 1886, 1887 and 1890—which were years of comparatively low yield—were, respectively, 22, 20.1 and 20.7 bushels. The yield for the present year, which must be regarded as a preliminary and not a final estimate, is less than the average for the ten years, 1870 to 1879, by 7.4 bushels; less than the average for the succeeding decade, 1880 to 1889, by 4.4 bushels, and less than the average for the four years, 1890 to 1893, by 3.7 bushels. The result is in harmony with reported indications during the growing season.

The rates of yield of the principal corn States are follows: New York, 28.2; Pennsylvania, 32; Ohio, 26.3; Michigan, 23.2; Indiana, 28.9; Illinois, 28.8; Iowa, 15; Missouri, 22; Kansas, 11.2; Nebraska, 6.

POTATOES.—The average yield of potatoes is returned as 62.3 bushels. This is a slightly greater yield than for the year 1892, but ten bushels less than for last year. The average yield for a recent ten-year period was 76.2. The present return is in accord with the conditions through the season and indicates a short crop. The product will be much less than that of 1893, notwithstanding the increased area shown in the preliminary acreage returns of July last.

The crops of New England, the South Atlantic, Gulf, Mountain and Pacific States are above the average in quantity, but in other sections of the country, including the most important in commercial production, the crop is so far below an average as to result in the present low figure of yield per acre.

The quality of the crop is fair, the percentage being 84.

SWEET POTATOES.—The average yield per acre of sweet potatoes is 92.4 bushels. This indicates a better crop than that of 1893.

HAY.—The yield of hay for 1894, as

averaged for the whole country, is 1.15 tons to the acre. This is not as high as the yield of 1893, which was 1.32 tons per acre.

Iowa, Missouri, Kansas, Nebraska and South Dakota depart further from their ten-year averages than any other State. The large yields reported from the Mountain and Pacific States are due to the culture of alfalfa in those States, which generally under irrigation yields more heavily than the cultivated grasses of other sections.

The quality is high, as shown by the percentage of 94.5.

BUCKWHEAT.—The average yield of this crop for the entire country is 16.1 bushels per acre, against 14.7 in 1893, 14.1 in 1892, and 15.3 in 1891. The yields in New York and Pennsylvania, which comprise nearly two-thirds of the total area under buckwheat, are 15.5 and 18 bushels, respectively. In Michigan and Wisconsin, which comprise about one-eighth of the total area, the yields are, respectively, 12 and 8.5 bushels. If we except Oregon, which has but an insignificant acreage, the highest yield per acre (37.8 bushels) is in Maine, while the lowest (3.7 bushels) is in Nebraska.

The general average for quality is 90.3, the averages in the four States of largest production being 94 in New York and Pennsylvania, 82 in Michigan and 76 in Wisconsin.

SORGHUM.—The yields of sorghum per acre range from 17 gallons in Nebraska to 158 gallons in Louisiana. The yields in the South are in general considerably higher than a year ago, and only one Western State east of the Mississippi river shows a decrease, this one being Wisconsin. West of the Mississippi there is a decrease in Minnesota, Iowa, Kansas, Nebraska and Utah; Minnesota and Nebraska being the heaviest losers. The small yields in the Northwest are mainly due to drought.

SUGAR CANE.—The indicated product of sugar cane is considerably larger than last year in each of the Gulf States except Florida, the increase ranging from 7 per cent. in Louisiana to 19 per cent. in Texas. There is also an increase of 1 per cent. in Georgia and 4 per cent. in Arkansas. In Florida, where heavy storms have damaged the crop, there is a decrease of 9 per cent.

COTTON.—The cotton returns of the Department of Agriculture for the month of November show improvement of the prospects as compared with the returns of last month. This is due to better weather and is especially noticeable in the States of Alabama, Mississippi, Louisiana and Texas. The favorable weather, besides improving the crop, has greatly facilitated picking. In Alabama the crop has been nearly all secured and much of it sold. In Mississippi many counties report picking as closed, and considerable improvement in the crop over the indications of October. The average estimate for the State of Louisiana is reported as raised because of the favorable weather for picking during October. The crop in Texas maintains the high average formerly indicated. The weather has been quite favorable for picking, and nearly three-fourths of the crop has been gathered. A greater dispatch has been noted in harvesting the crop than in any former year, and it has also been marketed in large quantities. The injuries to the crop in some parts of the State from excessive moisture, causing rust and rotting of bolls, have been more than counterbalanced by the favorable conditions that existed in other parts for maturing the top crop, and for picking. No great damage from frost reported. In Arkansas the weather has also been favorable for gathering. The increased product of that State, as compared with last year, is due to the fact that much land that was overflowed in 1893 was planted to cotton this year.

The indicated average yield per acre for the entire cotton belt is 191.7 pounds, distributed by States as follows: North Carolina, 210; South Carolina, 168; Georgia, 155; Florida, 110; Alabama, 160; Mississippi, 195; Louisiana, 230; Texas, 235; Arkansas, 203; Tennessee, 157; all other States and Territories, 200.

Horticulture.

METHODS OF CULTIVATING THE ORCHARD.

The best tillage is that which begins early in the season, and which keeps the surface stirred until late summer or early fall, and the best implements are those which secure this result with the least amount of time and labor. For the first few years, it is generally advisable to turn the land rather deeply with a plow at the first spring cultivation. There are many styles of clod-crushers, spring-tooth harrows, cut-aways and smoothing harrows which will adapt themselves readily to the cultivation of the particular soil in question. In all friable or loose soils, shallow cultivation is always preferable, and in these some form of cut-away or smoothing harrow will be found to be efficient. When the land is once in good condition, but little effort and time are required to run through the orchard. Crust should never be allowed to form upon the surface, and weeds should be killed before they become firmly established. The entire surface of the orchard should be stirred as often as once in ten days.

In general, level culture is best. This is secured by plowing one year to the trees and the following year away from them, one year north and south and the next year east and west. It is somewhat difficult to plow away from large trees, however, and with the cultivators or harrows now in use, it is easy to work the soil away by subsequent cultivation, allowing the furrow to be thrown towards the tree each spring; but it is always advisable, upon fairly level ground, to plow the orchard in opposite directions in alternate years.

The difficulty of working close to the trees has had the effect of encouraging too high pruning. There is a tendency to start tops too high rather than too low, thereby exposing great length of trunk to injuries of sun and wind, and elevating the top beyond the reach of pickers and of sprays. For most trees the ideal length of trunk is under four feet rather than above it, and implements now in the market allow of this lower training. Trees which have low tops or which hang low with fruit can be reached by separating the halves of any of the double harrows by means of a long doubletree, so that the halves, when adjusted, run from four to six feet from each other. A cut-away harrow rigged in this way will work away the back-furrows from under the trees during the season. All cultivators or harrows with high handles, wheels or levers should be discarded if orchards are worked when the limbs bend low with fruit.

This labor of working about trees is greatly facilitated by the use of harnesses which have no metal projections. There should be no hames which have elevated tops, and the turrets on the back-pads should be simply leather loops. The back-pad itself should be reduced to a single wide strap entirely devoid of wadding. Harness of the Sherwood type, with no traces, but drawing by a single chain between the horses, are excellent in orchards, as they require no whiffletrees.

It will now be asked what crops may be grown in the orchard. Grain and hay, never! Any hoed crops may be used for the first few years; but it must be remembered that every crop competes with the trees for food and moisture, and whatever may befall the crop, the trees should not be allowed to suffer. An open space should be left about the tree free of crops, at least several feet in extent. In fact, this space should correspond with the spread of the roots of the tree. Corn and some other plants will appropriate moisture more quickly than can the tree. In orchards set less than twenty feet apart, the land should rarely be cropped after the third year; but apple orchards, if well cared for, may be

cropped lightly for seven or eight years. In no case should the grower expect to secure as much crop upon orchard land as upon other areas; and the drier the land the less should it be cropped. When the orchard comes into bearing age, give it the entire land. Thereafter, the most profitable crop to raise is cultivators!

The growing of nursery stock in orchards—a frequent practice in Western New York—should be discouraged. This crop makes essentially the same demands upon the land as the orchard itself, and it does not allow of those variations in cultivation and management which may be essential to the varying seasons. It may be true that enough fertilizer can be placed upon the land to replace the loss of plant food, but it is never done and probably never will be. And, more than this, the nursery stock drinks up the moisture which should be used by the orchard. Nursery stock is known to be particularly hard upon land, so much so that nurserymen never grow two crops of fruit tree stocks in succession upon the same area.

effort to obtain them. It is surprising that the disastrous failures of recent years have not awakened farmers to the necessity of really doing something for their orchards. Now and then an enterprising man makes an energetic attempt and is rewarded, as a future bulletin will show; but the greater number continue to exercise the most thoroughgoing neglect and to bewail the failure of the crop. Yes, plow the old apple orchard; then fertilize and spray it. Or, if the roots are too near the surface to allow of plowing, harrow it thoroughly when the turf is soft in spring, and continue to work it during the season. If this is not feasible, then pasture it closely with sheep or hogs, feeding the stock at the same time. If this cannot be done, and the orchard is unprofitable, cut it down.—L. H. Bailey.

Inquiries.

EDITOR KANSAS FARMER:—Last spring I planted a number of pear trees. All are doing well but it is now evident I shall have to move them to another place. Are they liable to be injured by this second transplanting? When will be the best time to make the change? Do apple trees do

the fall. The writer would plant them in moist earth before the ground becomes frozen. If the earth is too dry where they are to grow bed them in the ground, keep them moist, and plant where they are to remain in the spring.

The Catalpa Bungei.

These beautiful trees are a dwarf variety from Japan, a mere shrub or bush, as shown by the tree on the right. In this way the trees have been grown in rare collections for years. One on the writer's grounds had been admired often, with the only regret, "what a pity that the tree is not 'higher up' so it could be better seen." Working on that thought came the idea of growing it upon a stem of the hardy catalpa, which resulted in growing six trees the first time trying. One of the six is shown in the standard tree at the left in the illustration. Both of these trees are growing in the park of Union Pacific depot at Lawrence, Kas. The photos from which we show the trees were taken the last of August, 1894. The trees have made a four-years' growth, and give a view as seen from the west, to show how well they stand against the prevailing south winds. Trees with such tops usually lean towards the north. The drought was so severe at the time that the grass was dead, yet not a leaf on the trees withered or grew pale. The stem is six inches caliper, five feet six inches to the limbs, thirteen feet spread of top, which is so dense no daylight can be seen through it. They are very conspicuous on the lawn. The style of growth is new among trees, unique in effect, resembling the foreign trees on which trained gardeners have spent years to bring in shape, while these trees assume their shape with no help of man, and are entirely hardy, clean, free of insects or disease, and have no rivals or trees to approach them for compactness of growth or beauty of foliage. They are adapted for lawns, yards, parks and every place however small, and can be grown with stem one to ten feet high if desired. These trees are grown and introduced by A. H. Griese, of Lawrence, Kas.

The thirty-seventh annual meeting of the Missouri State Horticultural Society is to be held at Library hall, Trenton, Mo., December 4, 5 and 6, 1894. An attractive program is to be presented and those who attend this meeting have the assurance of past successes that they will get full value for the time and money spent in attending.

Patrons of the Vandalla and Pennsylvania lines west of Pittsburg will be glad to know that an arrangement has been made, taking effect November 1, by which portions of mileage tickets will be detached and accepted in payment of excess baggage charges. Commercial travelers and others will find that agents of the Pennsylvania and Vandalla lines at all principal stations have been instructed regarding this concession, which will no doubt become immediately popular.

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THE CATALPA BUNGEI. (SEE DESCRIPTIVE ARTICLE ON THIS PAGE)

Sod may sometimes be allowed in an orchard if it is closely pastured, but hay should never be cut. Sod lands are not only drier than cultivated ground, but they are favorite breeding places of insects. Borers are particularly bad in grass land. No stone fruits should ever be allowed to stand in sod, and the same may be said of dwarf pears. Apples and standard pears may now and then be seeded with safety, but it is certainly true that, in general, fruit decreases in proportion as sod increases. Very thrifty young apple and pear orchards may sometimes be thrown into bearing by seeding them down for a time, but the sod should be broken up before the trees become checked in vigor. The use of clover and other temporary cover crops as a means of fertilizing the land, is discussed farther on.

Most of the apple orchards in New York are in sod, and growers are always asking if they shall be plowed up. If the growers of apples are satisfied with the crops of the past few years, let the orchards alone; but if it is thought that better crops are desirable, do not hesitate to make an

well in Kansas planted in the fall on bottom land? When is the right time to plant hazelnuts.

(1) If the pear trees have made a good start they can probably be removed the second time without more injury than was done at the first removal. If their vigor has been much depleted there will probably be some loss. If the soil is well saturated with moisture they may be re-set at any time before the ground freezes up. If the ground is very dry removal should be deferred until spring.

(2) If the ground is moist the fall is an excellent time to transplant apple trees in Kansas.

(3) Nature plants her hazelnuts in

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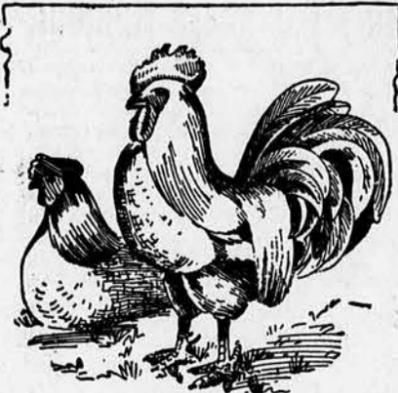
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The Poultry Yard

All About Dorkings.

This breed of fowls is older even than the English nation, by whom it is considered the ideal table fowl. In fact, the breed is so popular in that country that it is generally regarded as an English breed of fowl. There are four varieties of the Dorkings, viz.: Gray, silver gray, white and cuckoo. The cocks of the gray variety have either a pure black or slightly mottled breast, the neck and back being white, striped with black, and the wings nearly white crossed by a well-defined black bar. The silver grays are always alike in color, the male having a black breast, white wings crossed by a black bar and a black tail. The head, neck and back are pure silvery white, without sign of yellow or straw color.

The white Dorking is not quite so large as the other varieties which it is considered to surpass in symmetry. Its plumage is pure white and it possesses what is known as "rose comb," the others having a somewhat larger sin-



A PAIR OF DORKINGS.

gle combs. The cuckoo Dorkings have a peculiar plumage, consisting of a marking of bars or pencilings of dark blue gray on a ground of lighter gray. In size it is slightly larger than the white, but smaller than the other varieties.

Dorkings have full broad breasts, broad backs, short legs and are rather short in the neck. They have five toes on each foot. The male in good condition will weigh twelve pounds and the hen nine pounds. They are fair layers, good mothers, mature early and grow rapidly. The great objection is the delicacy of the young birds, which renders raising them difficult. The climate, or the soil, or both, in many parts of the United States does not seem to agree with them. This may, however, be due to too much inbreeding, as fresh blood is difficult to procure.

Dorkings can only be successfully raised on a dry soil, dampness being peculiarly fatal to them. They also require a wide range. The Dorking is not exactly suited to the requirements of the American market, its shanks being white, while we generally prefer yellow ones. Its skin is also white or pale yellow, instead of the gold color usually demanded; but for the production of cross-breed fowls for the table it should prove of great value.

Feather Eating.

Want of occupation is one of the chief causes of hens learning to eat feathers. For want of something to do they peck at the feathers on one another, and soon develop a taste for them. If the practice is not soon stopped it will become contagious, and will continue until the weather is fine enough for the birds to go outside. The best method of prevention is to give the fowls plenty of occupation. If the floor of the fowlhouse is of earth it should be dug over and made fine, and the food fed scattered over it. This will give the birds some work to do to obtain all the grain and food, and in scratching over the ground searching for it they will get plenty of exercise.

Where the floor is of cement or other solid material, straw scattered over it will give the poultry plenty of work to scratch in it to find their food. Plenty of vegetable food should also be given. If cabbages can be spared, one should be hung up in the house for the birds to pick at. Where these are not forthcoming, turnips, mangels or clover

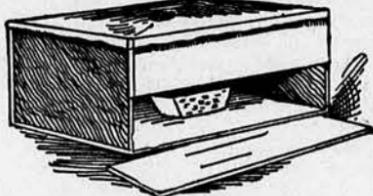
hay, cut fine, will do very well. Meat scraps are also good, and a little salt mixed in the food will be found advantageous.

Close confinement and overcrowding are other causes that conduce to feather eating. The former cannot always be avoided in a protracted and severe winter. Still, there are generally some days when the poultry can be turned out for a run, even during a severe winter, for an hour or two. Overcrowding, however, can be avoided. It is better when dividing the flock to keep the pullets separate from the older hens. When thus divided, if these latter have acquired any bad habits, the younger birds will not have the opportunity to learn them from them, which they probably would if they were running together.

When once an old bird has learned to eat feathers it is almost hopeless to attempt a cure, and the best method of proceeding is to terminate her existence. Every possible precaution, therefore, should be taken to prevent birds acquiring the habit. The habit may be acquired among fowls confined in summer time as well as in winter if they are not kept busy and provided with plenty of exercise and green food.—N. Y. World.

Novel Contrivance.

A novel contrivance, sent to Farm and Fireside, by Mr. G. L. Bateman, of California, for preventing hens from eating their eggs, is given in our illustration. Take a soap box, remove the top and place the box on a board, or leave it with the bottom on. Cut away one-half of the front, or an opening large enough to permit of placing a small basket or a pan of sawdust in the box. Now tack a flour sack over the box, and let it sag. Cut a hole in the top of the sack. Close the front of the box with a board. The hen will go on the sack to lay, and the egg will roll down and into the hole, and continue until it falls into the pan of saw-



NEST TO PREVENT EGG EATING.

dust underneath. Instead of a flour sack an old piece of carpet, or anything that will serve the purpose may be used. It will cost but a few cents to give this method a trial.

The Incubator in Winter

From this time on is the proper period for using an incubator, as one can learn before the broiler season comes on. The hen is an excellent medium for hatching in the spring and summer, but as the hens do not sit in winter, except rarely, the early broiler must be hatched with incubators, which bring out several hundred chicks at a time, and as it costs but little more to care for a large number of chicks than to attend to a hen or two when the snow is on the ground the incubator is much cheaper. Broilers often bring fifty cents per pound in the height of the season, and the cost of a pound of chicken does not exceed six cents. We must not omit the fact, however, that there are other expenses, as well as losses to meet, and we will also grant that the hen can raise her chicks better than it can be done for her, but not in the winter season. An incubator provides work in winter, and gives an opportunity to avoid loss of time by raising early broilers for market.—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.

In the Dairy.

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

Some New Facts About Cows.

Cows in milk will consume nearly 50 per cent. more water than the same cows when not giving milk. The New York Experiment Station, at Geneva, found as an average of several breeds that each cow drank 1,039 pounds of water and consumed 547 pounds more in food per month. During lactation the average per month was 1,660 pounds drank, and 774.8 pounds consumed in food. The pounds of water consumed for each pound of milk produced were as follows: Ayrshires, 4.26; Guernseys, 5.07; Holsteins, 4.43; Jerseys, 5.24; Short-horns, 5; Holderness, 3.95; Devons, 4.82, making an average of 4.68 pounds. The need of an abundance of water is evident.

Death of C. W. Horr.

We are pained to learn of the death of C. W. Horr at his home in Wellington, Ohio, October 3d. Mr. Horr was one of the best known dairymen of this country, an extensive breeder of thoroughbred cattle, and a member of the great cheese manufacturing firm of Horr, Warren & Co. But perhaps Mr. Horr was best known to our readers as President of the National Dairy Union and through his aggressive fighting of all kinds of fraudulent dairy products. As President of that union he has rendered signal service to dairymen everywhere and it will be no easy matter to fill his place. Mr. Horr was a member of a noted family, his brothers, Roswell G. and R. A., being men with national reputations. Mrs. Horr's mother died the night preceding his death, aged 91 years.

The Discovery of Butter-Making.

There was once an old farmer who took milk to town every morning for sale, and as he had quite a distance to go he often had great difficulty, on hot days, of keeping it sweet.

One summer morning, as he was crossing a branch, he stopped to pour some water into the milk, with the hope that by cooling it thus, it would not sour before he had sold it. Unconsciously, he dipped two frogs into the can with the water, put on the top, and drove on. One frog, after a few attempts to escape, gave up and sank to the bottom. But the other, being of an optimistic turn of mind, jumped and jumped, and each time fell back, but with the perseverance that overcometh all things, he kept up this amateur churning, until a large piece of butter appeared, and when the farmer opened the can he was surprised to see the frog peacefully perched on its well-earned refuge.

We add, however, with pain, that the glory of the new discovery was given, not to the energetic frog, but to the dishonest farmer.—Geneva Miller.

National Dairy Union.

The annual meeting of the association early in the coming year at Washington, will be an event of unusual interest to dairymen everywhere. This association is for the special purpose of fighting the encroachments of fraudulent dairy products, and as such is entitled to the hearty co-operation of every person connected with the industry, as well as the general public. We have been taught that faith without works was but of little avail. This

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is specially pertinent to this question. What the National Dairy Union needs is not alone your sympathy, but rather your contribution of cash for the prosecution of the work. The "oleo" crowd would probably give ten times the money to have this union squelched, that the dairymen are asked to furnish to carry it forward. Your duty in the matter is plain.

This coming meeting means life or death to the National Dairy Union. It was a bold move to take it to Washington, directly under the eye of Congress. To make a successful demonstration of strength is therefore absolutely necessary. Nothing so impresses the average Congressman as a show of numbers, of voting strength and harmonious action. This makes it a duty that all who are interested should take part in the demonstration. An occasion of this character demands that every man should do his part even though a sacrifice to him. There ought to be 10,000 dairymen at Washington. If they were half as interested in their salvation as are the "oleo" people, there would be double that number.—American Creamery.

Dairy Notes.

Over fifty agricultural college students in Michigan will study dairying this winter.

About sixty-five new creameries have been established in Minnesota alone, the past year.

Josiah Shull, one of New York's prominent dairymen, died at Little Falls, aged 72 years.

The Kansas State Dairy Association was organized at the reading rooms of the Copeland hotel, on the 20th of March, 1888. Hon. R. T. Stokes, of Garnett, was the first President. Hon. John G. Otis was the first to call attention to the need of such an association in the winter of 1887.

A dairy school will be established in connection with the agricultural department of the Ohio State university. At a recent meeting of the Board of Regents sufficient funds for this purpose were set aside and Prof. Hunt authorized to purchase the necessary machinery.

Dr. A. Seibert, of New York, made thirty experiments with milk filtered through cotton. No cream is lost by the process, only germs and filth saved from use. Where plain milk gave 3,800 to 200,000 germs on culture plates, the filtered specimens would show only one-quarter that number. Filtration is found to be almost as good as sterilization.

Wells & Richardson Co. will give gold medals to the butter-makers scoring highest at the Iowa, Kansas, Nebraska, Minnesota and Missouri State conventions, with their color. They will be beautifully engraved, with winner's name, score, etc. This firm, following their customary generosity, are early in the field with this liberal offer to the butter-makers. We hope that their kindness will be appreciated and that there will be such an outpouring of goods made with their color that the winners thereof will win them through the hottest kind of competition. To be in the race it will be necessary only to use "The kind that has no mud."

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The Apiary.

About Bee-Keeping.

I am asked whether it pays to make a business of keeping bees, and I find it difficult to answer such a question in as short a way as it is stated, for a great many circumstances can have an influence on the results. Among these influences, I may mention the ability of the beekeeper to understand his business, and to give to his bees the necessary attention at the right time; the location in which the hives will be placed; the kind of hives to be used, etc. A great many persons imagine that to keep bees successfully it is but necessary to locate them on a quiet spot, to watch them during the swarming season, and to take the surplus of their harvest. Such were, indeed, the only conditions required before the invention of the movable frame hives—an invention which afforded to the beekeepers the means of studying more carefully the habits of bees, to obtain larger crops with less risks of losing them in winter.

From the above, it follows that a man who does not know the business of keeping bees ought to begin cautiously with but a few colonies, say, two or three, and study the habits of bees in books at first; then, in verifying the teachings of the books, by opening the hives and examining the combs, and by watching outside the going in and out of bees. Such a study will take at least one year. Then if the apprentice beekeeper finds some pleasure in the work he can buy a few more colonies and increase their number either by natural or artificial swarming, or by buying bees. But I advise him to go slowly.

The locality in which the bees are kept has also a large influence on the honey crop, yet it is but a question of larger or smaller profits; for an apiary surrounded with lindens, white clover, or alfalfa, and bordered with cotton lands covered with marshy flowers, has better chance to succeed than any other; but a skilled beekeeper can have some success, even in a poor location.

Another stumbling block in beekeeping is the kind of hive to use; above all advise a beginner not to buy patented hives, for most of these vendors of patent hives do not know the habits of bees, and sell inventions more injurious than useful.

As beginners are inclined to risk as little as possible, I think that I have to warn them against the use of small hives, which require more work, more feeding of bees for winter and spring and do not give as good results as larger ones. Although white clover is our only resource, our crop can compete for quantity with those of beekeepers using small hives located in more prosperous districts.

The conditions of success in beekeeping, after the selection of the hive, can be summed up in a few words: To know what to do and to do it in time.—Charles Dadant, in *Prairie Farmer*.

Do the Bees Need Salt?

On account of the avidity with which bees take salt, I had supposed it as necessary to salt my horses, hogs and cattle, says a writer. If one does not keep a salt trough for the bees they are apt to swarm about his stock and well troughs and many are drowned; but so long as salt water is given them they do not go or bother anywhere else. Where there are streams or ponds convenient, bees, especially if not salted, will resort to these for water; but even there are certain spots that seem to yield mineral or brackish water they go to suck. This shows their need of something more than ordinary pure water, and since they leave all other watering places for a salty one, we can fairly conclude that it is best to give it.

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.

Publishers' Paragraphs.

"A Story From Pullmantown," is the title of a new book just brought out by Charles H. Kerr & Company, Chicago. It is a graphic picture of situations in that much-talked-of town, and brings home to the reader views of some phases of our social existence which are not seen except by those who go where the scenes are enacted.

The Missouri State Horticultural Society will hold its thirty-seventh annual session at Trenton, December 4, 5 and 6, 1894. The Chicago, Rock Island & Pacific railway passes through Trenton and tickets can be had on the certificate plan by this route. The Quincy, Omaha & St. Louis road terminates at Trenton and offers transportation same as the Rock Island. A cordial invitation is extended to every lover of fruits and flowers to attend and participate in the work of the session. Write to Secretary L. A. Goodman, Westport, Mo., for program.

A NEW SINGING CLASS BOOK.—The old music publishing house of Chicago, S. W. Straub & Co., has just issued a new work for singing classes, day schools, conventions, etc. It is called "Straub's New Model." It contains an excellent elementary department and a vast amount of sacred and secular music of most excellent quality and in great variety. Mr. Straub has made thirty popular books. This is the latest and contains the elements of usefulness and popularity in a marked degree. 192 pages. Price 60 cents. One sample copy for examination, only 30 cents.

DR. ORR'S BOOK.—Readers of the KANSAS FARMER will be pleased to know that arrangements have been made whereby they can obtain this concise and well nigh invaluable "Farmer's Ready Reference or Handbook of Diseases of Horses and Cattle" in combination with this paper at a slight saving in cost.

The separate prices of these are:
Dr. Orr's Book.....\$1.50
KANSAS FARMER, one year..... 1.00

Total.....\$2.50
Two dollars sent either to the Kansas Farmer Co., Topeka, or to Dr. S. C. Orr, Manhattan, will secure both, making a saving of 50 cents.

STEWART'S "FEEDING ANIMALS."—The new experience of feeding wheat has stirred up lively thought among feeders on the broad question of comparative values of feeding stuffs, and still further to the proper composition of rations from the various materials available. The short articles which have appeared in the agricultural press in which this subject has been briefly treated have added to the knowledge derived from the experience of individual feeders, but they have also whetted the demand for fuller information and more elaborate explanations of the general problem of economical feeding. This subject, and others, is treated in a book of 558 pages, entitled "Feeding Animals," by Elliott W. Stewart. The book is prepared rather for the Eastern than for the Western feeder, but it is invaluable, and, diligently studied, should save many times its cost to any farmer. The price of the book is \$2, for which price it will be sent postpaid to any address by the Kansas Farmer Co.

The holiday numbers of *The Horse Review* for four years past have been marvels of excellence, and have proven invaluable factors in enabling that journal to maintain the commanding lead which it enjoys among publications devoted to the light harness horse. The Christmas Review for 1894 will excel anything heretofore attempted in this line and, as the Review always keeps its promises to the letter, we bespeak for the lovers of the trotter and pacer a magnificent treat. This number will be issued December 18, will be enclosed in a double cover that is one of the most unique and handsomely colored of which the lithographic art is capable. Stories, poems, anecdotes and special articles pertaining to the horse by the best obtainable writers will be found in great variety in this peerless number, while the illustrations of the famous trotters and pacers will be executed true to life by the greatest horse artist in the land and will include four double-page supplements suitable for framing. The statistical features of this issue are simply unapproachable, being a thorough compilation of all horses trotting in 2:30 or pacing in 2:25 or better during the season just ended, complete family tables of the leading sires, the best records of all ages and ways of going, etc. The price of this great issue is but 50 cents, but is sent to all subscribers on the Review list previous to December 18 in lieu of the regular issue for that week. Send to The Horse Review Co., 215 East Madison street, Chicago, Ill., for it now and insure receiving one, as only a few thousand will be on sale.

ECONOMICAL IRRIGATION.—To the farmers of to-day, one of the most important subjects for their consideration is irrigation. Those farmers who are located in a region where rain seldom or never falls are more interested than those located in humid climates; but even the latter can profitably

consider methods for irrigating their meadows, gardens and orchards. The expense of providing irrigation, for special uses, is sure to be justified by avoiding losses from drought, which often comes even in very humid regions, as well as the large increase in crops.

It has often been demonstrated that the yield from five or ten acres, well cultivated and properly supplied with water, will, within ten years, yield as much profit as ten times the number of acres equally well cultivated but without the necessary moisture. If the difference is so great in such a case, it is reasonable to suppose that a proportionate benefit may be derived by judicious handling of water on farms even in a humid region. A regularity of the supply of moisture is quite as important in one region as another, for even in a humid region it may be too great at one time and of little use, and too little at another time when it is most needed.



In Indiana the losses by drought are very large, and yet that State is rated as a very wet State.

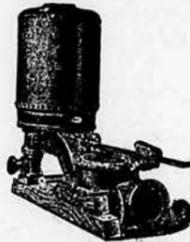
Irrigation has become recognized as a necessity where it has heretofore been pronounced unnecessary. Nearly everywhere, water that lies near at hand and goes to waste can be profitably utilized by an economical plan of irrigation. The water may lie on the surface in ponds or lakes, or run in streams that are perennial. The most economical plan of irrigation on a small scale is by automatic rams.

For many years the manufacturers of hydraulic rams endeavored to build them of greater capacity than the old style rams, but invariably failed, owing to being unable to retain air in the air chamber to absorb the concussion when placed under extreme fall or elevation, the rams invariably water-logging and pounding to pieces.

This question is solved by the construction of the Rife ram—with an automatic air supply, made possible by an elevated base, in constructing the ram—which enables the ram to feed air automatically at each stroke, thus replacing the air that exhausts at each stroke, giving them the highest efficiency and enabling the manufacturers to build them of any requisite capacity.

The illustration of a Rife ram at work will be found in this article, as well as a good illustration of the ram itself.

These rams can be placed under as much as thirty feet fall and will deliver water 500 hundred feet high, and the average annual cost of keeping them working day and night—year after year—is less than \$2, according to size used.



Every ram is absolutely guaranteed to deliver one-third of the water used, two and one-half times as high as the fall; one-sixth, five times, etc., and for every foot fall will elevate water thirty feet high.

Sizes vary from one to ten inches, and the Rife ram manufacturers make the largest rams in the world.

The large rams are used for irrigation, railroad tanks, small towns, and are meeting with great favor. The smaller sizes are used on farms, enables those in the country to have houses fitted with all modern bath and other city water appliances, at little or no expense for water, and they will elevate water for all other purposes, delivering it in any quantity, to any height, and at any distance.

The manufacturers claim to be able to deliver from two to five times as much water as any other ram, under exactly the same conditions, and will guarantee them to be perfectly satisfactory.

Any one interested in this subject should at once communicate with the Rife Hydraulic Engine Manufacturing Company, Roanoke, Virginia, who will send illustrated catalogues and estimates free.

MR. WILSON'S DEFEAT IN WEST VIRGINIA.—Mr. William L. Wilson, of West Virginia, who framed the tariff bill, the emasculation of which in the Senate by the majority under the leadership of Senators Gorman and Bruce has brought such disaster upon the Democratic party, has himself been defeated for re-election. The men who have framed tariff bills in recent years have usually had a hard time in their immediate future. Mr. Morrison, of Illinois, after passing his bill through the House, was defeated before his constituents; Mr. Mills, of Texas, with his bill, stirred up so

much enmity within his party that he failed to secure the Speakership of the House; Mr. McKinley, of Ohio, passed his bill through both Houses of Congress, and was then defeated for re-election at the polls by Mr. Warwick. The man who defeated Mr. Wilson is known scarcely at all outside of his own neighborhood. His name is Ashton G. Dayton, and he lives at Philippi. He is about 40 years old, and is by profession a lawyer. On the stump, and in a personal canvass among the people with whom he has always lived, he is quite formidable. He knows what to say to such people, and how to say it. For instance, when Mr. Wilson was traveling for his health this summer, and was entertained in London, Mr. Dayton was busily at work among the people. When he was asked where Mr. Wilson was, he replied: "He is dining with his friends in England. I am dining at home with mine." Then he told about the dinner given to Mr. Wilson by the merchants in London. These methods were cheap, but they proved effective when they had the practical aid of the rich corporations presided over by ex-Senator Davis, the father-in-law of Mr. Stephen B. Elkins. The West Virginia Legislature is Republican, and it is not unlikely that Mr. Elkins will succeed Mr. Camden in the United States Senate.—*Harper's Weekly*.

Only the Scars Remain.

"Among the many testimonials which I see in regard to certain medicines performing cures, cleansing the blood, etc.," writes HENRY HUDSON, of the James Smith

Woolen Machinery Co., Philadelphia, Pa., "none impress me more than my own case. Twenty years ago, at the age of 18 years, I had swellings come on my legs, which broke and became running sores. Our family physician could do me no good, and it was feared that the bones would be affected. At last, my good old mother urged me to try Ayer's Sarsaparilla. I took three bottles, the sores healed, and I have not been troubled since. Only the scars remain, and the memory of the past, to remind me of the good Ayer's Sarsaparilla has done me. I now weigh two hundred and twenty pounds, and am in the best of health. I have been on the road for the past twelve years, have noticed Ayer's Sarsaparilla advertised in all parts of the United States, and always take pleasure in telling what good it did for me."

For the cure of all diseases originating in impure blood, the best remedy is

AYER'S Sarsaparilla

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.

Cures others, will cure you

KANSAS TANNERY.

ESTABLISHED IN 1889.

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

M. C. BYRD, Lawrence, Kas.

MADE TO YOUR ORDER

SUITS OR OVERCOATS \$10 of imported cloths. We will make to your measure and allow you to select styles and material. We are direct importers—guarantee perfect fit, superior workmanship and finest trimmings. We pay Express Charges to any part of United States. Goods sent C. O. D. with privilege of examination. Write for free catalogue, samples and measuring instructions.

THE PROGRESS TAILORING CO., 262 and 264 State St., Chicago, Ill.

Sheriff's Sale.

In the District Court, Third Judicial District, Shawnee county, Kansas.

D. C. Nellis, Plaintiff, vs. Lydia Bell, M. L. Bell and George E. Curtis, Defendants. Case No. 16089.

By virtue of an order of sale, issued out of the District Court, in the above entitled case, to me directed and delivered, I will,

On Monday, November 26, 1894, at a sale to begin at 10 o'clock a. m. of said day, at the front door of the court house, in the city of Topeka, in Shawnee county, State of Kansas, offer for sale at public auction and sell to the highest bidder for cash in hand, the following described real estate and appurtenances belonging thereto, to wit:

The premises described in the mortgage set forth in plaintiff's petition as follows: In Shawnee county, Kansas, commencing at a point 2,100 feet northerly of the southwest corner of Jackson street and Gordon street, in the city of Topeka, and on an extended line of the west side of Jackson street and parallel with Kansas avenue; thence westerly at right angles 170 feet; thence northerly at right angles 75 feet; thence easterly at right angles 170 feet; thence southerly at right angles 75 feet, to place of beginning, in Shawnee county, Kansas.

Said real estate is taken as the property of said defendants and will be sold to satisfy said order of sale. The purchaser will be required to pay cash for said property at the time of sale. Given under my hand, at my office in the city of Topeka, Shawnee county, Kansas, this 17th day of October, 1894. D. N. BURDGE, Sheriff. D. C. NELLIS, Attorney for Plaintiff.

Makin Bros.' Hereford Sale.

The public sale of pure-bred Hereford cattle, property of the well-known Makin Bros., Florence, Kas., took place at their farm near Florence, last Thursday, November 15.

Everybody has heard of Makin Bros. and their famous Hereford cattle, hence in calling attention to the breeding of the animals sold it will bear favorable comparison with any in the country.

Col. S. A. Sawyer, of Manhattan, the genial and ever popular live stock auctioneer, made the dispersion at this offering.

The attendance was very good and nature could not have provided a much better day—warm and agreeable. The dinner, too, was excellent, and showed that the women folks understood the culinary art and method of pleasing as well as did the men folks in their handling of choice Herefords.

The detailed offerings were as follows: Miss Woodford 84003, calved April 21, 1888, by Prince Edward 7001, out of Topsy 12176, Lord Rowton 8662, went to Frank Tucker, Florence, Kas., for \$84.

Miss Stewart (Vol. 14), calved February 2, 1893, by Jurymen 30279, out of Miss Woodford 34003, she by Prince Edward 7001, to Frank Tucker, \$41.

Mayflower 5th (Vol. 14), calved March 21, 1893, by Good Luck 38282, out of Mayflower 4th 19141, she by Fortune 2080, to F. E. Dwelle, Cear Point, Kas., \$36.

Gay Lass 81204, calved October 30, 1886, by Dictator 1989, out of Gay 8953, she by Grove 3d 2490, to S. P. Johnson, Elk, Kas., \$46.

Rosa Washington 27837, calved March 28, 1886, by Washington 22615, out of Rosa 28411, she by The Emperor 12257, to G. W. Blackburn, Florence, \$100.

Rossini 2d 31465, calved March 26, 1887, by Washington 22615, out of Rossini 23588, she by Trelewack Grand Duke 17938, to F. Goffinet, Florence, \$62.

Rosalind 42938, calved January 2, 1890, by Jurymen 30279, out of Rossini 2d 31465, she by Washington 22615, to Frank Tucker, \$71.

Lady Rosa Vincent 47715, calved November 19, 1890, by Vincent 16691, out of Rossini 2d 31465, she by Washington 22615, to F. Goffinet, \$88.

Miss Rosa Good Luck 2d 52691, calved October 8, 1892, by Good Luck 38282, out of Rossini 2d 31465, she by Washington 22615, to Frank Tucker, \$50.

Lady Vincent 2d (Vol. 14), calved January 23, 1893, by Vincent 16691, out of Nevada 19446, she by Wilton Grove 19447, to Frank Tucker, \$41.

Lady Gladys Vincent 47713, calved October 19, 1890, by Vincent 16691, out of Snowdrop 5th 13597, she by Zulu Chief 13455, to Frank Tucker, \$56.

Miss Vincent 42935, calved August 12, 1889, by Vincent 16691, out of Peabody's Pride 28815, she by Dewsbury 2d 18977, to Frank Tucker, \$70.

Lady Julia Vincent (Vol. 14), calved February 18, 1893, by Vincent 16691, out of Julia Wilton 33534, she by Fitzroy 24509, to Roger Jones, Arvonia, Kas., \$40.

Miss Vincent 2d (Vol. 14), calved February 13, 1893, by Good Luck 38282, out of Miss Vincent 42935, she by Vincent 16691, to Frank Tucker, \$47.50.

Lady Francis 26451, calved May 23, 1886, by Joe Jefferson 19293, out of Edna 19293, she by Grove 4th 13733, to Barney McGovern, Florence, \$70.

Miss Rufus 42934, calved April 18, 1890, by Rufus 6562, out of Lady Francis 26451, she by Joe Jefferson 19293, to F. Goffinet, \$35.

Stately's Luck (Vol. 14), male, calved April 12, 1894, by Good Luck 38282, out of Stately 13th 42566, she by Washington 22615, to F. E. Dwelle, \$43.

Hawthorn Blossom 38283, calved November 2, 1888, by Vincent 16691, out of Mayflower 4th 19141, she by Fortune 2080, to Frank Tucker, \$71.

Peabody's Pride 28815, calved August 25, 1886, by Dewsbury 2d 18977, out of Cherry 4th 18258, she by Fortune 2080, to Frank Tucker, \$52.

Princess 2d 31222, calved December 20, 1886, by Prince Edward 7001, out of Strawberry 2d 13552, she by Orleans 2d 12606, to Frank Tucker, \$93.

Pearl Rufus 42937, calved April 26, 1890, by Rufus 6562, out of Pearl 3d 27846, she by Victorious 22597, to Frank Tucker, \$61.

Stately 13th A. (Vol. 14), calved February 24, 1893, by Jurymen 30297, out of Stately 13th 42566, she by Washington 22615, to Roger Jones, \$40.

Rachel 30116, calved August 10, 1887, by Hesiod 11975, out of Lady Wilton 15733, she by Lord Wilton 4057, to C. S. Cross, Emporia, \$101.

Verbena 2d 31470, calved April 14, 1887, by Blenheim 22606, out of Verbena 18529, she by Ethelred 18023, to Henry O'Neil, Florence, \$50.

Stately 10th A. 52703, calved May 8, 1892, by Good Luck 38282, out of Stately 10th

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

37945, she by Washington 22615, to Frank Tucker, \$110. Ellen Wilton 2d 42928, calved October 10, 1889, by Royal 16th 6459, out of Ellen Wilton 12110, she by Lord Wilton 4067, to G. W. Blackburn, \$100. Number of head sold, twenty-six; grand total, \$1,608.50; average, \$61.86.

Crossip About Stock. F. G. Tompkins, of North Topeka, breeder of White Plymouth Rocks exclusively, last week sold to W. O. Southwick, of Friend, Neb., one cock at \$20 and two hens at \$5 each. He also shipped a pen of five chicks to Senator E. O. Wolcott, of Colorado, for which he received \$25.

W. S. Tough & Son, managers of the Kansas City Stock Yards Co.'s horse and mule department, report the horse market during the past week as showing an increased volume of business all around. The receipts were larger and there was a greater attendance of buyers. Prices, however, ranged, as usually, distressingly low, except on good horses, and it takes an extra good horse to bring anything like an old-time price.

Elsewhere in this issue of the KANSAS FARMER the reader will find some points pertaining to the closing-out or dispersion sale of pure-bred Short-horn cattle that will be made by Mr. C. M. Garver, of Abilene, Dickinson county, Kansas, on Tuesday, December 4, next. On reference to his sale catalogue the reader will find a strongly-bred array of thirty-seven head that comprises his entire herd. The foundation stock came from the best herds in the West and were selected for their worth, regardless of price.

The demand for Ayer's Hair Vigor in such widely-separated regions as South America, Spain, Australia and India has kept pace with the home consumption, which goes to show that these people know a good thing when they try it.

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

SHIP Your Butter, Eggs, Poultry, Veal, Beans, Potatoes, Hides, Pelts, Wool, Hay, Grain, Green and Dried Fruits, or ANYTHING YOU MAY HAVE to us. Quick sales at the highest market price and prompt returns made. Write for prices or any information you may want. SUMMERS, MORRISON & CO., Merchants, 174 South Water St., Chicago, Ill.

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MARKET REPORTS. Kansas City Live Stock.

KANSAS CITY, Nov. 19.—Cattle—Receipts since Saturday, 8,074; calves, 308; shipped Saturday, 3,331; calves, 80. The general market was unchanged; cows a trifle weak. The following are representative sales: DRESSED BEEF AND EXPORT STEERS. 62.....1,469 \$5.55 118.....1,481 \$3.40 58.....360 4.60 16.....1,207 4.50 20.....1,148 4.30 19 mix.....1,188 3.90 5 hol's.....1,034 3.05 6 hol's.....940 3.00

WESTERN STEERS. 89 Col.....1,151 \$3.80 79.....1,093 \$3.15 74 fed Ariz.....1,002 3.10 5 Col.....1,024 2.50 7 N. M.....871 2.25

COWS AND HEIFERS. 12.....1,100 \$2.80 1.....1,120 \$2.75 1.....1,140 2.75 4.....905 2.75 18.....975 2.75 3.....1,120 2.65 30.....901 2.65 5.....1,040 2.63 1.....1,080 2.00 1.....900 2.00 1.....750 2.00 1.....760 2.00 6.....833 1.85 19.....674 1.80 1.....1,080 1.75 2.....1,010 1.75 3.....1,033 1.65 1.....1,030 1.65 2.....1,000 1.50 2.....1,200 1.40

WESTERN COWS. 38 Col.....922 \$2.20 317 Phd.....823 \$2.00 30.....805 2.00 154 Phd.....754 2.00 30.....751 2.00 89 Phd.....708 1.50

TEXAS AND INDIAN STEERS. 22.....1,060 \$2.90 29.....880 \$2.50 8.....1,092 2.30 12.....738 2.05

TEXAS AND INDIAN COWS. 14 Col.....1,032 \$3.35 22.....960 \$3.35 9 Col.....878 2.80 44.....798 2.85 9.....684 2.80 110.....802 2.75 85.....631 2.65 30.....798 2.60

STOCKERS AND FEEDERS. 59.....763 \$2.15 63.....710 \$1.93 6 mix.....585 2.05 28.....725 1.85 24.....616 2.00 28.....661 1.75 13.....738 1.75

Hogs—Receipts, since Saturday, 4,100; shipped Saturday, 599. The market was active and 10c higher, closing weak. The top was \$4.80 and the bulk of sales were \$4.45@4.70, against \$4.70 for top and \$4.35@4.60 for bulk Saturday. The following are representative sales: 78.....323 \$4.30 64.....259 \$4.80 61.....200 \$4.75 77.....234 4.70 27.....277 4.70 28.....269 4.70 74.....259 4.65 70.....270 4.65 27.....283 4.65 80.....200 4.65 84.....240 4.62 72.....257 4.62 62.....337 4.62 68.....235 4.60 66.....234 4.60 61.....264 4.57 28.....218 4.55 66.....219 4.55 61.....236 4.55 51.....196 4.55 61.....225 4.55 79.....215 4.55 75.....230 4.55 65.....208 4.50 96.....188 4.50 80.....217 4.50 69.....193 4.47 22.....220 4.45 65.....189 4.45 78.....185 4.45 75.....185 4.45 35.....163 4.45 83.....182 4.40 86.....153 4.32 31.....94 4.30 60.....120 4.30 120.....194 4.30 81.....189 4.30 60.....163 4.25 86.....161 4.25 84.....175 4.17 4.....225 4.00 51.....118 3.80 28.....108 3.80 15.....125 3.90 6.....148 3.60 24.....86 3.50 1.....370 3.50 34.....69 3.45 15.....164 3.25 1.....120 3.00 2.....125 2.50

Sheep—Receipts, since Saturday, 1772; shipped Saturday, 222. The market was active at steady prices. The following are representative sales: 6 lambs.....76 \$3.30 64 mut.....116 \$2.90 68 W. mut.....90 2.75 96 mut.....97 2.85

Horses—Receipts, since Saturday, 170; shipped Saturday, 49. The market was quiet.

Chicago Live Stock. CHICAGO, Nov. 19.—Hogs—Receipts, 50,000; official Saturday, 24,049; shipments Saturday, 3,629; left over, about 8,000; quality only fair; market active and firm; all parties buying; prices 10c higher. Sales ranged at \$1.10@1.60 for light; \$4.30@4.50 for rough packing; \$4.30@4.90 for mixed; \$4.55@5.05 for heavy packing and shipping lots; pigs, \$2.50@4.35.

St. Louis Live Stock. ST. LOUIS, Nov. 19.—Cattle—Receipts, 3,000; market steady; good cattle scarce; native steers, \$2.75@3.25; Texas and Indian steers, \$2.70@3.60; native feeders, \$2.40@3.70; Texas cows, \$1.50@2.45. Hogs—Receipts, 7,000; market active and 10c higher; heavy, \$4.00@4.80; mixed, \$4.25@4.70; light, \$4.40@4.50. Sheep—Receipts, 2,000; market higher.

Kansas City Grain. KANSAS CITY, Nov. 19.—Wheat by sample was in fair demand to-day and the offerings were a little larger than for some time past, though still limited to a few car lots. Prices were about 1/2c higher than on Saturday. There was some bidding for round lots in store. Receipts of wheat to-day, 64 cars; a year ago, 102 cars. Car lots by sample on track at Kansas City at the close sold as follows: No. 2 hard, 50@51c; No. 3 hard, 48@49c; No. 4 hard, 47@48c; rejected, 46c; No. 2 red, 50c; No. 3 red, 48@49c; No. 4 red, 47@48c; rejected, 46@47c. Corn sold slowly. The market was weak and prices as a rule were about 1/2c lower. Most of the sales were on scattered small orders. Bids for round lots were a little below the market. Receipts of corn to-day, 85 cars; a year ago, 151 cars. Sales by sample on track, Kansas City: No. 2 mixed corn, 11 cars 42 1/2c, 5 cars 42 3/4c, 7 cars 42c; No. 3, nominally 1/2c less than No. 2; No. 4 mixed, nominally 41@42c; No. 2 white, 6 cars 42 1/2c; No. 3 white, nominally 1/2c under No. 2 white. Oats were very firmly held, but the demand was light and sales were made slowly. Receipts of oats to-day, 11 cars; a year ago, 24 cars. Sales by sample on track, Kansas City: No. 2 mixed oats, 5 cars choice 31c, 1 car 30c; No. 3, nominally 29c; No. 4, nominally 27@28c; No. 2 white oats, nominally 33@33 1/2c; No. 3 white, nominally 30@31c.

Chicago Grain and Provisions.

Table with columns: Nov. 19, Opened, High'st, Low'st, Closing. Rows include Wh't-Nov, Dec, May, Corn-Nov, Dec, May, Oats-Nov, Dec, May, Pork-Nov, Jan, May, Lard-Nov, Jan, May, Ribs-Nov, Jan, May.

St. Louis Grain. ST. LOUIS, Nov. 19.—Receipts wheat, 45,758 bu.; last year, 43,156 bu.; corn, 43,916 bu.; last year, 152,600 bu.; oats, 34,100 bu.; last year, 52,800 bu.; rye, 700 bu.; barley, 3,755 bu.; flour, 5,320 bbls. Shipments, wheat, 4,873 bu.; corn, 1,350 bu.; oats, 580 bu.; flour, 7,743 bbls. Wheat—Cash, 52 1/2c; November, 52 1/2c; December, 52 1/2c; May, 57 1/2c. Corn—Cash, 45 1/2c; November, 40c; December, 40 1/2c; May, 46 1/2c. Oats—Cash, 30 1/2c; November, 30 1/2c; May, 32 1/2c.

Kansas City Produce. KANSAS CITY, Nov. 19.—Eggs—Receipts light; fresh eggs scarce; market quiet; strictly fresh, firm, 18c; limes eggs unsalable. Butter—Receipts fair; the market is firm and unchanged; extra fancy separator, 21c; fancy, 18@19c; fair, 16@17c; dairy, fancy, 16@17c; fair, 13c; choice country, 12@15c; packing dull and weak, 8@9 1/2c. Poultry—Receipts light; the market is firm; hens, almost unsalable, 4c per lb.; rough young roosters, 4 1/2@5c; small springs, quiet, 6c; old and young roosters, 15c; dressed chickens, 4@5c. Turkeys, receipts light; more active, firm, 6c per lb.; dressed turkeys, 6@7c. Ducks, firm, 5c per lb.; spring, 6c per lb. Geese, not wanted, dull, 4c; poor, unsalable; goslings, 5c. Pigeons, dull, 75c per doz. Green Fruits—Apples, receipts, light; market is quiet; mixed varieties, 25c per bu.; Willow Twig, Spy and Ben Davis, 45c; Winesap, 50c@60c per bu.; fancy Wagoner and Jonathan, 70c@75c per bu.; standard packed ranged from \$1.90@2.10 per bbl.; others, \$1.50@2.00. Lemons, quiet, steady, \$3.00@4.00 per box. Oranges, lower; Mexican, \$2.25@3.00 per box; Florida, more active, \$2.25@2.75. Grapes, 19@20c per basket. Cranberries, firm; Cape Cod, \$9.00 per bbl. Vegetables—Potatoes, receipts light; the market is firm; ordinary kinds, dull, 35@40c per bu.; Utah and Colorado, choice, 60c; common, 45@55c; sweet potatoes, red, 15@20c per bu.; yellow, 20@30c per bu. Cabbage, plentiful, firmer; 75@90c per 100; Michigan, \$18.00@20.00 per ton. Cauliflower, small, 45@50c per doz.; large, 75c per doz.

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Commencing Sunday, November 18, 1894, the MEMPHIS ROUTE, Kansas City, Fort Scott & Memphis Railroad, will inaugurate a through sleeping car line, Kansas City to Jacksonville, via Memphis, Birmingham, Atlanta and Macon, arriving at Jacksonville at 9:45 a. m., making close connections there for all points in South Florida. The cars in this line will be strictly first-class in all their appointments and will run every day in the week, leaving Kansas City at 10:30 a. m. For rates and full information, address J. E. LOCKWOOD, G. P. A., Kansas City, Mo.

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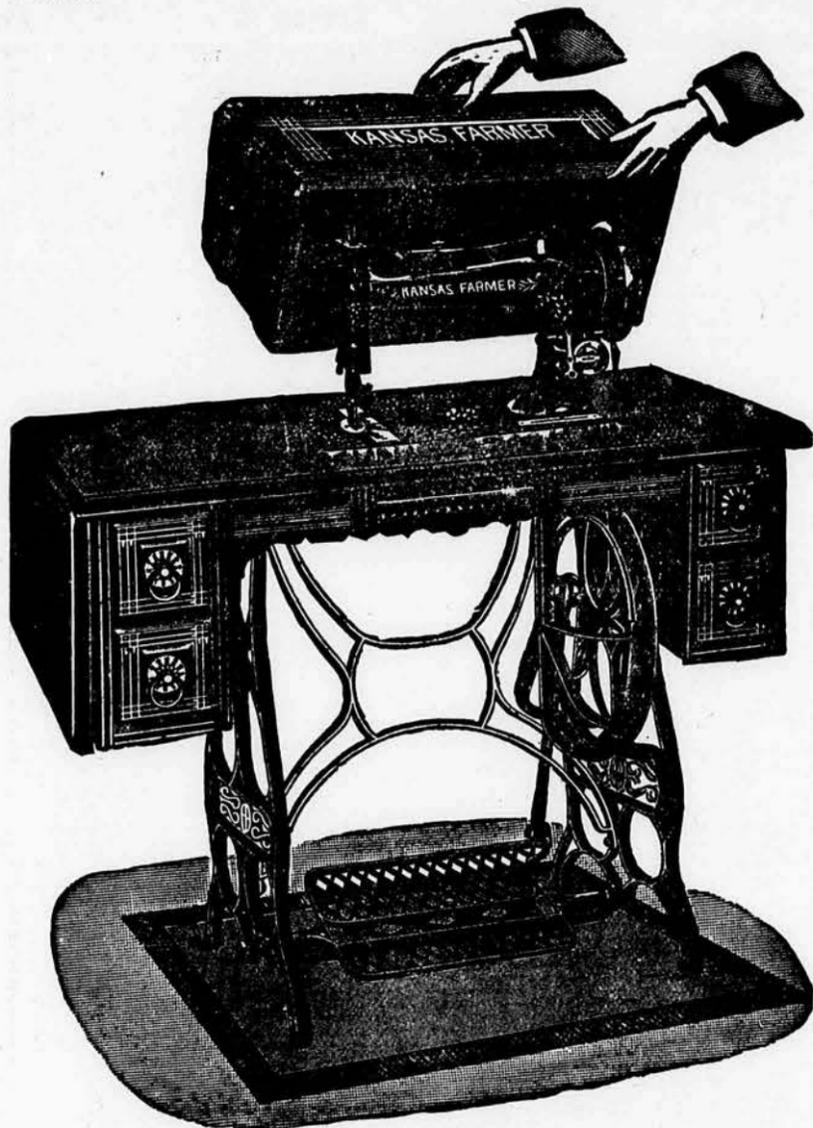
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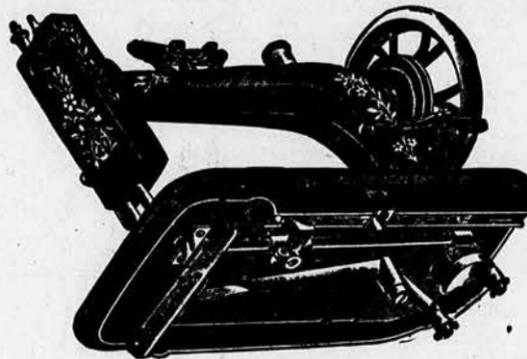
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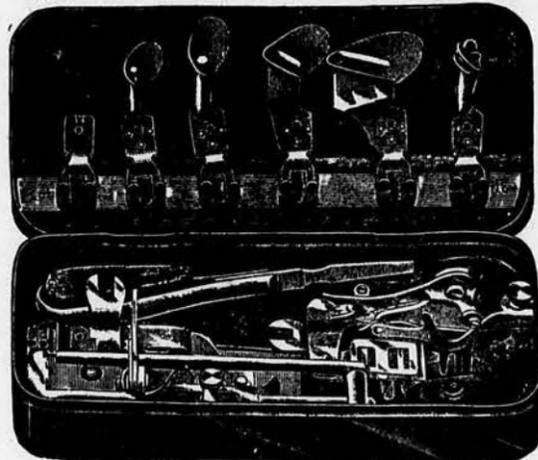


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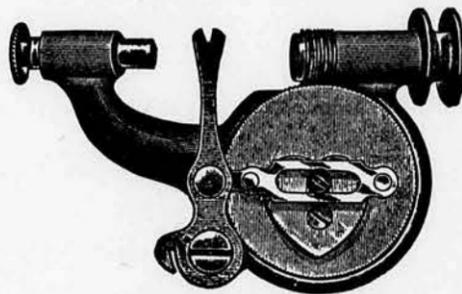


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FOR SALE—Choice bunch of thirty-five Galloway and Short-horn steers coming 2, four full-blood Galloway bulls coming 2. Inquire of Oscar Tammier, one mile northeast of Eldorado, Oklahoma Ter.

CALIFORNIA FRUIT AND FARM LAND—For trade for Kansas land. J. S. Brooks, Delano, California.

WE CAN FURNISH CORN, OATS, MILL FEED, bran, flour, ground wheat or feed wheat in car lots. Write or wire. Hodges & Seymour, Wichita, Kas. Mention Kansas Farmer.

FOR SALE CHEAP—Fifty to sixty well-bred Shropshire ewes and lambs, as feed is scarce. R. Fowles, Wakefield, Kas.

BLACK MINORCAS—Both sexes, Northrup strain. For sale at farmer's prices. A few to exchange for S. C. White Leghorns. J. B. Cotton, Stark, Kas.

WE MAKE A GOOD FARMER'S SPRING WAGON, two lazy backs and let-down end-gate, for \$65. Warranted. Kinley & Lannan, 424-426 Jackson street, Topeka.

WANTED—A farm near Topeka. Dr. H. W. Roby, Topeka, Kas.

BELOW THE BLIZZARD LINE—Fruit and stock farms for sale. Enclose stamp for price list, terms, etc. Hynson & Eimore, Mammoth Springs, Ark.

SEND TO-DAY FOR FREE SAMPLE COPY OF Smith's Fruit Farmer, a practical Western horticultural journal, 50 cents a year. Smith's Fruit Farmer, Topeka, Kas.

"HOW TO RAISE PIGS"—A free book to farmers, postpaid. J. N. Reimers, Davenport, Ia.

WANTED—Buyers for Large English Berkshires. One hundred pure-bred pigs, farrowed in March and April, are offered for sale at from \$10 to \$15 each. Farm two miles west of city. Riverside Stock Farm, North Topeka, Kas.

FRESH ALFALFA SEED. Crop of 1894. MCBETH & KINNISON, GARDEN CITY, KANSAS.

POLAND-CHINA MALES—Tecumseh, Square Business strain, cheap. J. D. Ziller, Hlawatha, Kas.

SUNNYSIDE—YAKIMA VALLEY.—Irrigated lands. Produce apples, pears, prunes, peaches, hops, alfalfa. Worth \$30 to \$600 per acre. "Twenty acres enough." For map, prices, particulars, write F. H. Hagerty, Sunnyside, Washington.

TIMBER TO BE HAD FOR THE CLEARING.—A tract of timbered land in south Missouri must be cleared for fruit. Heavily timbered with oak suitable for lumber. No underbrush. Railroad passes through land. A reliable tenant with two good teams wanted on same place. Address "C. C. G.," care KANSAS FARMER.

RED KAFFIR CORN FOR SALE.—One and one-half cents per pound. J. R. Cotton, Stark, Kas.

CLOSING OUT—Entire stock of Hamburgs, incubators, brooders, bone-mill, clover-outter, etc., on account of death of wife. J. P. Lucas, Topeka, Kas.

WANTED—To trade a \$50 scholarship in Pond's Business college for a good milch cow. W. B. Roby, 816 west Eighth St., Topeka.

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

THE STRAY LIST.

FOR WEEK ENDING NOV. 7, 1894.

Sumner county—Chas. Sadler, clerk.

HORSE—Taken up by S. H. Riley, in Guelph tp., P. O. Portland, October 1, 1894, one bay horse, weight 800 pounds, black mane and tail, white snip on nose, white hind feet, wire out on left fore foot; valued at \$25.

Montgomery county—J. W. Glass, clerk.

HORSE—Taken up by C. C. Brooks, in Rutland tp., September 1, 1894, one black horse, sixteen hands high, 7 years old, star in face; valued at \$30.

HORSE—By same, one roan horse, 4 years old, fourteen hands high, right hind foot white; valued at \$20.

Rawlins county—A. K. Bone, clerk.

MARE—Taken up by Edwin Berry, in Rotata tp., September 21, 1894, one dark iron-gray mare, 2 years old, white spot in forehead, fourteen hands high, weight about 800 pounds.

COLT—By same, one black horse colt, 1 or 2 years old last spring, white spot in forehead, white on end of nose, left hind ankle white, thirteen hands high, weight about 700 pounds.

FOR WEEK ENDING NOV. 21, 1894.

Labette county—J. F. Thompson, clerk.

MULE—Taken up by H. E. Bradbury, in Elm Grove tp., October 24, 1894, one black horse mule, 5 years old, some small white spots on each side of neck; valued at \$25.

HORSE—Taken up by Michael Hahn, in Hackberry tp., October 31, 1894, one bay gelding, 6 years old, left ear split near top; valued at \$20.

MULE—Taken up by D. M. Miller, in Hackberry tp., October 26, 1894, one brown horse mule, 12 or 14 years old, fourteen hands high, blind in right eye; valued at \$10.

MARE—Taken up by C. E. Fox, in Hackberry tp., November 9, 1894, one bay mare, 11 years old, fifteen hands high, slit in left ear; valued at \$25.

Shawnee county—Chas. T. McCabe, clerk.

COW—Taken up by F. H. Schone, in Monmouth tp., one red cow, about 7 years old, branded H on left hip, small star in forehead; valued at \$23.

Greenwood county—J. F. Hoffman, clerk.

STEER—Taken up by M. P. Mitchell, in Jamesville tp., November 12, 1894, one pale red steer, 2 years old, crop off each ear and right ear split.

Woodson county—H. H. McCormick, clerk.

STEER—Taken up by Owen Dwinney, P. O. Yates Center, one red and white yearling steer; valued at \$12.

Leavenworth county—J. W. Niehaus, clerk.

MARE—Taken up by J. I. Gardner, in Fairmount tp., P. O. Baselor, October 13, 1894, one bay mare, 8 years old, scar on right side of head, scar on each fore leg above the knees, hind feet white; valued at \$12.

Kansas Redeemed!

As a result business is "picking up" wonderfully and prices are looking better in all lines. In Farm Property there will be no exception. Prices that now range are exceeding low—they are bound to advance, and lucky is he who gets a farm in this section of Kansas between this and spring. I have hundreds of way down bargains. First come, first served. You can better yourself now and have money left for other use. Write me now or come and see. Car fare refunded to all purchasers. Address WALTER LATIMER, Garnett, Kansas.

Farmers, Spay Your Sows

For fall fattening. Also your Nannies, Ewes and Gip Dogs, with Howsley's Spaying Mixture. Easily used, quick, absolutely certain and safe. Price, \$3 per bottle; \$2 half bottle. One bottle spays one hundred head. Write for testimonials and particulars.

THE HOWSLEY SPAYING CO., Kansas City, Mo.

Warts Removed

WITHOUT CAUSING SORENESS. They disappear in a few days. This remedy removed over 300 from the teats of a Jersey cow and milked her every day. In five days they were nearly all gone. Equally good for man or beast. Harmless and safe. Have used this remedy for seven years and never had a failure. Warranted in every case or money refunded. Box by mail, 50c. Large discount to agents. T. J. PUGH, Fullerton, Neb.

The Kirkwood Steel Wind Engine

has been in use since 1882. It is the pioneer steel mill. It has beauty, strength, power; it is THE BEST, hence the mill for you to buy. Thousands have them! Our Steel Towers have four angle steel corner posts, substantial steel girts and braces—not fence wire. They are light, strong, simple in construction, much cheaper than wood and will last a lifetime. Our mills and towers are ALL STEEL and fully guaranteed.

Write for prices and circulars. Address, mentioning this paper, KIRKWOOD WIND ENGINE CO., Arkansas City, Kas.

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& Box Combined. Runs 8 days, keeps perfect time & furnishes constantly all the most charming & popular tunes. Plays anything from a simple song to a difficult waltz or operatic selection. To introduce it, one in every county town furnished reliable persons (either sex) who will promise to show it. Enclose a stamp to Inventor's Co., New York City, P. O. Box 2352.

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CLOSING-OUT SALE OF FIRST-CLASS SHORT-HORN CATTLE,

TUESDAY, DECEMBER 4,

At 10 o'clock a. m., at my farm, 2 miles east of Abilene, Dickinson Co., Kas.

Wishing to spend some time in the East, I have decided to offer my herd of Short-horns at public sale, without reserve. The herd numbers thirty-seven head, all registered, consisting of ROSE OF SHARONS, Rosemarys, Adelalides, Water Lillies, etc. The Cruickshank bulls, My Lor 1 and the Golden Drop bull Goldfinch, bred by Col. W. A. Harris, have been at the head of the herd. A number of the cows were the tops of the two last inter-State sales held in Kansas City, and are representatives of some of the best herds of Short-horns in Missouri.

Terms:—One year's time without interest on approved notes, if paid when due; if not paid when due, 10 per cent. from date. Eight per cent. off for cash. Free lunch at noon. Send for catalogues.

COL. S. A. SAWYER, Auctioneer. C. M. GARVER, Abilene, Kas.

Feeders, Attention!

WHAT ARE YOU DOING? FEEDING WHEAT INSTEAD OF CORN? EXPECT TO MAKE A HATFUL OF MONEY?

We hope you will, and to help you do it we offer a friendly word of warning. Those who know, say wheat fed to farm animals acts as an astringent, and causes constipation; therefore something else must be combined with the wheat to overcome this difficulty. You cannot put on flesh and fat unless the digestive organs are in a healthy condition, so that the food can be easily and properly assimilated. This can be secured by feeding an article that is not only a natural food but also a regulator of the system. If you will feed OLD PROCESS GROUND LINSEED CAKE (OIL MEAL) you will find that your animals will eat more wheat, grow faster, take on flesh and fat faster, keep in good health, and put money in your pocket. Hog feeders particularly should give heed to these suggestions.

For prices and further particulars, address

TOPEKA LINSEED OIL WORKS, Topeka, Kansas.

HORSES! SOLD AT AUCTION.

On Tuesday, Wednesday, and Thursday of each week. Private sales every day. At the KANSAS CITY STOCK YARDS, HORSE & MULE DEPT.

THE LARGEST & FINEST INSTITUTION OF THE KIND IN THE UNITED STATES. 85107 head handled during 1893. All stock sold direct from the farmer, free from disease, and must be as represented or no sale. Write for market report, mailed free. Address, W. S. TOUGH & SON, Mgrs., Kansas City, Mo.

THE UNION STOCK YARDS, CHICAGO.

(Consolidated in 1865.) The largest live stock market in the world. The center of the business system from which the food products and manufactures of every department of the live stock industry is distributed. Accommodating capacity: 50,000 cattle, 300,000 hogs, 30,000 sheep, 5,000 horses. The entire railway system of Middle and Western America center here, rendering the Union Stock Yards the most accessible point in the country. The capacity of the yards, the facilities for unloading, feeding and reshipping are unlimited. Packing houses located here, together with a large bank capital and some one hundred different commission firms, who have had years of experience in the business also an army of Eastern buyers, insures this to be the best market in the whole country. This is strictly a cash market. Each shipper or owner is furnished with a separate yard or pen for the safe keeping, feeding and watering of his stock, with but one charge of yardage during the entire time his stock remains on the market. Buyers from all parts of the country are continually in this market for the purchase of stock cattle, stock hogs and sheep. Shipper should ask commission firms for direct information concerning Chicago markets.

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The Kansas City Stock Yards

Are the most complete and commodious in the West and the second largest in the world. Higher prices are realized here than further east. This is due to the fact that stock marketed here is in better condition and has less shrinkage, having been shipped a shorter distance; and also to there being located at these yards eight packing houses, with an aggregate daily capacity of 9,000 cattle, 40,000 hogs and 4,000 sheep. There are in regular attendance sharp, competitive buyers for the packing houses of Chicago, Omaha, St. Louis, Indianapolis, Cincinnati, New York and Boston. All of the eighteen railroads running into Kansas City have direct connection with the yards.

Table with 6 columns: Cattle and calves, Hogs, Sheep, Horses and mules, Cows. Rows include Official Receipts, 1893, Slaughtered in Kansas City, Sold to feeders, Sold to shippers, Total sold in Kansas City.

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ENTERPRISE TINNED MEAT CHOPPERS ARE THE BEST IN THE WORLD. Meat Chopper. FOR CHOPPING Sausage Meat, Mince Meat, Hamburg Steak, for Dyspeptics, Tripe, &c., &c. For Sale by the Hardware Trade. The Enterprise Mfg Co. Third & Dauphin Sts., Philada. SEND FOR CATALOGUE, FREE.