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BREEDERS' DIRECTORY.

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TOPEKA HERD OF LARGE BERKSHIRES.—Young boars ready to use. Choice weanling pigs. Mature sows bred. H. B. COWLES, Topeka, Kas.

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ASHLAND STOCK FARM HERD OF THOROUGHbred Poland-China hogs, contains animals of the most noted blood that Ohio, Indiana and Illinois contains. Stock of both sexes for sale sired by Bayard No. 4683 S., assisted by two other boars. Inspection of herd and correspondence solicited. M. C. Vansell, Muscotah, Atchison Co., Kas.

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JAM'L JEWETT & SON, Proprietors Merino Stock Farm, Lawrence, Kas.—breeders of SPANISH MERINO SHEEP. Forty rams for sale. Correspondence solicited.

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H. H. HAGUE, Walton, Kas.—breeder of recorded H. Poland-China hogs, Cotswold and Merino sheep. Twenty varieties of land and water fowls. Stock for sale. Eggs in season. Stamp for reply.

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The Stock Interest.

A SURE CURE FOR BOTS.

There are such erroneous opinions current among farmers and many horse owners concerning the bot fly and the depredations it is supposed to commit upon the horse that a more careful study should be made of it. Of the insect parasites and tormentors a correspondent of the *Farmer's Home* claims that the gad fly is of the most importance.

This fly attacks the animal while grazing or at work late in the summer, its object being, not to derive sustenance, but to deposit its eggs. This is accomplished by means of a glutinous excretion, causing the eggs to adhere to the hair. The parts selected are chiefly those of the shoulder, base of the neck and the inner part of the fore legs, especially about the knees, for in these situations the horse will have no difficulty in reaching the eggs with its tongue. When the animal licks those parts of the coat where the eggs have been placed, aided by warmth, it hatches the egg, and in less than three weeks' time from the depositing of the eggs the larvæ have made their escape. In the form of maggots they are next transferred to the mouth, and ultimately to the stomach of the animal along with the food and drink. A great many larvæ perish during the process, some being dropped from the mouth and others being crushed in the food during mastication. Out of the many hundreds of eggs deposited on a single horse, hardly one out of fifty of the larvæ arrives within the stomach. Notwithstanding this waste, the cutical portion of the interior of the stomach may become completely covered with bots. The bots become anchored in this situation chiefly by means of two large cephalic hooks. After the bots have attained perfect growth, they voluntarily loosen their hold and allow themselves to be carried along the alimentary canal until they escape. In all cases they sooner or later fall to the ground, and when transferred to the soil, they bury themselves beneath the surface and undergo transformation. After remaining in the earth for a period of six or seven weeks, they emerge from their pupal-cocoons a perfect winged insect—a gad fly. From this it will be seen that bots ordinarily pass about eight months of their lifetime in the digestive organs of the horse.

The opinion, almost universally entertained, that bots frequently cause colicky pains, is held by many of the best veterinary surgeons to be erroneous. It is very common to hear bystanders declare that almost every horse with abdominal pains "has the bots." Almost all horses in the country, as well as in the city, during their first year have the bots. It is in exceptionally rare instances that they produce any appreciable symptoms or disturbances.

Where bots attempt to fasten themselves to the sensitive lining of the bowels in their outward passage they may cause irritation and expressions of pain in the form of colicky symptoms, but this they seldom do.

The opinion often expressed at post mortem examinations, when the stomach is found to be ruptured, that "the bots have eaten through the stomach," is a mistake. Bots never do this; the rupture is due to over-distention of the viscus with food or gasses.

Some writers on veterinary medicine have even urged that bots, by their presence, stimulated the stomach secretions, and were thus actually an aid to digestion. This opinion is about as far from the truth as the more general one referred to in the foregoing concerning the harm they do.

Bots may, and probably do, when in large enough numbers to be fastened to the true digestive portion of the stomach, interfere, to some extent, with digestion; the animal may not thrive, the coat stares, and emaciation may follow. To prevent bots in horses it is necessary to watch for their eggs on the legs and different parts of the body of the horse in the late summer and autumn. These eggs should

be carefully scraped off and burned. Horses should not be watered from stagnant ponds, as they frequently swallow the ripening eggs with such water.

If bots follow their natural course or stages of existence they loosen their hold on the intestines during May and June. They are then expelled in large numbers, and horse owners, noticing them in the manure, hasten to the conclusion that their horses "have the bots." In the natural course of events nature is doing the best thing possible in the circumstances. Bots seldom produce evil effects. Not more than once in ten thousand times do they cause colicky symptoms.

A sure remedy when bots is the real ailment of the animal is given below. When a horse is attacked with bots it may be known by the occasional nipping at their own sides, and by red pimples or projections on the inner surface of the upper lip, which may be plainly seen by turning up the lip.

A sure remedy for bots is new milk, two quarts; molasses, one quart; mix and give the horse the whole amount. Fifteen minutes afterwards give very warm sage tea, two quarts. Thirty minutes after the tea give one pint of melted lard, to which has been added three or four ounces of salt; if you have no lard at hand, dissolve a double handful of salt in three pints of warm water.

The cure will be complete, as the milk and molasses cause the bots to let go their hold, the tea puckers them up, and the lard carries them entirely away.

Keep Some Sheep.

There is a place on every farm for a few sheep, especially on the hilly ones which are difficult to cultivate. The dairy farmer should test his cows, sell the non-paying ones and replace them with sheep. It will cost no more to keep eight sheep than one cow, and at the average of the cows of the State as a basis, the sheep will be found more profitable. If you are going to put a flock of sheep on the farm, begin slowly and cautiously. Buy two or three full-bred ewes and a thoroughbred sire as a nucleus. Decide upon the breed you wish to keep, then grade up the remainder of the flock by using the thoroughbred sire on the common sheep. In this way in a few years a fine flock may be secured. Make mutton the primary object, and at the same time strive to put as much wool on the back of the sheep as possible, remembering that the foods which produce the most and best mutton also produce the best wool. The best foods are early-cut clover hay, brewers' grain, ground oats, wheat bran, wheat middlings and others of like character. Give the sheep the best of care and warm quarters, as no other farm animal so keenly feels the cold and storm. Make the barns light and well ventilated, and have water and salt free of access. Do not put more than fifty sheep in one pen, and wash and shear in June.—*Farm and Home.*

Among Canadian Flock-Masters.

"I spent two weeks in June among the Canadian flock-masters," writes Geo. McKerrow, of Wisconsin, "selecting my annual importations of registered sheep. I found them busy getting in the turnip crop, which, on many stock farms, is one of the main crops. Quite a number were also preparing for rape, and some had safon tares, oats, peas and other green crops growing, to cut and feed to their sheep in the hot, dry weather, or to feed the housed sheep being fitted for the World's Fair, where Canadians expect to win their share (and I imagine some of them think this will be nearly all). While they have some very good sheep which will be well brought out, they may be disappointed when they see the exhibits from the States, which promise to be immense. I selected three car loads of choice sheep and came home happy and leaving them in the same condition. Two questions were almost always propounded. One, 'Who is going to show sheep at Chicago, and who will judge them?' The other, 'When will the duty be taken off barley?' On my arrival home I

found a letter from Mr. Miller, my agent in England, telling me that the lot of show Oxfords bought by me of Mr. Brassey last April, for importation to show at Chicago and other leading fairs this fall, had been very successful at the three largest English shows, including the Royal—having won 'first' all through. A pen of three yearling ewes being champion pen at Oxfordshire over all breeds, and the yearling ram, Hethrop Prince, winning the same honor over all the rams, which he has continued to do since Mr. John Tredwell, a leading breeder, offered £120 for him to place at the head of his flock. But I concluded he was none too good to head a Wisconsin flock and to be a stable companion to Royal Warwick, last year's great winner, who was pronounced by the *Breeders' Gazette* and the best judges in the country the sensational ram of the season. Come and see them at Jackson park after September 25, with several good ones that have won first honors at leading English and American shows of '91, '92 and '93."

Pasturage and Pork-Making.

"Pasturage is the key to profitable pork-making," writes F. D. Coburn, of Kansas City, Kas., to an exchange. "Saying this implies no disparagement or belittling of any others of the various essential items entering into the rearing and maturing of swine. It is the green stuff raised with little cultivation and harvested in the seasons of dews and warm sunshine by the pigs themselves which, in connection with other appropriate eatables and drinkables, comes nearest to giving the farmer what a large share of humanity covets, viz., something for nothing. It is a strong statement to make in the face of conditions as they exist, but no less true, that no man is rightly equipped for hog-raising who has not arrangements whereby the growing animals can have the range of ground where there is grass, clover or other succulent herbage.

"Other methods of keep may be and too frequently are substituted for this, but they are artificial and expensive if not more or less unhealthful, while this is natural, inexpensive and confessedly healthful. A weak point in a great deal of the general farming is in giving too great a proportion of time and attention to the corn field and the increasing of its acreage, when if greater effort was made in the direction of having more ground seeded to a variety of the best grasses more and better pork would be made with less outlay. Men of scientific attainments, who have been in position to make careful tests along these lines, have invariably reached the same conclusions as the more observant farmers and feeders, to the effect that corn, however cheap, is by no means the cheapest material for meat-making.

"As applied to pork-making, a fair average of their experiments is seen in the following table. The estimate of six tons as the product—green—of an acre of clover is quite low, as with anything like a favorable season and fair stand the crop would weigh more. Alfalfa and its capacity for pork-production is not represented in the table, but it is well known that of all green foods for hogs, alfalfa is the best. It will also produce twice or three times the amount of green food to the acre that is credited to clover, the production of dry hay not infrequently amounting to six tons. The table is on the basis of four pounds of grain or fifteen pounds of green clover making a pound of pork, and probably most of us would consider the former a little high—not higher than has been reached, but higher than the average of us go.

	Gross product per acre—lbs.	Pork per acre—lbs.	Value at 4c. lb.
Wheat	900	225	\$ 9 00
Barley	1,680	420	16 80
Oats	1,320	330	13 20
Corn	2,240	560	22 40
Peas	1,500	375	15 00
Green clover	12,000	3000	32 00

"If this is approximately true in practice, it is evident that an acre of clover is worth for pork-making as much as one and one-half acres of good oats, or three and one-half acres of average wheat. The comparative expense of producing these can be seen by a blind man.

"No argument is made here in favor

of summering shoats on grass exclusively, although good alfalfa pasture will nearly meet all requirements; they need grain to go with the grass and grass to go with their grain; something less heating and concentrated than corn alone and less bulky and less watery than grass. Nature asserts in many ways that a single food, whatever it may be, is not sufficient to best sustain the beasts of the fields or birds of the air, and it generally turns out that the man who persists in opposition to this idea gets worsted. Those who have not fenced pastures for hogs to range in can, during the summer, supply them with green food, such as alfalfa, clover, green corn, peas, etc., cut and hauled, with almost as good results, but the labor is greatly increased."

Cattle Notes.

A juicy, tender young beef ought to be one of the good things a grazing farm provides for family use every fall.

Profit in breeding cattle depends greatly upon the rapidity and constancy of gain. When cattle go off their feed for a few days it means great loss.

If any cattle man doubts the efficacy of good breeding, let him watch the difference in the way well-bred cattle and common stock sell in the market.

No matter how plentiful beef cattle may be, the best are always scarce. Look at the market report to-day, and see if this is not true. Moral: There is always room and profit at the top.

It is a bad plan to get an idea in your head that there is only one good breed of cattle, and that you must have that at any price. It is not so much the breed as it is that you have a breed, and not non-descript.

The corned and smoked beef will provide many excellent meals through the year and save the cost of the entire animal where the meat cart has been liberally patronized. Home production and home marketing are among the best methods of laying up a competence.

Cattle may be kept alive on almost anything—on a dried-up pasture in the fall or on a straw stack in the winter; but men who practice such methods are not stockmen, nor even farmers, but mere robbers, who try to get something for nothing from both their stock and the soil.

Sheep Notes.

The big, thrifty lambs will sell readily and handsomely. It is a wonder more don't go into it.

If the ewes are kept too fat before lambing they will secrete too much milk; and this will cause caked bag.

Keeping sheep over-fat at any time is injurious, and should always be avoided, and especially the breeding animals.

Professor Henry shows by experiment that it costs \$2.61 to produce 100 pounds of gain with lambs, and \$3.03 to produce the same gain with pigs of about the same age.

The number of sheep annually killed by dogs is something appalling. It is said to exceed 700,000, with a value exceeding \$3,000,000. And how much are the dogs worth?

The sheep is one of the small farmer's best servants. It not only produces wool and mutton, but it keeps his fields fertile with manure, and no farmer should be without at least a small flock.

A Suffolk ewe was shown at the Royal show the past season which had five living lambs at her side twelve weeks old, all her own, and having had no other nourishment than that supplied by the dam.

Sheep are the most helpless animals in deep snow that exist. At every considerable snowfall or drifting, snow should be shoveled out of their accustomed walks and resting places or be tramped down solid.

Timidity is a characteristic of the sheep that should not be tampered with. A wise sheepkeeper will use every means to calm his sheep and keep them so. No cud-chewing animal can be kept in a state of excitement and be profitable to its owner.

See that the sheep do not fall off in flesh. If they lose in weight and appearance the wool will fall and perhaps a cough will attack the flock. In late winter the ewes will be weak, and sickly or dead lambs will be the result. It pays to feed the sheep well.

Within the last thirty-five years the average weight of fleeces produced in the United States has doubled. This is due to the fact that the sheep have been better cared for in every way than formerly and more intelligently managed, especially with reference to breeding.

If you are tired and never hungry, Hood's Sarsaparilla will make you feel strong and well, and give you a hearty appetite.

Get up a club for the FARMER.

Agricultural Matters.

GOVERNMENT CROP REPORTS FOR MONTH OF JULY.

Corn.—The July returns to the department for corn relate to the area sown and present conditions of the growing crop. In the comparison of breadth the acreage harvested last year is used as a basis. The returns show an increase of area planted this year over that of last year of a little over three points, the average being 103.3, as compared with the area harvested in 1892. This increase in area is the result of the plowing up of wheat lands and sowing to corn and other crops. This makes the increased area devoted to this cereal a little over 2,000,000 acres. The largest proportional increase is in the Ohio, Mississippi and Missouri valleys. In the seven surplus States, which furnish the principal part of our surplus corn, the percentage of acreage this year is as follows: Ohio, 99; Indiana, 103; Illinois, 105; Iowa, 105; Wisconsin, 102; Missouri, 103; Kansas, 110; Nebraska, 112.

The condition of the crop is returned at 93.2. This is the highest July average reported by the department since 1887, when the condition stood at 97.7. The condition this year is a little above that reported in July, 1891, when the largest crop ever grown was made. The averages in the principal States are: Ohio, 93; Indiana, 96; Illinois, 92; Iowa, 98; Missouri, 92; Kansas, 93; Nebraska, 94.

The conditions of corn for ten years on July 1 is shown in the following table:

Table showing corn conditions for various states from 1884 to 1893. Columns include State, 1884, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893.

Oats.—The condition of oats remains about the same as it stood last month, being 88.8 as against 88.9 June 1. This is the highest condition since 1889, when it stood at 94.1, declining to 81.6 in 1890, advancing to 87.6 in 1891 and dropping to 87.2 in 1892. In July, 1886, the condition was 88.8, the same as the present month.

Rye.—The July returns show a slight advance in the condition of rye from 84.6 on June 1 to 85.3 this month. Winter rye stands at 83.8 and spring rye at 89.0, the combined average, as stated above, being 85.3.

Barley.—Condition of barley, like that of oats and rye, has changed but little during the month. The average is 88.8 against 88.3 on the 1st of June. The condition is the result of a cold, backward spring, with drought in some sections and too much moisture in others.

Wheat.—The condition of winter wheat is reported at 77.7 against 75.5 on June 1, a gain in the intervening time of 2.2 points, which, however, was more than offset by the decline in condition of spring wheat, the average percentage of both winter and spring wheat being 76.6 for July as against 78.8 for June. The season has been unusually unfavorable for wheat, and conditions have been low at every report.

In parts of Kansas and Illinois the

crop entirely failed, and the general condition in both States has been persistently low. Owing to the unfavorable season much of the area seeded to wheat last fall has been, as was shown in the June report, plowed up and devoted to corn and other crops. This reduction of area took place in the best wheat-producing States, i. e., in Kansas, Illinois, Missouri and California. The decrease of acreage alone, as compared with last year, is 10.2 points.

In the principal winter wheat States the present returns are compared with those for June and for July in recent years, as follows:

Table showing wheat conditions for various states from 1893 to 1891. Columns include State, 1893 (July, June), 1892, 1891.

Spring wheat conditions declined during the month from 86.4 on June 1 to 74.1 on July 1. The present condition in the principal spring wheat States, compared with the return for June and for July of 1891 and 1892, is presented in the following table:

Table showing spring wheat conditions for various states from 1893 to 1891. Columns include State, 1893 (July, June), 1892, 1891.

Potatoes.—The average for the country is 101.1 per cent. of the acreage of last year. The returns of condition averaging 94.8 for the whole country, and being not far from the average of July returns for a series of years, taken in connection with this normal increase of acreage, would indicate, if dependence could be placed upon the continuance of an average season, a crop well up to the average.

Clover.—The general average for the condition of clover is 92.6 as against 95.5 a year ago. Drought in the autumn of 1892, freezing during the winter or early spring, and drought during portions of the spring or during the past month, are among the causes of the reduced condition. As compared with a month ago, there is little change, such as there is being a reduction, but only to the extent of one-tenth of 1 per cent. The States in which the average rises above 100 are Connecticut, Arkansas, Wisconsin, Washington and Oregon, but the highest average (110) is that of the Territory of Arizona. The States whose average falls below 80 are Maine (79), Delaware (78), Texas (69), Kansas (79) and Nebraska (72). In the report from Lane county, Kansas, it is stated that "alfalfa has made three-fourths of a crop, and that without rain," but that the area under this plant is small.

In general, it may be said that it is old fields which were exposed to drought last fall, and then to the severities of the following winter, whose condition is lowest.

In many localities cutting is later than usual, owing to the lateness of the spring, and in a few instances there is complaint of unfavorable weather for securing the crop, especially in parts of West Virginia and Ohio; but most of the reports in respect to the character of the harvest weather are satisfactory, and many of them are highly favorable.

The reports under the head of clover, from the States and Territories of the arid region, relate mainly to alfalfa.

Timothy.—The condition of this crop falls considerably below the exceptionally high one of a year ago, but is rather better than that for the corresponding date in 1891. The figures which express the general average for the country for each of the three dates

indicated are as follows: 1893, 89.8; 1892, 96.8; 1891, 87.4.

The States which have an average of 100 or above are North Carolina, Mississippi, Texas, Washington and Oregon, and to these must be added one Territory, namely, New Mexico. Those which fall below 80 are New Jersey (73), South Carolina (75) and Nebraska (76). Among the larger hay-producing States Iowa has the highest average, her present figures on condition being 97, while Pennsylvania, with an average of only 80, ranks lowest.

In localities where the condition is far below the normal one, the fact, where explanation is furnished, is in most cases attributed to drought, either during the past month or at an earlier period. In the States bordering the lakes from Michigan westward, a number of counties report severe drought in June. Other causes, such as freezing during the past winter, cold rains in spring, weeds, and insect pests, figure to some extent in the returns. Among insects the only one mentioned with any degree of frequency is the army worm, from which a number of counties in Illinois and a few in Indiana and Missouri have suffered considerably.

Pastures.—In most of the States the condition of pasturage is, on the whole, very satisfactory, but a number of States and the Territories of New Mexico and Arizona have suffered quite seriously from drought, and the general average of condition for the country is thus somewhat reduced, the present figures being 94 as compared with the unusually high average of 98.4 a year ago. Among States along the Atlantic coast, Massachusetts, New Jersey, Pennsylvania, Delaware and Maryland are the only ones where the condition is reduced below 90, and in two of these, namely, New Jersey and Delaware, it is below 80. Aside from these, the region of low condition is on the plains and table lands of the interior, including a large part of Nebraska and Kansas and most of the States and Territories lying to the west and southwest of these two.

Foreign Fodder Crops.

There will be a large market abroad for American fodder crops, especially of hay. The English hay crop is very poor. Many fields are burned to a crisp, leaving the farmers to the resource of feeding their sheep on turnips from lack of other fodder. The condition of a large part of France and Germany is almost as bad, and hence great interest is taken in the American crop to be harvested.

In many parts of Germany cattle are dying of starvation. Reliable reports indicate only a one-third yield of hay. Throughout a wide area of central Germany cattle and horses have been killed for food, because there was no supply of fodder to sustain life. The agricultural districts along the Austro-Hungarian and Swiss frontiers have an abundance of fodder. The inhabitants are anxious to continue their old trade with the buyers across the border. They are compelled, however, to sell to the agents of the imperial treasury, who are purchasing all the ready stock for distribution in the distressed districts of the north. The federated governments have voted a large relief fund, and the railroads have reduced their freight charges on everything sent to relieve the suffering peasants.

In England hay has reached the high figures of \$40 to \$45 per ton at retail. This must create a large export trade from this country, and we are likely to see a stiff market for hay the coming year. The fact that we have little or no surplus must check extensive export movements.

This country has always been an importer rather than an exporter of hay. For instance, during the ten months to April 30, 1893, the United States imported 82,989 tons of hay, and exported only one-third as much, or 27,839 tons. Of course, possible high prices may tempt farmers to dispose of all the hay they can spare and feed roots and other crops instead. Another important item is the foreign demand for grain. France has taken off the duty on American corn until next January, and both

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England and Germany will require large additional quantities of American grain to piece out their fodder.

Bearing on the subject come some important observations made by a well-known Massachusetts citizen, who has been traveling extensively on the Continent and in England: "I doubt if there is an understanding in America of the extent of the drought in Europe. France is parched and killing the cattle and sheep upon a glutted market. The dry time is practically unbroken in England. All the south, west and midland country is dry beyond precedent. I have not seen a hay crop that would be worth cutting at our prices for hay, but there the stock of hay and straw is very low, and old hay is worth from \$35 to \$40 the long ton, in the stack. Pastures are yellow. Fattening cattle and sheep are crowded into market. It is too late now to remedy the trouble. There will be a scarcity of forage until next year unprecedented in our time. I do not see why American hay, never an article of export to any extent, should not be greatly in demand. Wheat and oats seem to be a good crop, though the straw will be light. The calamity is a terrible blow to the farmers and the whole landed interest of England, and may affect politics."—American Cultivator.

Yellow Sweet Clover.

EDITOR KANSAS FARMER:—Will you please inform me what is the name of the enclosed clover, and if it makes good stock feed? I find it growing on the poorest and rockiest places here. P. S. T. Eskridge, Kas.

The plant concerning which the inquiry is made is the yellow sweet clover (Melilotus officinalis). It is closely related to the common roadside weed, the white sweet clover. The latter has no value in Kansas agriculture and its aggressive character as a weed renders its presence highly undesirable. The yellow-flowered species is much less common here, but in its characteristics so like its white-flowered relation that we must believe that its general introduction would prove a greater blessing. Both have some value as honey plants where bees are kept.

No improvement is noted in the prospect for hay and forage in foreign countries. Every ton of this should be saved here. Kansas hay is good for European money this year.

Bureau of Information.

"The Burlington" has recently established in a convenient quarter of its elegant and commodious passenger station at Chicago, an office designed to afford travelers information on the thousand and one things they need to know, with regard to routes, rates, connections and accommodations. It has been placed in the hands of an experienced man, supplied with all railway guides, maps and time-tables, and is known as the "Bureau of Information."

It is a place to which all travelers may apply for information and receive a full and correct answer. This is the only office of the kind west of the sea-board cities; and it cannot but prove a convenience to the traveling public. All trains of the "Burlington" enter and depart from this station, and the intelligent and valuable service of the bureau may be enjoyed by all patrons of this line.

A special pamphlet will be issued by the "Burlington" in the near future, giving accurate information as to "How to get to the World's Fair Grounds;" How to secure rooms and board at the various hotels, boarding and lodging houses.

Trustworthy agents will be at the C. B. & Q. depot in Chicago to impart all information to visitors. Arrangements will probably be made by which some trains will be run direct to the World's Fair grounds without change or delay.

As an outsider, the greatest need of Kansas in my judgment is a good, healthy "fool-killer," and have him enter upon his duties and follow it up until there is a large amount of vacant land left for men who are willing to farm and not be statesmen.

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"KANSAS FARMER" REPORTS.

We present below reports from practical farmers all over the State on the yield of crops, the present condition and prospects of those not harvested, and the condition of work animals and other live stock. A rather undue proportion of these reports are from those portions of the State which were seriously affected by the drought of the spring and early summer; and yet there are enough reports from the eastern half of the State to form a fair basis for generalization.

The wheat crop is very much less than last year, and yet the reduction is not so great as at one time seemed inevitable. While some of the far western counties, which last year contributed materially to the aggregate crop of the State, report nothing this year, it is also observable that the great wheat-producing counties of McPherson, Reno, Sumner and Butler, report less reduction than was feared to be inevitable, while other good wheat counties make equally favorable showings. A conservative estimate of the crop of the State based on these reports would place the aggregate at 30,000,000 bushels.

The western limits of the corn belt have suffered from drought so that their increased acreage is probably offset by a reduced condition. But in the greater part of the corn belt the acreage is very large and the condition exceptionally fine, and the continuance of the present favorable conditions will make the corn crop now growing the largest ever produced in the State.

Forage crops have been sown in the western counties and are doing so well as to assure an abundance of feed in that section, while in the eastern section and in the corn belt generally the crops of forage and hay will be unusually full. Fruits, with the exception of peaches and grapes, are generally a light crop.

Live stock is almost universally in fine condition. No diseases are reported. The horn-fly is causing some annoyance. Chinch bugs are reported from some sections, but no general destruction of crops from their ravages seems to be feared.

Barber—Average yield of wheat about 30 per cent of full average crop. Area of corn, 125; condition very poor. Rain might save some late peaches; quality poor; pastures very short. Work animals are not generally in good condition owing to short pastures; other stock doing fairly well.

Butler—Wheat, four to thirty bushels per acre. Oats, thirteen to sixty bushels. Field corn has fine specimens of roasting ears at 1.00. Potatoes only half a crop. Peaches are the only fruit to speak of. Stock of all kinds doing fairly well. Bugs have done but little harm.

Bourbon—Yield of wheat 110 per cent of the full average. Yield of oats, 100 per cent. Area of corn, 120; condition, 110. Yield of hay, 105. Condition of pastures, 90. Condition of work animals and other live stock, 110. Oats were injured by rust. Another rain and the corn crop will be larger than ever yet.

Brown—Wheat threshing hardly begun as far as heard from yet; from three to fifteen bushels per acre from perhaps 35 per cent of full crop. Oats, 75 per cent; early oats good; late badly rusted. Acreage of corn about an average, and indication of big crop—about 115 per cent. Hay, 80 per cent. Pasture plenty and good. Apples about 30 per cent; peach trees moderately full, but not many trees; grapes full crop; some blackberries. Working animals and other live stock in fair condition. Yesterday and day before we had the heaviest rains of the season, so far; hard on small grain, which is mostly in shock yet.

Crawford—Little threshing done yet; yield probably not more than 50 per cent of a full average crop; quality, poor. Oats, a good average crop and generally of good quality. Acreage of corn larger than last year, and generally looking well. Tame hay about an average crop; prairie hay, rather more than an average crop. Pastures good. Apples, none; peaches very few and rot on the trees; other fruits none to speak of. Work animals in good condition, and all other stock in fine condition.

Coffey—Wheat eight to thirty bushels per acre. Oats ten to forty bushels per acre. Area of corn probably larger than last year. The yield of tame hay is very large; prairie hay the best for two years. Pastures very good. Apples not good; some peaches; not much other fruit. Work animals all right. All live stock doing well.

Clark—Wheat, 40 per cent of a full average crop; very little of it will grade No. 3. No oats. Very little barley. Area of corn, 75 per cent; burned up by the hot winds; Kafir corn an imperfect crop, but in good condition. Alfalfa, a full crop on first bottom lands, while other will depend on future rains. Pastures good. All fruits, excepting grapes, are an entire failure. Working animals in good condition; range stock in best possible condition.

Douglas—Winter wheat 80 per cent of an average crop. Oats struck by rust—about 60 per cent. Area of corn planted, 100; condition of corn, 110. Tame hay, 95; prairie hay, 100. Few apples in the county; condition of peaches not good—dropped off badly; light fruit crop of all kinds. Work animals in fairly good flesh; live stock not so good as it should be on account of flies, especially the horn-fly.

Dickinson—Wheat, two to twenty bushels; grade No. 3; about 30 per cent of a full crop. Oats eight to ten bushels. Corn area, 110; condition, 50; another rain equal to last night's within ten days will raise the points fifteen to

twenty. Tame hay, 60; alfalfa, 60 to 90; wild grass, 85; pastures, 60. Apples, 0; peaches, 60; grapes, 75. Work animals, 100; other live stock, 90. Chinch bugs pretty bad in places.

Decatur—But little wheat or oats is out in this county. Corn in some portions of the county is crowned out, while in others it is dried up. Hay very poor, and farmers have been cutting their year-old bunch grass and hauling it to Oberlin, and getting \$5.00 to \$8.00 per ton. Corn and potatoes, half crop. Many farmers lost all of their surplus money in the bank failure.

Ellsworth—Corn is fair, but needs a rain. Some threshing has been done, turning out from three to ten bushels. Hay prospects are poor. Stock is looking well, but flies are very bad. Plowing is well under way, but the ground is very dry.

Ellsworth—Yield of wheat poor; best estimates of that which is cut, ten bushels per acre. In many places all oats are not cut; average twenty bushels per acre. Area of old ground corn same as last year; area on abandoned wheat ground cannot be counted on now; drought, late planting and chinch bugs are very bad on it; condition of the main crop fully 100. Hay about 100. Pastures, 100. Apples, 40; peaches, 40; other fruits, 50. Work animals, 100; other live stock, 100.

Ellis—Yield of wheat, 0. Oats, 0. Area of corn, 250 per cent; condition of corn where clean is fair, dirty, poor. Yield and prospects for hay 50, and condition of pastures 50. Apples, peaches and grapes, 0. Condition of work animals, 100; condition of other live stock, 95. Flies are very bad. Not sufficient rain yet to wet down any depth, and the ground gets very dry between showers.

Finney—Report for northern part of county. Wheat and oats nothing. Area of corn, 125; condition of corn, 100. Yield and prospects for hay, 125. Condition of pastures, 100. No fruits. Condition of working animals and other live stock, 100; no diseases among stock. Good prospects for all forage plants.

Finney—Wheat 5 per cent of an average crop. Oats, nothing. Corn area, 75 per cent; condition, 90 per cent. Hay, 75 per cent. Condition of pastures, 50. No fruit of any kind. Condition of working animals and other live stock, 90. Good rains within the last week, and considerable feed will be raised, but no grain here.

Greenwood—Wheat, ten to twenty-five bushels, but not all threshed. Oats, five to twenty bushels, light and poor quality. Acreage of corn, 110; condition, good. Yield and prospects for hay good. Condition of pasture good. No apples; peaches one-fourth of crop on high land; condition of other fruits poor. Condition of work animals good. Condition of other live stock better than common.

Harper—Yield of wheat 50 per cent of full average crop. Yield of oats, 33 per cent. Area of corn, 50 per cent. Yield and prospect for hay, 10 per cent. Condition of pastures, 40 per cent. Condition of apples, 100; yield, 25 per cent; condition of peaches, 10; yield, 50 per cent; condition of grapes 10 and yield 10 per cent. Condition of work animals, 100. Condition of other live stock, 100.

Johnson—Yield of wheat about fourteen bushels per acre. Oats, fifty-two bushels. Area of corn, 70 per cent, more than last year; condition of corn, 100. Yield of hay, timothy, one and one-half tons per acre; prairie hay, one and one-half tons per acre; pastures very good. Condition of apples tons. Pastures very good. Condition of work animals and other live stock good. Condition of other live stock better than common.

Lincoln—Yield of wheat, 90 per cent. Yield of oats, 105. Area of corn, 110; condition of corn, 75. Yield and prospect for hay, 85. Condition of pasture, 65. Condition of apples, 00; condition of peaches, 00; condition of other fruit, 15. Condition of work animals, 10; condition of other live stock, 100.

Lyon—Wheat about 50 per cent of a full average crop. Oats, 65. Area of corn, 110; condition, 100. Hay, 100. Pastures, 100. Apples, 10; peaches, 40; other fruits, 25. Condition of work animals and other stock, 100. Good rains. Most of the corn in tassel and earing nicely.

Lyon—Wheat about 110 per cent of a full crop. Oats, 100 per cent. Area of corn 110 per cent of last year's crop; condition of corn crop is good. The yield and prospects for hay are fully up to our average taken for several years. Pastures in good condition. Apple crop a failure; the early peaches were a full crop, and there will be a fair supply of late peaches; prospects for grapes good. Working animals and all other live stock in good condition.

Morris—Wheat will not average eight over bushels per acre, and light. Oats will go seven over bushels. Corn area, 100 per cent; condition 125 per cent of full crop. Wild hay will yield about one ton per acre, and more than will be needed. Pastures O. K. Very few apples but those look well; peaches very light crop and exceedingly wormy; grapes promise an abundant crop, but plums are scattering. Work animals in good condition and abundant. All other live stock in good condition except that much poultry is dying with so-called cholera.

Montgomery—Wheat, 100; injured by chinch bugs. Corn, 80; injured by rust and bugs. Potatoes, 100. Apples, 20. Wheat is very uneven, the yield being from three to thirty-seven bushels per acre. Late plowing and too much growth of straw are main causes of failure. Wheat is selling at from 25 to 40 cents per bushel. Much of it is being fed to hogs and horses.

Mitchell—Yield of wheat, 20 per cent of an average. Oats, 30 per cent. Area of corn, 100; condition, 75. Hay, 75. Pastures, 100. Apples, 10; peaches, 10; other fruits nearly a failure. Condition of work animals and other live stock good.

McPherson—Yield of wheat, 40 per cent of the full average crop. Yield of oats, 25 per cent. Area of corn, 140 per cent; condition of corn, 50 per cent. Yield and prospects for hay, 75 per cent; condition of pastures, 50 per cent. Condition of apples, 25 per cent; peaches, 25; other fruit, 25 per cent. Condition of work animals, 90 per cent; other live stock, 90.

Miami—Yield of wheat and rye will be average. Area of corn same as last year, and condition good. All fruits will be very short. Plenty of moisture, and everything growing. Hay was good and in fine condition.

Nemaha—Wheat, winter, killed and 90 per cent of the acreage plowed up. Oats, 90 per cent of a full crop. Area of corn, 115; condition of corn, 105. Yield and prospects for hay, 95. Condition of pastures, 100. Condition of apples, 75; yield, 15; condition of peaches, 75; condition of other fruits, 80; yield, 40. Condition of work animals, 95; other live stock, 90.

Olathe—Wheat about seven bushels per acre. Oats, 0. Corn, 110 per cent of an average. Alfalfa hay fair; wild hay, very short. Pasture poor. Apples, none; peaches, half crop. Work animals in fair condition. Other live stock not thriving on account of soot pasture.

Ottawa—Wheat almost a failure—from two to eight bushels per acre. Oats 10 per cent of a crop. Potatoes, 20 per cent. Early corn is injured one-half; late corn is doing well. Good rains during the last four days. Apples nearly a failure; peaches poor; no small fruit. Hay poor. Pastures good. Work animals and all other live stock in good condition.

Osage—Wheat is threshing out about 35 per cent of good average, and is of poor quality. Oats, 50 per cent, and light. Up to within two

weeks of harvesting the prospect for a good crop was excellent. Area of corn large and in fine condition. Prospect for the best crop ever raised in Osage county. Hay crop and pastures good. Apples, peaches and cherries fair, and all other fruits light. Condition of work animals and other stock good.

Osborne—Yield of wheat about 15 per cent. Oats a total failure. Area of corn, 115 per cent; condition of corn, about 50 per cent; nearly all early corn burned up by hot, dry, windy weather. Prospects for hay, about 70 per cent. Pastures are getting rather short. No fruit of any kind except a few grapes. Live stock in fair condition.

Pawnee—About 25 per cent of the wheat is out; it will yield about 25 per cent of its average crop. No oats. Area of corn, 100; condition of corn, poor. Very little hay except on bottom land. Pastures very poor. No fruit of any kind. Work animals in fair condition; other live stock ordinary to poor.

Pottawatomie—The season is unusually good for corn; condition, 100 per cent. Wheat, 10. Oats, 50 to 60. Pastures generally good, and prairie hay 100. Rye, 50. Apples, 25; peaches nearly a full crop; Concord grapes, 100; pears fair crop.

Reno—The drought is at last broken; two inches of water fell night before last. The crop averages and prospects are: Wheat, 25 per cent; rye, 25; oats, 25; corn, 75; potatoes, 25; other garden vegetables nearly a failure. Apples, 5; pears and plums, none; peaches, 100.

Reno—Wheat turning out better than was expected, some getting as high as fifteen bushels per acre, and some only six or seven; average about ten bushels. Oats, light, running twenty to twenty-five bushels. About one-fourth of the cultivated land is in corn; condition about 150 per cent. Hay, light, pastures short. No apples; a good many peaches. Work animals in fine condition and other stock doing well.

Riley—Wheat very poor yield from five to fifteen bushels. Oats about twenty bushels—quality poor. Corn improving since the rain; chinch bugs very numerous—new brood hatching; but the whole corn promises a good crop. Tame hay light; prairie improving. Where pastures are heavily stocked feed is short. Water has been scarce. Apples a light crop, still dropping badly; peaches nearly a failure. Condition of work animals and other live stock good.

Rocky—Yield of wheat 5 per cent. Oats, 0. Area of corn, 160; condition, 25. Yield and prospects for hay, 60. Condition of pastures, 75. Condition of peaches, 5; other fruits, 5. Condition of work animals, 90; other live stock, 100.

Shawnee—Wheat from ten to twenty-five bushels; quality fair. Oats about twenty-five bushels injured by rust. Acreage of corn about same as last year; condition never better for a year. Corn almost assured. Tame hay about 80 per cent of a full year; prospects for wild hay 100. Pastures are good. Apples almost a failure; peaches a fair yield, but there are few trees; grapes a full crop. Condition of live stock of all kinds good.

Sumner—Wheat about fifteen bushels per acre. Oats, fifteen to twenty bushels per acre. Area of corn small; almost an entire failure; a few fields will make a half crop. The hay crop and pastures are badly dried up. Apples, 25 per cent; grapes plenty; other fruits a failure. Condition of working animals and other live stock good.

Wilcox—Wheat average about ten bushels per acre; up and wheat very poor—too poor to cut. Corn about the usual acreage, in condition rather poor. Oats acreage much larger than usual; average yield about seventeen bushels. Hay good. Condition of pastures fair. Condition of apples and peaches very poor. Condition of working animals good; all other live stock in fine condition. Dry weather and chinch bugs have damaged the crops in this county more than any previous year.

Wabash—Yield of wheat about 80 per cent of a full crop. Oats, 90. Area of corn, 100; condition, 90. Yield and prospects for hay, 95. Pastures short in places. Work animals and other live stock good.

Wyandotte—Yield of wheat eight to twenty bushels per acre; very poor quality and badly damaged by excessive rains. Oats about thirty bushels per acre—same as wheat. More than an average area of corn; prospect fine. Hay very light. Condition of pastures good. No crop of apples; about half a crop of peaches and half a crop of grapes; other small fruits good. Condition of work animals and other live stock good.

Horse Notes.

There have been over 100 heats trotted and paced below 2:15 this year.

Budd Dobie does not like aluminum for shoes. He thinks it too soft and liable to bend.

The old trotting gelding, Guy, reduced his record from 2:10 1/2 to 2:09 1/2 at Detroit the other day.

An offer of \$25,000 has recently been refused for the Eastern trotter, Early Bird 2:16 1/2, by Jay Bird.

Saladin 2:05 1/2, and Stamboul 2:07 1/2, are the two fastest performers by a common sire. Both are by Sultan.

King Thomas, the thoroughbred for which the late Senator Hearst paid \$38,000 as a yearling a few years ago, was sold at auction recently for \$750.

Martha Wilkes is not showing up well this year. In a race at Detroit recently she didn't get better than fourth place in any heat in a field of seven horses.

Governor Stanford made no provision in his will for perpetuating the breeding establishment at Palo Alto. It all rests with Mrs. Stanford, who will administer the great estate.

The thoroughbreds are not doing well this year and no remarkable performances can be chronicled in their class. The big running races have almost without exception been disappointing.

A lack of entries has caused the Kansas association of trotting horse breeders to declare off all stakes and races for their meeting which was to take place August 28 to September 1 at Abilene. Their futurities and a stake for yearling trotters will be started over the kite track at Holton during Mr. McDonald's meeting, August 14 to 19.

Hal Pointer won the free-for-all pacing race at Cleveland Friday, taking the three winning heats in 2:08 1/2, 2:11 1/2 and 2:09 1/2. Guy got the first heat in 2:08, which Flying



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Jib could have won had he been steady. In the second heat Flying Jib went the half in 1:02 1/2 but broke and was distanced. The other entries were Major Wonder, Blue Sign and Chronos.

The old gelding Guy took three records at Detroit recently. He captured Allerton's last champion record by going a mile in 2:13 to a wagon, Allerton's record being 2:15. He also got the fastest record for a thirteen-year-old horse by trotting a mile in 2:09 1/2, the former record being 2:14 1/2, made by Harry Wilkes. This last record not only reduces his old record of 2:10 1/2, but gives him the champion record for a gelding.

G. E. Kane, a commission turf agent of Bolton, England, is in Buffalo for the purpose of purchasing undeveloped trotters and pacers which he intends to take to England to race there. Mr. Kane will visit the Buffalo track to look over some of the stock there. In England, Mr. Kane says, trotting is experiencing a boom, but the industry is still in its infancy. The best purses offered there are \$750, and the fastest record is held by a pony at 2:25 1/4.—*Buffalo Commercial.*

When the grand circuit meeting in 1892 was held at Pittsburg the bicycle sulky had not appeared. A comparison, therefore, of the average speed made at that meeting and that of this season is of interest as showing the difference in time between the high wooden wheel and the pneumatic tire. In 1892 thirty-three heats were trotted at an average of 2:21 1/2, only thirteen of this number being below 2:20. This season forty-four heats showed an average of 2:17 3/4, and only four heats were lower than 2:20, and two of these were made by the two-year-old, Chris Lang. The pacing average shows an even greater drop. In 1892 it was seventeen heats, with an average of 2:19; in 1893, eighteen heats, with an average of 2:14 1/4.

Weekly Weather-Crop Bulletin.

Issued by the United States Department of Agriculture, in co-operation with the Kansas State Board of Agriculture, for the week ending July 31, 1893; T. B. Jennings, observer.

Abundant rains have fallen during the week, averaging for the State 1.34 inches; but this has been unequally distributed, being excessive in the northern portion of the western division, the northeast and central counties of the middle division, and the central counties of the eastern, while the southwestern, extreme southern and southeastern show a decided deficiency.

The week has been warm. Much sunshine has prevailed in the regions of deficient rainfall, with nearly an average over the rest of the State.

Throughout the northern half of the State, and extending south to Wilson, Sedgwick, Stafford and Ford, the week has generally given fine growing weather. In the northern half of Anderson and Coffey, and in Lyon, and northward to the north line of the State, the corn promises an immense crop. In Butler, Sedgwick, Reno, thence northwest to Wallace and northward of this line the corn has generally made great improvement. In Ford corn is silking, though the heat is unfavorable, and listed sorghum is growing well.

In the west and southwest the prairie is looking quite green and grazing is improving. In the east tame hay is now about all in stack and is a good yield. In Coffey flax is being harvested of good quality and fair yield. In the northeastern counties wet weather has prevented the stacking of much small grain, and it is beginning to sprout in the shock. Fall plowing has begun in the central and southern counties.

The Apiary.

Edited by REV. E. T. ABBOTT, St. Joseph, Mo., to whom all communications relating to this department should be addressed. Inclose a stamp if you desire a reply by letter. We invite questions and communications from any of the readers of KANSAS FARMER who may be interested in bee culture.

The Farmer's Honey Crop—What About It.

We commend the following, written by Eugene Secor for the *Stockman and Cultivator*, to the readers of this column:

"I am sorry to know that this is a minus quantity in a majority of cases. To bring about a different state of facts is the object of this essay.

"If honey is a desirable article of food, or a luxury worth setting before our family and friends, the question is, 'How shall I obtain it?' Shall the farmer who owns the range over which bees forage, raise hogs and cattle and grain for market, and with the proceeds thereof buy his honey, or shall he keep a few bees himself and be independent of the grocer or specialist in honey-production?

"Some argue that it is better to leave the production of honey to the specialist altogether. They say he can produce it more cheaply than one who has other business. That is true in some sense. It is also true that the market gardener can raise cabbage and strawberries more cheaply than the farmer usually does. Shall he therefore leave the growing of all garden truck to the specialist and buy his vegetables and fruit? The main difficulty in both cases is, if the farmer does not produce them himself, his family is very liable to go without the greater part of the year.

"I have noticed that those farmers who think they cannot afford to 'potter' with a garden or bees, have few of the luxuries which these furnish. Luxuries, did I say? Necessities, if health, comfort and happiness count for anything in this world.

"Honey is a luxury, but it is healthful and nourishing. It is not a necessity in the usual sense of the word, nor is any other sweet. Sugar is so generally used in this country that we regard it as a necessity. But it is not. I suppose there are millions of people who scarcely taste sugar. And there are thousands of families, largely farmers, too, in this country, who scarcely know the taste of honey. They do not keep bees, and when they wish to gratify the taste for sweet, buy sugar or glucose syrup, because it is cheaper in price than honey.

"But why shouldn't the farmer produce his own honey? Is it because of the belief that greater skill and knowledge is required to make this branch a success than other departments of the farm? If this is the prevalent notion I wish to dispel it. It does require some study and some skill, but not more than to raise good stock, or to grow good crops. If a farmer raises nothing but scrub cattle and hogs, and gets a good crop of corn only when everything is favorable, he will probably never have much honey to sell, and will doubtless conclude that it's all luck, anyhow."

"But if he knows a good cow from a poor one, and knows how to raise the good one; if he knows how to get a good crop of corn when many of his neighbors have only nubbins, he can master all the intricacies in bee-keeping without lying awake nights, or infringing on his time in harvest.

"I believe the person who gets the most pleasure out of producing honey is the one who does so in conjunction with some other business. His whole soul is not wrapped up in the one dollar-and-cent idea. It is chiefly produced for his own table, or to give pleasure to his friends.

"I wish, however, to caution the reader, if he thinks seriously of getting bees, to inquire if his locality is adapted to the production of honey. Not every prairie farm is an ideal beeparadise. If no linden grows within a mile or two, and if white clover is not plentiful enough to yield a surplus, then two of the chief sources of white honey in the North are wanting. Still there may be an abundance of other flowers for a few colonies. Spanish

needle, heart's-ease, the asters, and a great variety of other wild flowers can be utilized and made profitable if not too many colonies are kept in one locality.

"If a person who wishes to keep bees has had no experience, he should not buy more than a colony or two to start with. Spring is the best season to purchase. Buy as near home as possible. Talk with some one who has made the subject a study. Buy a good book on bee-keeping, and after a little, if the subject proves interesting, subscribe for a bee paper. You will grow with the business naturally, furnish your table with a dainty luxury that takes the place of sauces, is always acceptable to company, and at the same time the study of the subject will prove to be both pleasant and profitable."

Kansas State Grain Inspector.

The following sketch is from the *American Elevator and Grain Trade*, to which journal we are under obligations for the use of the elegant picture of Mr. Jones:

"Kansas is the first State to have its State Grain Inspection Department placed in charge of a farmer, yet, as no complaints have been made against the inspection department during the several months of his management it must be that the service is satisfactory to the trade.

"Sam P. Jones was born July 29, 1844, in Cincinnati, Ohio. His father



STATE GRAIN INSPECTOR SAM P. JONES.

died when he was 3 years old, and a few years later his mother moved into the country, where Sam worked on the farm in summer and went to school in winter. When Fort Sumpter was fired upon in 1861, Sam, though scarcely 17 years of age, enlisted in Co. I, 5th Regt., Ohio Vol. Inf. He served with the regiment in the battles of Winchester, Port Republic, South Mountain, Antietam, Chancellorsville and Gettysburg. His strength gave out and he was discharged on account of inability.

"After recuperating he went on the river and learned it between Cincinnati and New Orleans as a pilot, under Captains John and Charles Sebastian. He served on the river as a pilot for fifteen years. He served on most of the packets in the Cincinnati and New Orleans trade, and was pilot on the Chas. Morgan when she beat the A. C. Donally in a race between Cincinnati and New Orleans, in which race the Morgan beat the Duke of Orleans' time, which was the fastest on record up to that time—five days, eleven hours, fifty-nine minutes. Mr. Jones was married in 1875. In 1878 he concluded to leave the river, and went west in 1879, locating in Harper county, Kansas, where he pre-empted 160 acres of land. His first purchase was an ox team, with which he commenced to break sod. He has lived on this same tract of land ever since, raising, handling and shipping wheat, until Governor Lewelling appointed him State Grain Inspector.

"In regard to his political affilia-

tions, he was originally a Democrat, and still claims to be one. He voted for Peter Cooper, was in the convention that nominated Horace Greeley, voted for Streator, was a delegate to the State convention that nominated Lewelling; also a delegate to the Omaha convention. His appointment was given to him as a reward to his county, for having cast the largest majority in the Seventh Congressional district and the second largest majority in the State. His petition to the Governor for the appointment was signed by seventy-five old soldiers in his county, who are actual wheat-raisers and regardless of political affiliations. He is a member of Benton Post No. 61, G. A. R., and has a host of friends."

The University of Kansas.

The FARMER calls attention to its first page illustration of the main building of the University of Kansas, Lawrence. The University is the foremost institution of higher learning in Kansas, and it is in every way a credit to our State. At the last session of the Legislature liberal appropriations were made for the maintenance and further development of the institution, and the coming academic year, which opens Wednesday, September 6, promises to be the most successful since the foundation of the institution.

The University now has eight buildings, including two in process of erection (one, a physics building, \$50,000, the other, a library building, \$75,000). In addition a handsome residence for the Chancellor is building. The student enrollment last year was 750.

and the present faculty numbers forty-five. Five schools are comprised in the University, viz.: A school of arts, a school of law, a school of engineering (civil and electrical), a school of pharmacy and a school of music and art. Tuition in all departments of the University is free; a lecture fee of \$25 a year is charged in the school of law. Students are admitted on certificates from the Kansas high schools, academies or colleges. There is no preparatory department, so candidates for admission must be prepared to enter the freshman class.

The apparatus of instruction of the University includes library of 20,000 volumes, natural history collections comprising over 150,000 specimens, first-class equipment in electrical engineering shops, and excellent facilities in all the lines of instruction offered in the various schools. There is a sports field of twelve acres, containing running tracks, football and baseball fields, etc.

The presentation of certificates and holding of examinations for admission will be on Wednesday and Thursday, September 6 and 7.

For catalogues and programmes of courses and for general information apply to the Registrar of the University, Lawrence, or to Francis H. Snow, Chancellor.

Special Excursions to the World's Fair.

The Missouri Pacific railway has made arrangements for a cheap trip to the World's Fair, and will run special excursions to Chicago at greatly reduced rates on the following dates: July 24 and 31 and August 7. The advantages of this route are many, owing to the elegant through service and magnificent equipment. All particulars concerning rates, leaving time of trains, limit of tickets, etc., furnished by ticket agents of the Missouri Pacific.

REST AND MEDICINE.

A Natural Nerve Tonic and Health Restorer.

Mrs. C. C. Filler, 174 East Rich street, Columbus, Ohio, writes in a letter dated July 21, 1893:

"For ten or fifteen years I had been subject to nervous dyspepsia. I would have spells of quivering in my stomach, with smothering feelings. My nerves were terribly debilitated. I was suffering from what is called nervous prostration. My stomach felt bloated, and I was constantly weak and trembling. I consulted several physicians, who treated me without doing me any good.

"I had almost given up in despair when I heard of Pe-ru-na. It was about six years ago that I first took Pe-ru-na. I found it an immediate relief to all my disagreeable feelings. It is the only medicine that has ever been of any use to me. I think it is a grand medicine; and I would recommend it to any one suffering from nervousness or dyspepsia. I am a hard working woman, and am obliged to expose myself often, and to do hard work that I would not if I were not obliged to. This sometimes brings back symptoms of my old trouble, for which I find Pe-ru-na to be an immediate relief. Before I began taking Pe-ru-na I was in such a state of health that I could do no work; but Pe-ru-na seemed to raise me right up and give me strength and health so that I could work. Ever since I first began the use of Pe-ru-na I have been able to do hard work, such as house cleaning, washing and doing heavy day's work.

"The Man-a-lin I consider also an excellent remedy for the liver and constipation. I do not know what I would do without it. It regulates my bowels perfectly, and too much can not be said in praise of it. I would feel lost without Pe-ru-na and Man-a-lin. I am a hard working woman, but I will try to answer any letters of inquiry which may be written me."

Mrs. C. C. FILLER.
Send to the Pe-ru-na Drug Manufacturing Company, of Columbus, Ohio, for a free copy of their latest book, entitled "Aurora," devoted to diseases of summer.

300 EGG INCUBATOR, ONLY \$12.50
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GRAVING FOR STIMULANTS or liquor habit cured. Home treatment. Best and cheapest cure known. Sent secure from observation. **ENO CURE CO., Box 253, Station A, Des Moines, IOWA.**

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.

The Bridle-Path.

Through the green aisles of the woods,
Past streams that foam and leap in light,
Pacing through murmuring solitudes,
We loiter on from morn to night.
Above our heads the oriole swings,
In the dim boughs the robin sings,
As by the bridle-path we fare
And taste life's freshness everywhere.

Pale blooms that hide in sheltered spots
Breathe pure sweet odors as we pass.
We see the rare forget-me-nots,
The hooded violets in the grass.
Is there afar a stormy world
Where fields are fought and flags are furled,
And dust and grime obscure the air?
We wonder as we blithely fare

Along the quiet bridle-path;
Our gentle ponies know full well,
No terrors for their feet it hath
In shelving steep or dimpling dell.
High in the oak's cathedral hush
We hear the vesper of the thrush;
Far off an even ng church bell rings,
And in the dusk the robin sings
—Harper's Bazaar.

A Little Learning.

They were strolling up a hill together
In the fairest kind of summer weather;
She was a sweet girl graduate,
He a geologist, and late
Of Harvard, and still fairly yearning
To share with all the world his learning.

So much he knew and longed to utter,
That a strange sort of mental stutter
Confused his mind and flushed his face;
Her face was maddeningly cool,
And all he said was commonplace;
Commonplace which had been to school.

She was beginning to be bored.
Knowledge is excellent, when stored,
But when too much of it is flying
It sometimes grows a trifle trying;
The road was rough and very steep,
The footing difficult to keep.

And lo, when, stamping once or twice,
He said, urbanely, "This is gneiss!"
She curled her pretty lip with scorn,
And threw him a bewitching frown;
"Nice!" quoth she, "both my shoes are torn,
And 'twill be worse still going down!"

MAKING SILK FROM WOOD.

The following is an interesting and important account of the new industry, developed in France, of making soft silk from wood. It is embraced in a report by United States Consul Francis B. Loomis, of St. Etienne, France, to our government.

Borrowing the famous sentence of Mme. de Sevigne, a writer of renown, in the *Petit Journal*, of Paris, who has recently visited the factory at Besancon, where wood pulp is converted into soft silken thread, says to his readers:

"I am going to tell you about the most astonishing thing, the most surprising, the most marvelous, the most miraculous, the most triumphant, the most astounding, the most extraordinary, the most incredible, the most unexpected, the most prodigious, the most unique, the most brilliant and the most worthy of imitation and envy in this century—it is the invention of Count de Chardonnet, by means of which wood pulp or cotton is converted into durable, luminous and elastic silk."

In the volume of consular reports for June, 1892, I contributed a short account of the Chardonnet process, which has been the means of opening up a good deal of correspondence on the subject, and I am now glad to present some details and additional information.

For a long time after its discovery the process and system of M. de Chardonnet remained concealed in his laboratory. It made its first appearance at the exposition of 1889, where it received the highest award that the jury could give. Connoisseurs, savants and manufacturers were greatly interested in it, though it had not reached the degree of perfection to which it has been brought to-day.

The great question, that which leads all others, since the new invention tends to produce a revolution in one of the greatest of French industries, is, can this discovery be utilized for the growing needs of the people?

A complete answer in the affirmative has been given to-day by M. de Chardonnet, who has already, by enlisting the sympathies of several business men, built a mill at Besancon, where the "silk" is being manufactured. The raw material is made of wood pulp, such as is used for the fabrication of certain kinds of paper. This pulp is carefully dried in an oven, and plunged into a mixture of sulphuric and nitric acids, then washed in several water baths and dried by alcohol. The product thus prepared is dissolved in ether and pure alcohol, and the result is collodion, similar to that used in photography. This collodion, which is sticky and viscous, is enclosed in a solid receptacle furnished with a filter in the lower end. An air pump sends compressed air into the receptacle, and by its pressure the collodion is passed through the filter,

which removes all impurities and flows into a tube placed horizontally. This tube is armed with 300 cocks, of which the spouts are made of glass, and pierced by a small hole in the diameter of the thread of a cocoon as it is spun by the silkworm.

The spinner opens the cock, and the collodion issues in a thread of extreme delicacy (it takes six to make a thread of the necessary consistence for weaving). This thread is not, however, fit to be rolled on spools by reason of its viscosity and softness. The matter is as yet collodion, and not silk. To produce the necessary hardness the inventor resorted to a very ingenious but simple method. The little glass tube already mentioned is surrounded by a small reservoir of the same material constantly filled with water; when the thread issues from the aperture in the manner described, it traverses this water, which takes up the ether and alcohol, and then the collodion becomes solidified, that is to say, it is transformed into an elastic thread as resisting and brilliant as ordinary silk.

One more detail. On account of the materials employed in the manufacture of this silk—wood, ether or alcohol—it might be rightly supposed, as was mentioned in the former report, that the stuff manufactured would be dangerously inflammable. M. de Chardonnet has apparently obviated such a contingency by plunging the spun thread in a solution of ammonia, thus rendering it as slow of combustion as any other raw material.

This discovery seems to have a great future. I have talked with a great many silk merchants, brokers, dyers and men who manufactured silk goods about the Chardonnet method of producing raw silk from wood, and it is universally admitted that the process will eventually yield large, practical and profitable results. A great step has been made towards this end in reducing the inflammability of the Chardonnet silk. Its original combustibility was at the alarming rate of two centimetres per second.

Another practical difficulty to be remedied in the invention is the frequent snapping of the slender threads issuing from the cylinder by reason of unequal pressure. This makes it impossible to maintain a standard quality for the output, and, consequently, there may be produced five pounds of excellent silk, followed by five pounds of comparatively worthless quality. This difficulty is being overcome, I am told; but until it is completely removed men of large means will not invest largely in the stock of the company which has been formed to exploit Count Chardonnet's invention.

Up to the present time none of the rich and important silk men of St. Etienne or Lyons have invested heavily in this enterprise. They all profess to believe in it and declare that in a few years artificial silk produced by this process, when it shall have been improved somewhat in certain details, is destined to figure largely in the commercial world.

The disposition to-day on the part of capitalists here is to await developments. When the process is once perfected, and its results are wholly satisfactory, there will be a lively struggle for the control of this valuable invention, and, as I have said, there seems to be no doubt of the inventor to remove every obstacle which stands in the way of perfect practical success.—*Mechanical News.*

When a Woman Faints.

If there is anything amusing about a fainting spell it is the conduct of the men called upon to witness it or lend their assistance in reviving the luckless woman who succumbs. A few Sundays ago at the cathedral at Louisville, a pretty girl fainted up in the organ loft. As soon as it was seen that she was prostrated by the closeness of the air the terrified men in the choir huddled together and stared helplessly at the chief actor in the drama. The women, however, were equal to the occasion. They supported the tottering girl to a bench, placed her on it and began ordering the men around like generals on a field of battle. In five minutes one young fellow had been dispatched for a glass of water, another for ice, smelling salts and whisky, while the remaining gallants sat by and gave their sympathy. Hardly had this little scene ended before a young girl seated near the sanctuary was seen to gasp and turn pale and look extremely unhappy. The crowd was so great that it was impossible to take her down the aisle, so an usher was pressed into service and carried her through the sanctuary to the sacristy beyond. The young lady was conscious enough to walk and the usher hurried her away as if nervously apprehensive that she would faint outright and he would be obliged to put his arm around her. "You don't know how awful it is to try and carry an insensible woman," groaned one of the ushers. "They are twice as heavy as usual, and feel like a sack of meal. You can always tell, though, when they are beginning to get all right, for the first thing they want to know is if their hats are on straight."



Teach all of the family to swim; bathing suits are easily rigged up and an open air bath gives both fun and health. Then what is more refreshing in the cool of the day than a good swim? But don't forget the Ivory Soap, any other will slip away and sink before you are half through with it. You need not be afraid of losing the Ivory; throw it up stream and it will be back to you by the time you are ready for it again.

Ivory Soap is pure. It floats.

R. 7.

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How to Go to Sleep.

Parents are frequently reminded, and with good reason, that it is their duty to make the little ones happy at bedtime. I wonder that there is not more said about cultivating in older minds happy thoughts as companions to the land of rest and dreams. To this end, what can be better than counting up one's mercies? As you lie with closed eyes, waiting for the chariot of sleep, review the day with this end in view. Pass by the darker happenings, and pick out the good things, as children pick the plums from the pudding. Begin with the morning. If your eyes opened on the world glorified by sunshine, let that head the list. If all the household were able to "be up and doing with a heart for any fate," that may come next. Has the help in the kitchen been willing and kindly, don't forget to make a note of it. The one little blossom on the plant you have so long tended in vain, the toothsome dessert that won the family approbation, the comforting poem that you found time to copy and mail to an invalid friend, the delightful call from a neighbor, the helpful paragraph in the paper, your success in renovating Amy's gown that seemed so hopelessly shabby, the wisdom from above that helped you to con-

trol dear, wayward Tom, the glimpse that you had of a warm, kind heart hidden away in that stern-featured Miss Cross, the beautiful tints of the sunset, and the bright twinkling of the sociable stars, may seem a curious jumbling of things great and small, but of such is the warp and wool of life.

If these and a score of kindred things have not been pleasant to us, I fear the days have not brought us much delight. Very few find great nuggets of joy between the waking and sleeping; we must search with care for the tiny, golden grains. Then if we string them on the silken thread of thanksgiving, they will make a magic circle whose enchantment will do away with the torture of weary wakefulness.—*Good Housekeeping.*

Perhaps some one would like to know how to prepare for papering a wall that has once been whitewashed. Make a thin glue-water by soaking common glue in cold water; then set the vessel in hot water until dissolved and warm. Then apply to the wall with a whitewash brush, the width of one or two breadths of paper at a time. Put the paste on the paper in the usual way, hanging the paper while the wall is damp with the glue-water, and you will have no trouble with paper peeling off.

A Bitter Fight

Is being waged by

The Price Baking Powder Co.,

against the use of ammonia and alum in baking powders by naming and exposing the guilty manufacturers, and the services thus rendered are being recognized by the people, for they are leaving severely alone all ammonia and alum baking powders and adopting

Dr. Price's Cream Baking Powder

which is the

only brand prepared by a physician of high standing. A pure Cream of Tartar Powder brought to the highest degree of perfection. Free from Ammonia, Alum, Lime or any other adulteration.

The Young Folks.

Missouri Slave Song.

Speckle buhd a-settin' on de ole daid lim'.
 Hoodah!
 Look mighty pert an' young an' slim.
 Hoodah, hoodah, hum!
 Look out, lil buhd, de old boy come.
 Hoodah!
 Fiah in de eye, he look mighty glum.
 Hoodah, hoodah, hum!
 Look out, lil buhd he gwine for to shoot!
 Hoodah!
 Flap yo' wings an' git up an' scoot.
 Hoodah, hoodah, hum!
 Oh, slneh, sinneh, dat des lak you!
 Hoodah!
 De ole bad man, he gotter gun, too.
 Hoodah, hoodah, hum!
 He shoot yo' front and he shoot yo' back.
 Hoodah!
 Down yo' go, plum dald, ker-smack!
 Hoodah, hoodah, hum!
 Run, po' niggah, run an' run.
 Hoodah!
 Debbil, big debbil, a-aimin' he gun.
 Hoodah, hoodah, hum!
 Run, run, run; run, run, run!
 Hoodah!
 Run, run, run; run, run, RUN!
 Ho-dah, hoodah, hum!
 —From *Voodoo Tales*, by M. A. Owen.

Farewell!

Man cannot make, but may ennoble, fate,
 By nobly bearing it. So let us trust
 Not to ourselves but God, and calmly wait
 Love's orient, out of darkness and of dust.

Farewell, and yet again farewe'l, and yet
 Never farewell—if farewell mean to fare
 Alone and disunited. Love hath set
 Our days, in music, to the self same air;

And I shall feel, wherever we may be,
 Even tho' in absence and an alien clime,
 The shadow of sunniness of thee,
 Hovering, in patience, through the clouded
 time.

Farewell! The dawn is rising and the light
 Is making, in the east, a faint endeavor
 To illuminate the mountain peaks. Good night,
 Thine own, and only thine, my love, forever.
 —Owen Meredith.

HIRAM'S COW.

Mr. Turner kept quite a drove of cows, and it was Hiram's duty to drive them to and from the pasture at milking time twice every day. Hiram was about 13 years old and as wide awake as any boy you ever saw. The pasture was a large field "down on the bottom," as they said, across a small creek and through some woods, half a mile from the great barn and high-fenced milking yard. From the barn back to the woods the way led down a fenced lane between corn fields and meadows, but through the woods to the pasture it was unfenced. Beyond the pasture for many miles extended a range of rugged hills covered with the primitive forest.

One evening about 6 o'clock, as Hiram was going after the cows, and just as he reached the end of the lane, what was his surprise to see the whole drove coming as hard as they could run, as if their lives depended on getting to the barn as soon as possible. Wondering what was the matter, he sprang behind a large tree and concealed himself to watch them go by. In a moment the first one, a long-limbed young cow, flashed past, looking as wild as a frightened buffalo—then came another and another, badly scared and running at their highest speed, evidently not knowing that Hiram was hidden behind the tree. The big bell-cow, named Queen, was last, and she was several rods behind, her bell jangling in the noisiest manner as she hastened after the others. She was a singularly brave and sensible creature, never getting quite as excited and nervous as the others were liable to become. But what was Hiram's amazement to see, ambling along between Queen and the rest of the cows, an animal which did not belong to the herd, and which had, no doubt, caused the fright among them.

It was a plump, shiny-coated black bear, apparently not quite full grown.

As soon as the bell-cow had passed him, Hiram also joined the procession. Whether the bear was frightened, as the cause of its keeping on with the cows, I do not know; but two or three times when it seemed inclined to turn back, the bell-cow roared, jangled her bell, shook her horns and rushed at it so furiously that it seemed glad to keep out of her reach by hurrying forward after the drove. When they reached the yard and all dashed through the gateway pell-mell, Hiram flung the gate together and fastened it outside, as if it was absolutely necessary to keep them in till the bear could make a supper off one of them.

"Foolish boy!" said his mother, afterward. "What if the animal had killed some of them!" But when cows are in danger and cannot readily escape, they make a desperate fight of it. Peering through a knot hole in the high board fence, Hiram saw them plunge at the creature, led by the bell-cow, as if they intended to eat the bear instead of allowing it to eat them. Round and round the yard they went, chasing it and bellowing fearfully, until the poor bear might have despaired of escape if the upper half of one of the barn doors had not been open. Making a desper-

ate spring, it succeeded in getting into the barn, receiving, however, a furious helping from the bell-cow's horns as its heels disappeared. At this, Hiram again found a work to do. Leaping into the yard he ran to the barn door and quickly shut and fastened it, for he knew that, thus secured, Mr. Bruin was a captive. Then he hurried to the house to tell the news.

"Mother, mother!" said he, as fast as he could get breath to explain, "I've got a big bear—shut up—in the barn! It came with the cows—and they—came near—killing it."

Other things he tried to say, but nobody wanted to hear. All hastened out to see the animal, and if Hiram had not restrained them, very likely they might have let it out or been attacked by it.

That night after dark, Mr. Turner, with half a dozen, taking several bright lanterns and lamps, entered the barn to see what the bear was about. They found it curled up in the granary where it had been eating wheat almost to excess, and so dazed was it by their lights that it seemed entirely subdued. Shutting it into the granary, they kept it there for weeks, first carrying out the grain, and as it was young and they fed it well, it grew very tame and gentle. At length it was secured by a wide leathern belt around its neck, to which was attached a strong chain, and it had a permanent place in the carriage barn, where a warm kennel was provided for it.

A few days after it was caught Hiram's little sister, May, about 6 years old, asked one of her visitors to come out and see "Hiram's new cow," and so that became the name it received from everybody.

It lived for many years, becoming remarkably intelligent and interesting, and finally perished when one night the carriage barn was burned and it, poor creature! chained fast, could not escape.—*Detroit Free Press.*

A Curbstone Syndicate.

It is so seldom that people get the credit of better motives than they possess that the following incident seems worthy of notice:

"I was walking a partially deserted cross street of New York, when it became apparent to me that my shoes were very dusty. A bootblack was strolling leisurely along the other side of the street, his hands in his pockets, his rude box of tools dangling carelessly from his back. There was nothing about the boy that would distinguish him from others in his profession. There was the slouch hat, several sizes too large for his head; ragged pantaloons fastened by a single string suspender, trailed on the ground behind his dirty bare feet. He wore no coat, and his thin arms emerged from his calico shirt clear to the elbows. There was, too, the same ever-saddening, old, hard look on the boyish features—the look so characteristic of all street-educated boys. There was something in the reluctance with which this boy obeyed my summons, however, that was very peculiar indeed. Never before had I seen a boy move so slowly toward the coveted dime, especially when another bootblack was within hailing distance.

"Don't you want the job?" I asked him, rather sharply, as he shambled slowly toward me.

"Please sir," he replied with downcast eyes, "would you give it to that other feller down there?" He pointed with his thumb to a similarly equipped urchin a block away. "I've had six shins this mornin', and he hain't had none."

"Was it possible that I had found so generous a nature in the very slums of the city? Almost instinctively my hand went into my pocket, and I left a shining quarter in the hand of the grinning boy, as I made my way to the object of his pity.

"The second boy was ready for the job. "Meanwhile my generous friend had pocketed his quarter and leisurely recrossing the street, comfortably seated himself where he could contemplate his companion at work.

"Who is that boy over there?" I asked of the one on my boots.

"Oh, he's my divvie," he replied, without looking up.

"Your divvie?" I was not versed in street slang.

"Yes; me and him runs this street together, and divvie up the cash."—*Harper's Bazaar.*

Chicago Society Episode.

"I want some body to show me where to unload this coal," said the grimy looking man at the kitchen door.

"You needn't ask me about it," retorted the young woman. "I don't have anything to do with unloading coal. I'm the kitchen lady."

"I can't help that," he rejoined. "I'm the coal gentleman and the father of three kitchen ladies, one laundry lady and one cash lady, and if you don't show me where to put this coal I'll call the woman of the house."

"I—I'll show you, sir," she humbly replied, leading the way to the coal-house.—*Chicago Tribune.*

A Thrilling Experience at Sea.

The great four-masted American sailing ship, Shenandoah, while coming home from Liverpool last March, had a lively experience with waterspouts. When within 500 miles of Sandy Hook, the wind suddenly changed, a great bank of clouds just ahead parted, and there, coming down, driven before the gale, appeared six waterspouts at one time.

One rushed by, just clearing the bowsprit and head sails by a few yards. Another came at her amidships, threatening to carry the mainmast away, which the captain just avoided by quickly turning the ship toward and around it. There were two more near ones and as they were too close to run away from, the big ship was "luffed" up and steered right between them. The ship was saved, but what her fate would have been had she been struck by one can only be imagined from the captain's description of the waterspout that passed astern. He says it seemed to be fully twenty feet in diameter, and of solid water reaching to the clouds.

During the same month the steamer Piqua had a still more uncomfortable experience with these wandering giants of the ocean, near the Bermuda islands. There she met a cyclone upon whose outer edge there hung a great number of spouts—all dancing and pirouetting here and there, twisting and turning and balancing to partners as if engaged in an elephantine quadrille.

The captain became bewildered, for whichever way he turned his steamer he was headed off by the surrounding waterspouts. At last, just as he imagined he had steamed safely away, two of them made a rush, headed him off, and struck the starboard side of the steamer's iron bow a tremendous blow. Then there was a commotion indeed. The broken columns of water dropped in tons on the forward deck, smashing the pilot-house and bridge-ladder, tearing down fourteen ventilators, and dashing to the deck two sailors badly wounded. The ship staggered and rolled as the weight of water poured over her sides in a Niagara of foam and spray, and for some time she could make no headway.

While the two spouts were having their frolic with the sorely beset steamer, the others were whirling about as if dancing in glee at the commotion they had caused. From the black clouds above there shot down blinding streaks of lightning, which, although they missed the ship, so filled the air about her with electricity that it settled upon the metal tips of all the spars, glowing and sparkling there steadily with the beautiful light known as "St. Elmo's fire."—*St. Nicholas.*

What to See in Chicago.

The problem, what to see in Chicago, is one that will vex every visitor. There is enough to see to keep one busy six months. Of course the great World's Fair will claim the larger part of one's time, but the great city of Chicago is none the less wonderful. Sixty years ago the site of the city was the haunt of wolves; fifty years ago Chicago was a busy country town. Twenty odd years ago, when a city of 330,000 population, it was nearly swept from existence by the most awful fire ever kindled; to-day it is the home of over a million and a half of people, and is one of the few really great cities of the world.

No one will miss seeing Chicago, and none should fail to visit that most wonderful scene, the panorama of the great Chicago fire, as it shows truthfully and upon a scale of grandeur never before attempted, a magnificent bird's eye view of the entire city while the great fire was at its height.

Before the observers lie nearly two square miles of smoking ruins, five thousand blazing buildings, and ten times as many refugees trying to save themselves from an awful death. No one visiting the World's Fair can afford to pass by this remarkable exhibition. Its location, on Michigan avenue near Madison street, brings it within easy walking distance of all the principal down-town hotels.

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The great national convention of the advocates of free coinage of silver convened in Chicago on Tuesday, August 1. The announced purpose of the convention is to demand the free coinage of silver at a ratio of one to sixteen.

Labor Commissioner Todd has on file in his office a number of applications from persons desiring positions as farm laborers; also several applications from engineers, some carpenters and painters. Any of our readers desiring to secure such help will do well to correspond with the Labor Commissioner, Topeka, Kas.

One of the most important meetings of the season will be the irrigation convention, to be held at Dodge City next Monday, August 7. At this time delegates from the western counties of Kansas will consider questions which will become more and more important to the counties themselves, to the State and to the nation, until a solution of the problem shall have been reached.

The war cloud in the east, which last week showed some portentous indications, has been completely dissipated on account of the willingness of the small and weak country, Siam, to accept the settlement offered by France in her ultimatum. The chief international significance of this settlement arises from the fact that the position of France in the east is considerably strengthened. England is not well pleased, but seems at present to be entirely ignored in the matter.

PREPARATION OF LAND FOR WHEAT.

Commenting on Mr. Swan's communication in last week's FARMER, on "Experience with Wheat," Mr. H. R. Hilton observes that he would expect just the result Mr. Swan records from shallow as compared with deep plowing just before seeding. Mr. Hilton continues: "I believe in deep plowing occasionally, but never in same season in which wheat is to be sown. I believe in shallow and thorough cultivation for wheat on land that has been plowed from one to four years previously. If Mr. Swan had given the result of similar treatment on these two tracts of land in following seasons we could judge better as to the value of deep vs. shallow plowing. There are soils naturally loose, that deep plowing might injure, but the majority of soils have too compact an arrangement of soil particles underneath the land cultivated. These are generally helped by subsoiling.

"It might be well to bring out a few of these points, as I think Mr. Swan's conclusions, while justified by the facts presented are, all the same, misleading."

BURNING STUBBLE.

As a general rule, suggestions which tend to induce Western farmers to waste fertility in any form are to be avoided. The average prairie farmer is already an adept at failing to avail himself of opportunities for enriching his land, and his education should be rather in the line of preserving and increasing fertility than wasting it. There is one very common case in the West, however, where an apparent waste of fertility is not only justifiable, but advisable.

In turning under stubble, especially if the grain has been headed, or cut high with the binder, the ground is left very loose. The stiff straws serve to prevent the soil from settling compactly, and a very porous condition, exactly suited to rapid drying, is the result. With the stubble removed before plowing, this condition would not exist, but instead, the soil as turned over would settle down and form a firm, solid bed, which is just what is needed in the West for small grain seeding.

Burning the stubble, to be sure, wastes some fertility, and this is an argument against it. But the amount of fertilizing elements thus destroyed is so very small that its loss cuts but little figure in comparison with the advantages accruing from the removal of the stubble. Ordinarily there is less than half a ton of vegetable matter left to the acre. The removal of this amount may be compensated for very easily by the application of stable manure which is going to waste, and the only possible bad results from burning the stubble thus obviated.

The statement that burning the stubble puts the land into better condition for plowing, and by making possible the firm settling of the soil induces the better growth of crops, is not mere theory. It is borne out by ordinary experience and by experiment. The great advantage of burning the stubble was first called to the attention of the writer on a Republic county farm. A field of rye had been cut high, leaving stubble about fourteen inches in length. When the ground came to be plowed in August it was very dry and the stubble interfered with the work. As a mere matter of convenience, fire was set out and most of the field burned over. A few patches, where the stubble happened to be thin or the green weeds thick, were left. As soon as the field was plowed it was sowed again to rye, the seed being put in with a press drill. On the areas that had been burned over the rye appeared in five days, while on the unburned patches the seed was eight days in sprouting. The difference was due solely to the fact that where the stubble had been burned the soil settled firmly and was thus enabled to retain sufficient moisture for the prompt germination of the seed, while the soil on the unburned patches was held up, to a great extent, by the stiff stubble, the air given access and the evaporation of moisture made almost complete. From seeding until harvest time the difference in the growth of the rye on the burned and unburned areas was noticeable. The most of the field was of a dark, healthy green until the grain headed. The plants stooped freely, the straw made a strong, rank growth, and the heads were long and well filled. But all over the piece there were small areas, and, most noticeable, a narrow strip entirely around the field, representing the few furrows that were turned before the fire was set, where the growth was much less thrifty, the heads smaller and not so plump, and the yield of straw and grain much less. It was impossible to tell how great the difference in yield was, but good judges estimated it to be at the rate of five bushels per acre.

Later, an experiment was tried in Riley county with a view to determining the advisability of burning stubble. A thirty-eight-acre stubble field, which was to be seeded to wheat again, was divided into two equal parts. The stubble on one part was burned and that on the other allowed to remain. Both pieces were plowed in early August and seeded the last week in September. The nineteen acres on which the stubble was burned yielded

438 bushels of wheat, and the other nineteen acres yielded 391 bushels. The pieces were as nearly equal in natural productive capacity as a straight division could make them, and neither had any apparent advantage over the other.

Many other cases have come to notice where the yield of grain has been greatly increased by burning the stubble before plowing. Besides resulting in an improved condition of the ground, much weed growth is prevented and a greater amount of plant food and moisture thus insured to the grain crop. It is quite probable that stubble burning is a profitable operation as preparation for wheat or rye sowing in the West, especially in a dry fall or when plowing is done late.

THE NECESSITY OF IRRIGATION.

A circular from the Publication Committee of the International Irrigation Congress (Los Angeles, October 10 to 15, 1893,) calls attention to the extraordinary value of irrigation to all lands which are now tilled under a deficient rainfall. The recent drought reports from western Kansas bring into strong contrast the uniform success of farming, both in grains and fruits, which is met with in irrigated districts.

The Irrigation Congress which meets in Los Angeles, October 10 to 15, will be a notable gathering of prominent irrigators, engineers and bond investors, and very much valuable information to owners of arid lands will result from this Congress. The programme is now in the hands of the Executive Committee, of which ex-Governor Thomas, of Utah, is chairman, and it will embrace such leading topics as irrigation engineering, State laws affecting irrigation, national legislation on irrigation, effects of irrigation on horticulture and agriculture, irrigation bonds as an investment, irrigation machinery and appliances, and other topics.

A handsome book on irrigation is also being prepared by the committee, to be issued about August 10, which will be sent to all interested parties who will send 4 cents in postage stamps for it. Particulars about the Congress can be obtained from C. D. Willard, Secretary, 137 South Main street, Los Angeles.

HORN-FLY EXPERIENCE.

The following letter to the Entomological Department of the State Agricultural college has been sent to the FARMER for publication, and shows something of the depredations in Kansas. The communication is as follows:

"I notice there is considerable comment on the subject of horn-flies, which have made their appearance in this part of the country this spring for the first time.

"They are here in great numbers, and are doing a very great amount of injury to the cattle in this district. An animal that has not a full tail suffers dreadfully. Milch cows lose greatly in flesh and flow of milk, and grazing cattle remaining stationary or often losing. If an animal has a full tail it can better fight off the insects, which can then only congregate on the shoulders and neck. Sometimes one can see the horns covered around the base with the insects.

"Another fact in regard to the insects is that they are at work during every hour of daylight, never leaving off till too dark to see any longer.

"The horn-fly begins operations very early in the season and continues until late in the fall. I noticed them last year in Pottawatomie county, the first I had seen. They came in the latter part of August or first of September and stayed until after hard freezing weather. I noticed them long after the other flies disappeared. They would hide away in some sheltered place while it was too cold for operations, and then as soon as the sun warmed up the air they would begin again.

"The horn-fly is certainly a source of great injury to the cattle interest, and it is to be hoped that some means of relief can soon be found.

"The above facts in regard to the fly may be, and I presume are, already known, but I have seen nothing to that effect.

Durham, Kas. C. J. R."

IRRIGATION BY PUMPING.

In a great many regions in Kansas there is an abundance of water close to the surface of the ground. Probably it is safe to say that in at least half of that portion of the State which really stands in need of irrigation, a practically inexhaustible supply of water may be had at a depth of not to exceed thirty feet. In all such regions irrigation by pumping is, as has been abundantly proved during the past two years, entirely feasible.

In California, in Utah, in western Colorado, in Arizona and New Mexico, and to a limited extent in the western part of Kansas, individual pumping plants for irrigation purposes have been put on trial, and in a great majority of cases they have given complete satisfaction. A few who have attempted to use wind as the motive power have encountered failure, but nothing else could be expected. An ordinary windmill and pump throws so small a stream of water that the parched soil swallows it all before it has run ten rods from the well. Those who have provided the proper equipment for pumping, however, have found it possible to irrigate their lands easily, cheaply and profitably. In no other line of mechanical progress has so much been achieved during the past three years as in the construction of irrigating machinery. For some time the conviction has obtained that a great deal of future irrigation must be done by means of individual pumping plants, and the effort has been to provide the necessary machinery. How well the effort has succeeded is shown on hundred of farms in the arid regions, where in many cases water is pumped from wells at a less cost than would be involved in the purchase of water rights from ditch companies and the payment of the subsequent annual water tax.

The farmers of Finney and adjoining counties are making an extensive trial of this pumping method of irrigation this season, and the final outcome of the experiment will be watched with a great deal of interest. Fifteen irrigation pumps have been placed in the vicinity of Garden City alone, and other neighborhoods have made records nearly as good. Mr. Myron Wood, of Garden City, was questioned recently as to the possibility of profitable irrigation by pumping. He said: "Certainly; irrigation by pumping is practicable in this and in many other sections. From \$400 to \$500 will put in a plant that will irrigate 160 cultivated acres, and the cost per acre per year, including fuel and repairs, will not exceed 60 or 65 cents." It is quite likely that this estimate is too low, both as to the original cost of plant and as to cost of operating, but it might be doubled, and still be less than the present cost of irrigation to Colorado farmers, whom we all envy because of their ability to raise crops every season without fall.

Mr. Bixby, postmaster at Spearville, Ford county, has on his farm a centrifugal irrigating pump which cost him, with the oil engine to run it, \$380. Thus far this season he has irrigated fifty acres of corn, nine acres of potatoes and three acres of garden by means of the pump, and at no time did he work it to its full capacity. It is quite probable that the pump would irrigate eighty acres of land as often as would be needed to raise a full crop. If it can be made to do this there is great profit in irrigating the land, even for ordinary field crops.

One of the great advantages of these individual pumping plants is that they are always to be depended upon. There is not the danger of being suddenly left without water during the growing season which is always attendant upon ditch irrigation. Nor is there a great waste of water when it is not needed. The supply is under absolute control and may be used exactly as suits the needs of the crops and the convenience of the irrigator. Irrigation by pumping seems destined to find much favor in this State and to be the cause of much profit to our farmers.

The visible supply of wheat continues to decrease slowly, but is still several million bushels larger than ever before at this season of the year.

A MODEL AMERICAN RAILROAD.

An Exhibit at the World's Columbian Exposition by the Pennsylvania Railroad Company, Representing the Development and Progress in Transportation and Traffic.

Every patriotic citizen who visits the World's Fair will be greatly interested in the exhibits in the Transportation building, which contains representative and modern exhibits of the leading countries of the world of all forms of transportation, showing the progress and development made during the past 400 years.

The most interesting and important exhibits are, of course, the railroads' displays. And the leading and most instructive and comprehensive exhibit is made by the Pennsylvania Railroad company. A member of the FARMER staff enjoyed a brief examination of this magnificent exhibit of one of America's greatest railways.

The exhibit of the Pennsylvania Lines is under the charge of competent and intelligent gentlemen, who thoroughly understand every feature, and who take pleasure in imparting detailed information and explanations concerning the exhibit and the system.

One is astonished at the bewildering array of mechanism, motive power, equipment, and the thousand and one things that enter into the make-up of a modern railroad system, such as shown by the Pennsylvania Railroad company. In the annex of the Transportation building there is shown all the various cars manufactured by them exclusively—freight, passenger, refrigerator, flat, observation and officials'; also one kind that is called a track indicator car—the only railroad in the world having such a car. It is a car which, in passing over the track, shows any defect in the grade or rail and locates it so accurately on a sheet of paper, which is fed automatically through a mechanical device operated by the car in motion, and shows the exact condition of each mile of the road. This draft is an infallible guide to the trackmen, who are thereby enabled to keep the track in perfect condition, an important feature for the safety of travel and freight traffic, as well as insuring greater speed and less wear on the rolling stock. A system of merits is given for any division of the road kept in the highest state of perfection.

In addition to the exhibits in the Transportation they have the Pennsylvania Railroad building across the street, a magnificent and artistic structure which contains a veritable railroad exposition of itself. Models, relics, pictures, views, photographs, etc., all to show the progress made in railroad-ing from the beginning, as well as all the features which go to make up a great modern railroad. The visitor gets a bird's-eye view of the whole system. It is one of the greatest educational exhibits the writer ever saw, and it would be utterly impossible in the brief space of a column to attempt to describe it in detail, but simply to call the attention of World's Fair visitors to the importance of making a study of this remarkable exhibit.

In order that our readers may have some idea of the magnitude of the system, equipment, and the traffic of the Pennsylvania Lines, the following facts and figures, officially compiled, will serve as a graphic illustration:

At 6 p. m., on Columbus day, October 21, 1892, the Pennsylvania Railroad company had 865 trains and 1,000 engines under steam.

The mileage of the system is distributed as follows: New York, 106.11 miles; New Jersey, 750.79; Pennsylvania, 3,128; Delaware, 238; Maryland, 447; District of Columbia, 8; Virginia, 103; West Virginia, 70; Kentucky, 3; Ohio, 1,340; Indiana, 1,077; Illinois, 231; Michigan, 446; total mileage, 7,980 miles. The total amount of capital invested by the Pennsylvania company is \$750,000,000.

In their building they have a novel illustration of their traffic. It consists of a globe and shows that the passenger business is equivalent to one passenger making a trip around the world every seven and three-fourth minutes. The freight traffic represents one ton

of freight every sixty-three minutes and one locomotive around the world every two hours. This statement of stupendous enterprise seems dazzling for a single company, but only aptly illustrates the result of business development in transportation since the days of Columbus.

There are so many other things of value worthy the study of every visitor in the display made from the Pennsylvania Lines that one would be well repaid for the trip, provided he made a study of nothing else at the fair.

After a review of this exhibit and noting every modern convenience as well as precaution provided for the safety of the traveler and the countless other attractions of the route, the visitor finds himself making a mental resolve to make a trip over the famous Pennsylvania Lines for his mental, moral and physical benefit, and also to familiarize himself with the business resources of a country whose traffic is so immense that it has required the evolution of such a gigantic railroad system as the Pennsylvania Lines, with its unparalleled equipment to do business in any volume with dispatch. This is one feature only of the World's Fair—the model American railroad.

For detailed information regarding the Pennsylvania Lines of railroad, a letter addressed to E. A. Ford, Passenger Agent, Pittsburg, Pa., will bring the desired result to our readers.

KANSAS FRUIT FOR THE WORLD'S FAIR.

The State Board of Managers for the World's Columbian Exposition have placed the State fruit exhibit in charge of the Kansas State Horticultural Society, under the superintendency of Judge F. Wellhouse. The co-operation of every fruit-grower is desired in the work of collecting and forwarding to him, at Leavenworth, the finest products of the orchards and vineyards in your county.

The opportunity should not be neglected of sustaining the high reputation which has been accorded to the State in years past as a most favorable fruit region in the West, and which has added thousands of intelligent fruit culturists to her population, and materially increased her wealth, which has been the result of exhibiting her fruits in the past at home and abroad.

The opportunity offered to exhibit the product of the resources of Kansas at the World's Exhibition, and before the thousands of home-seekers, vastly surpasses any occasion offered heretofore, and should not be treated with any degree of indifference or neglect by any class of our citizens.

The following directions for packing and shipping should be observed:

Apples, pears, quinces, etc., should be wrapped in paper (old newspapers will do) and packed in barrels.

Peaches, plums, etc., should be wrapped in paper and packed in crates or shallow boxes; and do not let them get too ripe.

Select perfect specimens, clear of insects, and as highly colored as possible. Put on gloves while handling.

Grapes can be packed in shallow boxes with cotton. Put the name and postoffice address of the grower on each package, and the name of the county, as we intend to show by counties.

Ship by express to Ryan & Richardson, Leavenworth, Kas. This firm has a large cold storage plant, and lets us have the use of it free.

We will pay express charges on its arrival at Leavenworth; or, if it is paid when shipped, send expense bill to Ryan & Richardson, and the amount will be refunded.

All counties should be represented.

Bankers have again been hugely swindled. Maine and Massachusetts banks advanced about \$800,000 on bogus elevator certificates.

The total receipts of wheat at primary markets for the week ending July 22, and for the corresponding periods as compiled by the Cincinnati Price Current, are shown in the following table:

1893	3,299,000	1889	2,102,000
1892	4,646,000	1888	2,405,000
1891	5,389,000	1887	3,984,000
1890	2,163,000	1886	4,812,000

TO RELIC OWNERS.

The Columbian Liberty Bell committee have forwarded from Troy, N. Y., all the swords, guns, chains and filings that they have received, which could not be fused into the Columbian liberty bell or availed of in the clapper, to Messrs. Deere & Co., plow manufacturers, Moline, Ill., who have been selected to make the Columbian peace plow, and who have generously offered to make it without cost to the committee.

The Columbian Liberty Bell committee now desires wood and additional metal (wrought iron or steel) of great historical interest, which will be made up into the plow. Persons having control of such wood or metal are requested to send their contributions to the manufacturers at Moline.

Each contribution should be labelled, the label stating what it is, its history, and giving the name of the owner. Contributions should be sent in at once. A complete record of each donation will be made and kept on exhibition at the World's Fair, with the plow beside the liberty bell.

SPECIAL RATES AT THE WORLD'S FAIR

To Kansas Farmer Subscribers.

The manager of the KANSAS FARMER, who has spent considerable time at the World's Columbian Exposition, has secured for the benefit of KANSAS FARMER subscribers special reduced rates at the Columbian Union hotels. They are all within from one to three blocks of the World's Fair Sixty-second street central entrance. Regular rates are \$1 per day and up European, \$3.50 and up American plan.

These hotels are new brick and stone, fire-proof buildings with modern improvements, well furnished, and just the place for comfort and convenience.

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AGRICULTURAL EXPERIMENTS.

"Colic in Horses and Mules" is the title of Bulletin No. 25 of the Mississippi station, at Agricultural College P. O., Miss. The author of this bulletin states that nineteen out of every twenty cases of colic may properly be charged to some irregularity in food or water. The water supply for stock is an especially important matter, though one which receives but little attention. So long as an animal will drink it no water is considered too foul for either horses or mules. Not only is this neglect on the part of stock owners responsible for many cases

of colic, but many other diseases are directly traceable to impure water. Animals should have free access to plenty of good, pure water at all times, and when this is true there is never any danger of an animal drinking too much. Animals at rest should have water at least three times a day, and those at work should be watered not less than five times a day. Summed up, the following rules should always be followed: Use only pure water; water before feeding; water frequently, from three to five times daily; never give a large quantity at one time, especially if the animal is warm or about to undergo severe exertion.

In the matter of food some important rules are given. The quality and quantity of food and the regularity with which it is given are of the greatest importance. Oats is the best single grain food for horses and mules.

If a horse is required to do more work than usual on a given day it is a common custom to give him more feed. This is a serious mistake. A change of food should always be made with caution and a smaller quantity of the new food given for several days. The best rule is to never to give a horse a full feed on a change of work, nor full work on a change of feed.

Spasmodic colic is due to some irritant, as particles of undigested food or foreign bodies in the stomach. Or it may be caused by indiscretions in watering or by sudden changes in temperature. For this any of the following prescriptions will be found of service: (1) Chloral hydrate, 1 ounce; sulphate atropia, ½ grain; water, 1 pint. (2) Sulphuric ether, 2 ounces; laudanum, 1½ ounces; raw linseed oil, 8 ounces. (3) Laudanum, 2 ounces; oil turpentine, 1½ ounces; raw linseed oil, 8 ounces.

Give one of these at a dose and repeat in half hour if relief has not been obtained.

Flatulent or "wind" colic is due to gas in the intestines resulting from indigestion. It is due very often to the feeding of large quantities of green food or large feeds of grain immediately before or after severe exertion. This colic must be treated on entirely different principles from the other. Opium must be avoided. For the relief of the pain and the checking of the fermentation and consequent formation of gas in the intestines, the following has proved the best yet found: Chloral hydrate, 1 ounce; hyposulphite of soda, 2 ounces; atropia sulphate, 1 grain; water, 8 ounces. This is to be given as one dose and repeated at intervals of a half hour if relief is not attained.

Those of our readers who live in the cotton region will doubtless be interested in the "Cost of Cotton Production and Profit per Acre," as reported in Bulletin No. 26 of the Texas Experiment Station, at College Station P. O., Tex.

In Bulletin No. 22 of the Department of Agriculture, Brisbane, Queensland, Prof. E. M. Shelton, formerly of Kansas, gives his experience in wheat-raising. After covering the ground in his characteristic thorough way, the professor concludes as follows:

1. Early sowing and the cultivation of early ripening sorts.
2. Harvesting rust-infected crops in the early or 'dough' stage.
3. The growth of sorts which local experiences have shown to be rust-resisting or rust-escaping.
4. The growth of wheat after fallowing or after crops of a different order, agreeable to the true principles of rotation.
5. Thin seeding with due regard to varieties and local conditions of soil and climate.

He also devotes a chapter to the various smuts and their remedies.

Another "formerly of Kansas" man, Prof. H. E. VanDeman, has lately issued his handsome report as Pomologist of the Department of Agriculture. Of special interest in this report is the chapter of fruit-raising in Colorado and the very considerable list of promising new fruits. Among the latter are named the following apples: Brightwater, Bryant, Yacob, Mickel, Perry, Story and Upp; of Russian apples he names the White Russet and Cross; but one crab apple is given, viz., the Snyder; of pears the Fitzwater, Longworth, Max, Mission and Victor are named; the list of cherries embraces the Bing, Hoskins, Matilda, Mercer, Quaker and Vesta; the Gaudalpe, Oro, Rose, Stinson Late and Zanc are the peaches mentioned; of plums the Grace, Golden, Harlow, Jessie, Perfection, Sophie and Theresa are named; four grapes, the Critic, Hosford, Lawrence and Ohio; three blackberries, the El Dorado, Primus and Truman Thornless; two black raspberries, the Babbitt and Hanibal; one purple raspberry, the Colossal; three red raspberries, the Cardinal, King and Royal Church; four strawberries, the California, Columbian, Murray and Omega. A number of these and of several varieties of tropical and semi-tropical fruits are handsomely illustrated in the report.

The Secretary of Agriculture can doubtless supply copies of this report to those who desire it.

Horticulture.

Bulbs Grown from Seed.

EDITOR KANSAS FARMER:—In answer to the inquiry of Mrs. M. K. N., will say that bulbs can be grown from seed, but few of the seed houses in this country keep all varieties of such seed. We presume, however, she asks the question in reference to growing bulbs for herself. If so, we would suggest that she make her venture from among the following, most, if not all, of which can be procured through any large seed store: Begonias (tuberous), cyclamen, gladiolus, gloxinias, cannas, dahlias, freesias, oxalis, and perhaps callas and amaryllis. B.

The Shawnee Horticultural Society.

There were about 100 persons present at the residence of Mr. Coleman, north of Menoken, and several persons were called on and responded with interesting talks and papers on the following subjects: Mr. Entsminger gave an interesting talk on "Strawberry Fruiting, Handling and Marketing," and believes in having fruit in the very best possible condition when brought into the market. Mr. Coleman was then called on for a paper on "Help in the Orchard." He believes in using the disc harrow. Mr. Robt. Priddy then gave us an account of his father's method of picking apples by using a canvas. J. M. Priddy read a paper on "Our Friends in the Orchard." It was an able and interesting article on the most timely subjects ever brought before the society, and will appear in full in the FARMER. Mr. B. F. Vanorsdal then proceeded to give us an account of "Horticulture at the World's Fair," and greatly deplores the lack of fruit from Kansas on exhibit at the Fair.

On motion, the society will meet at Mr. Martin's on the last Thursday of August. Mr. G. W. Vanorsdal then suggested that all bring some fruit of the season to the meeting.

Mr. Sexton then introduced the subject of working up grapes instead of selling them.

On motion, a vote of thanks was extended Mr. Coleman for his cordial reception of this meeting. Adjournment followed.

An Accidental Discovery.

Some of the most valuable discoveries are made apparently by accident. Professor Goff, of the Wisconsin Experiment Station, tells how the Bordeaux mixture, for example, was accidentally discovered. Some owners of vineyards at Bordeaux, France, were troubled with the small boy, who in that, as in all other countries, has a relish for good things and knows how to get them. The small boy was in the habit of stealing grapes from the vines by the roadside, and it occurred to the owner of the vineyard that if he would sprinkle the grapes with a solution of lime and blue vitriol, which would make them bright blue in color, premonitions of colic would keep the small boy away. The mixture not only kept the boys off but proved to be a remedy for blight. Six years after, or in 1889, it was tried in America for potato blight, and in 1890 was tested at the Wisconsin Experiment Station, and in the same year at the Vermont Experiment Station, with the result that while potatoes which had not been sprinkled only yielded ninety-seven bushels to the acre, those treated yielded 257 bushels. Professor Goff then said it was his candid opinion that the mixture was so promising as to warrant its trial on a large scale by the practical potato-grower. The mixture must be applied before the blight gets possession. Paris green might be mixed with the Bordeaux mixture for the sake of economy without injuring the effects or harming the potatoes.

Pear Blight.

For some reason there is more pear blight—and its "first cousin," twig blight, of the apple and quince—this season than usual, even Tyson suffering somewhat. We have just been cutting away large branches from a fine Hoosic, of beautiful proportions, which never showed any sign of the malady

in the ten years it has been planted until the present season.

The first cutting—about two weeks ago—was by an inexperienced hand, and not far enough below the blackened portion of the limbs, and as the disease kept on, this second cutting—so much greater than the first—mars the symmetry of the tree very much. But there is no other way yet known to save its life. As soon as any blackened leaves are observed, an examination should be made to find how far the disease extends. The discolored bark will show, and the cutting should be eight or ten inches below, so as to make it reasonably certain that all the affected bark and wood is removed.

Special care is required in the cutting, as Prof. Arthur has demonstrated that the knife or saw used will convey the malady to healthy wood. If at any time the knife (or saw) has passed into the blighted portion of a limb, it should be disinfected before being used on sound wood. The simplest method of disinfection, probably, is to pass the blade several times through the flame of a lighted lamp.

The careful investigations of Profs. Burrill and Arthur leave little doubt as to the character of the disease—bacterial—but the complete remedy has not yet been discovered. The late Dr. J. P. Kirtland, of Cleveland, O., who came very near the same conclusion concerning the malady a number of years ago, recommended washing with a strong solution of copperas water. This can do no injury, but most reliance is to be placed in the cutting and burning.—R. J. B., in *National Stockman*.

Government Reports on Fruits.

Apples.—The prospective crop of apples, commercially considered, as indicated by returns of our correspondents for July, will be light, and in many sections a complete failure. The high returns in June from districts then in bloom have been materially lowered for July; the set has been poor and the drop, still continuing, severe. Thus in Maine and New York the percentages are lowered 22 and 19 points, respectively. These States are by far the most important of the eastern apple district, and failure there makes the sustained percentages of New Hampshire, Rhode Island and Connecticut of little significance as regards surplus production, though it means much to successful growers in the latter States. Large reductions are also shown in Vermont, Massachusetts and Pennsylvania.

In New Jersey, Delaware and Maryland a fair to good crop is expected. The percentage in the latter State, however, has been reduced 16 points by the dropping of immature fruit, and is liable to still further reduction from the same cause. Virginia has sustained her percentage and will probably have half a crop.

In the Ohio valley and the Missouri fruit belt things have gone from bad to worse. The frequency of the word "failure" in the notes of the correspondents throughout these sections ominously emphasizes the exceedingly low condition, as shown by the percentages. Michigan has declined 20 points since June report.

The high condition of apples in the Pacific coast region still continues, and a good crop is confidently expected. The fruit is dropping some in Oregon, where the decline since June, though slight, has been greater than in Washington and California.

Peaches.—A large crop of this fruit is indicated by the returns of the present month. The percentages of June are well sustained in the States of surplus production, excepting in Ohio and Georgia. In the former State the condition has been low from the start, and since last report fruit has dropped badly. In localities where fruit is still on the trees the early varieties are rotting more and more as they approach maturity. The same causes have worked the decline in Georgia.

In the States of New Jersey, Delaware and Maryland the prospect has been rarely, if ever, so promising. Returns from the peninsular district of Delaware and Maryland point to a crop larger than any since 1875. The crit-

ical period has been passed in New Jersey, and yet the returns from that State make an average of 101, one point above the standard.

From Michigan the returns are not quite as encouraging, but a very fair crop seems probable.

California returns average high. A good crop is assured, and the fruit being of excellent quality, it is thought prices will rule high and the net profit to the orchardist be satisfactory.

Grapes.—The condition of grapes is generally high throughout the country, and the prospects of the crop are excellent. Rot is reported as appearing in some sections, though not to an alarming extent, and rose bugs are doing damage in some counties in the Eastern and Middle States.

August Notes.

BY N. J. SHEPHERD.

Push the plowing for fall wheat. Sow a patch of rye the last of the month. This is a good month to set out strawberry plants.

It will pay to commence feeding the hogs for early market.

Commence cutting the corn as soon as it begins to harden.

Haul out and scatter the manure on the ground for fall wheat.

When the ground has been cropped down commercial fertilizers can often be used profitably with fall wheat.

If any of the cows are to be fattened and marketed this fall the fattening should be pushed now.

Now is a good time to go over the stock on the farm and determine what shall be fattened and marketed.

It is not good economy to attempt to winter more stock than can be well fed and sheltered, and this fact should be determined in good season.

It is often the case that by commencing to feed in good season stock can be made ready for market with profit when otherwise it could not be done.

On many farms work is not pushing now, and it will be a good plan to look after the winter shelter for the stock.

The second crop of clover will be ready to harvest this month either for hay or for seed. If for seed, arrange to handle as little as possible.

Onions will be ready to harvest this month. Cut off the tops and let lay in the sun a day or two and then spread out in a dry place.

Better allow the hogs the run of the orchard in good season rather than allow the fallen fruit to go to waste, as is often done.

This is a good month to breed the ewes for early lambs when they are wanted for early market. Select only the best ewes and breed to a first-class ram.

The larger part of the swine feeding should be done in the latter part of summer or early fall if the best gain for the amount of feed consumed is secured.

With all stock intended to be fattened a good plan is to gradually increase the ration until they are given all that they will eat up clean at each meal.

The surface of soil intended to be seeded to fall wheat should be worked into a fine tilth to the depth of three or four inches, and the more thoroughly this is done the better the start to grow.

This is one of the best months to underdrain, and land that is unfit for cultivation can often be made the most profitable on the farm by thoroughly underdraining.

So far as is possible it is best to have the seed wheat on hand in good season, and it will pay to take considerable pains to secure seed of good quality.

When the season has been hot and dry and the young orchard has been mulched in good season, it will often be advisable to remove the mulch the latter part of this month, in order to prevent a too late growth, as a late growth is often seriously injured by freezing weather.

Millet should be harvested this month. In curing, the management should be nearly the same as with clover. It should not be allowed to get too ripe, as the quality of hay is not so good; cut in good season, and properly cured, it makes a splendid feed for cattle or sheep during the winter.

Sustain the Sinking System.

This common sense injunction is too often unheeded. Business anxieties, overwork, exposure, must and do cause mental and physical exhaustion, which lessens vigor and tells injuriously upon the system. That most beneficent of tonics and restoratives, Hostetter's Stomach Bitters, effectually compensates for a drain of strength and loss of nerve power, regulates impaired digestion, arouses the dormant liver and renders the bowels active. It is, besides, a preventive of malarial and rheumatic ailments.



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The Poultry Yard.

Red Mites.

No parasites so destructive and so difficult to get rid of in the henry is known to the poultry-keepers as this little insect. It is not commonly seen among fowls, but when once it gets a foothold in the fowl premises, or fixes itself upon the bodies of the birds, it is hard to eradicate.

Thorough fumigation of the building where the chickens lay and roost at night will exterminate them there. Close the house tightly in the day time and burn two or three pounds of common crude brimstone (on live coals) inside of the building. And to this, say a pound of resin, to be burned at the same time, and after two or three hours, open and thoroughly ventilate before the birds are allowed to return. This will clean the house.—*Poultry World*.

A Seasonable Necessity.

The most important thing for us to consider at this season in connection with the fowls is dust. They must have it. We cannot have thrifty young chickens, vigorous cocks or laying hens now if they have not access to a wallowing place.

Dust is nature's remedy for lice. It is the only remedy of the partridge and the dove that wallow in the road dust—of the sparrow that dusts in the carriage-way of the city streets—of all wild fowl. They know nothing of insect powders, lime or kerosene, and yet one rarely finds a wild bird or a wild fowl that has perished of lice. Never, in fact, unless disabled by accident or gunshot, and unable to apply nature's remedy for cleansing their plumage and skin.

Dust is, perhaps, the simplest thing of all in connection with our poultry fixtures. And yet it is one of the utmost importance. It has a financial significance that we do not fully appreciate. In keeping hens for their eggs, either pure-bred or common, if we omit the dust-bath from our list of necessities, we are quite sure to suffer a great loss in eggs, for hens infested with lice and mites will not lay profitably. This fact is often lost sight of, and many people wonder why on earth their hens don't lay, when the cause is simply the absence of a suitable wallowing place.

Kerosene and lime about the perches and nests is desirable, but if the hens have no place in which to dust, the lice will stay with them, in spite of us.

The male bird that is infected with lice is a sorry creature. He soon loses his gallantry and vigor, becomes pale about the comb and wattles, crows only now and then, is feverish and restless, and in a fit condition to weaken and die from the first thing that disagrees with his digestive apparatus.

It is much better to furnish a good wallowing place for the fowls than to be all summer saturating the hen-house with something to kill lice.—*American Poultry Journal*.

Breeds.

EDITOR KANSAS FARMER:—Unless a specialty of eggs or fowls for market is made, the matter of breeds is largely one of choice, that is, any good breed given good care will return a good per cent. of profit. There are some breeds that are best when eggs alone are wanted; there are others that are best as table fowls, making a large growth in a short time, while there are others that may justly claim to be good all-purpose fowls. As there are several breeds of these different classes one may readily have a choice if desired.

But in selecting a breed the purpose should be determined in advance and a class selected that will best answer this, and then which breed of this class is rather a matter of choice. But after the selection is made give it a reasonably fair trial before discarding. In a majority of cases one trial is not sufficient to fully determine their value, and it is not good economy, at least, to be changing from one breed to another. Any breed can be made

profitable with good treatment, and in a majority of cases, if not a success, the fault will be found to be more in the management than the breed.

The very large breeds are easiest confined and bear confinement rather the best. They make a quick growth, and when the largest quantity of meat in a short time is desired they are the best breeds. The small breeds are generally best for eggs alone, but while they make a good enough table fowl, so far as the quality of the meat is concerned, yet the carcass is small, and this is the principal objection to them as a table fowl. But they are usually first-class foragers, and on the farm where they can be allowed a good range, will pick up the greater part of their own living with less looking after than the large breeds. At the same time they are more difficult to control, and this is often a disadvantage.

The medium breeds fill more nearly the wants of the farmer that needs eggs and table poultry at all seasons than either the small or the extra large. The majority of the medium breeds are sufficiently active to be good foragers, and as they lay well, make a good table fowl for the farm.

As with the other classes, there are a sufficient number of breeds, so that there is plenty of opportunity for a selection. But after a breed is selected, keep it a sufficient length of time to fully test. Generally, two years, at least, is necessary to test with any degree of satisfaction. But in making a start be sure to have one of the best breeds, and then give good management, as any good breed can be made more profitable than "dung-hills." N. J. S.

In the Dairy.

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

World's Fair Dairy News.

Brown Bessie, No. 14 in the Jersey herd, on July 10 gave forty-three pounds of milk that made 3.48 pounds of butter.

No. 22 in the Guernsey herd, imported Rosabella, owned by Levi P. Morton, of New York, died July 11. The cause of her death was said to be impaction of the stomach, brought on by over-feeding.

For the week ending July 12 the largest amount of milk in one day from the Jersey herd was 836.9 pounds; the highest per cent. of fat was 4.9; the largest yield of cream was 153.5 pounds; salted butter, 48.98 pounds; highest score on butter, 95.2. During the same week the best record for the Guernseys was 728.7 pounds of milk, 4.6 per cent. of fat, 100.5 pounds of cream; salted butter, 39.14 pounds; highest score on butter 94.5. The highest mark reached by the Short-horns on the same date was, milk, 725.2 pounds; 3.8 per cent of fat, 121.0 pounds of cream; salted butter, 32.31 pounds; highest score on butter 94.0.

The weather during the hottest part of July has been terrible in the intensity of heat, and as the heat has been continually accompanied by great humidity, the cattle in the three barns suffered fearfully, and under such circumstances the records made by each herd is astonishing.

The Dairy Exhibit at the World's Fair.

W. I. Buchanan, chief of the Agricultural Department of the World's Fair, in speaking of the dairy exhibits, said they would come under three different heads. There would be the exhibit proper, then a series of experiments, and lastly, a course of lectures. Butter and cheese will be sent at four different times. After it has been exhibited and the committees have passed upon it, it will then be placed on sale and the next lot placed on exhibition. Each State will bear the expense of the exhibit from within its own borders. There will be a dairy section in which experiments in breeds, feeding and methods will be very carefully tested. Arrangements will be such that visitors can very comfortably witness these experiments while in progress. In one sense it will be a

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dairy school. In a building capable of seating 15,000 people there will each day be given lectures upon agricultural topics. The best possible talent will be secured to give these lectures. The dairy interests will not be left out. One lecturer is to be a woman from England, who is to tell how best to make butter.

Farmers might find it decidedly to their advantage to make their own cheese during hot weather, when the price of butter is usually at its lowest. For \$1 C. E. Kittinger, of Powell, S. D., will mail to any address ten rennets with complete instructions in cheese-making. He says if any one fails while following his instruction he will refund the money received by him for the rennets. His process is very simple and can be followed by any one.

Dairy Notes.

A persistent milker is worth \$10 extra. A mean cow is an intolerable nuisance. Never drive a milch cow faster than a walk.

There is always a sufficient reason for your butter selling low.

You must make the kind of butter the trade demands. You had better do so for policy.

If you use deep-setting of milk in covered cans you then have no use of thinning the cream; it is right every time.

If the dairy cows are made most profitable they must be made comfortable. The best quality of butter cannot be made from a poor, half-starved cow.

It does not pay to put a large quantity of food before a cow and let her waste it. Increase the feed gradually and at intervals. A week's feeding and the results carefully noted will tell the story.

The kind of butter that comes to market shows just how the milk and cream is handled. The saying, "store butter," has passed into common use, and is generally conceded to mean a low grade article. Good butter is only made when the conditions are all right.

Farm dairies can beat the creameries in quality of butter, because they can secure a perfect condition of their milk, and it is not subjected to long and dangerous hauls over dusty roads in hot weather, churning and pounding innocent milk and cream into undesirable or immature butter.

The really choice butter to be found in any market at any time is not equal to the entire product on sale. The price for the best is always high enough to insure a profit to the maker, and the price of the lowest is always low enough to insure a loss. An investigation of these facts show clearly that there is no trouble with the business of dairying in itself, but rather with the methods of the majority of dairymen.

The hydrate of chloral treatment for milk fever after calving is coming to be regarded as almost a specific for the disease. From six to eight drams chloral hydrate mixed with molasses is given as a first dose, and half an ounce at each succeeding dose at intervals of two, four or six hours, according to the severity of the symptoms and the size of the animal. If treatment begins at the first or early part of the second stage, the number of doses necessary rarely exceeds two, says the *London Agricultural Gazette*.

In spite of the exposure every day by scores of reputable newspapers, the black pepsin fraud continues to gather in its victims. Many purchase it under the impression that it will increase the yield of butter without detracting from its wholesomeness; others buy it under the belief

that it increases the yield but makes the butter injurious as a food. They do not care for the latter provided the former results are obtained. But the fact is, black pepsin does not increase the yield of butter, but, on the other hand, speedily produces decomposition and rancidity. Any man of common sense ought to know that there is no method by which the actual contents of butter fat in milk can be increased after the milk leaves the cow.—*National Dairyman*.

It is said that two-thirds of a pound of butter is consumed weekly by each person in the United States, or thirty-five pounds a year. Reckoning our population at 60,000,000, it would require 2,100,000,000 pounds of butter to feed our people yearly. The last census makes a return of 16,000,000 milch cows. To produce the above quantity each cow must make on an average 130 pounds of butter annually. As a great many cows are never handled with a view to dairy productiveness, it might be set down that the 130 pound average is putting too great a burden on all the cows, good, bad and indifferent, and very likely 100 pounds would come nearer the true amount. Adding to this 70,000,000 pounds which we export would increase each cow's production about four and one-half pounds, still leaving a large deficiency to be supplied by the oleo manufacturers.

Making Cheese at Home.

Send \$1.00 to C. E. KITTINGER, POWELL, SOUTH DAKOTA, for ten rennets, with complete instruction, by mail, for making cheese at home without any costly apparatus or previous experience. Any woman can make cheese while attending household duties. Milk that will make one dollar's worth of butter will make two dollars' worth of cheese. Simplest process of all. Endorsed by the Manhattan Experiment Station and hundreds of farmers in all parts.

FARMERS,

WE WANT YOUR BUTTER. Will furnish vessels to ship it in, take it regularly, and pay the best Kansas City prices. We have hundreds of regular customers, and will convince you that we can handle your butter satisfactorily. Refer to Grand Avenue Bank and Bradstreet's Mercantile Agency.

Chandler & Son, 515 Walnut, Kansas City, Mo.

Cancer Cured With Oils.

Cancer, Tumor, Skin and Womb Diseases cured with soothing, balsam oils. A new book just printed on the above diseases will be mailed free to suffering humanity, which explains the mode and length of treatment. No knife or burning plasters, but soothing, painless, aromatic oils. Call on or address

DR. BYE,

Portsmouth Bldg., Kansas City, Kas.

EPILEPSY OR FITS

Can this disease be cured? Most physicians say No!—I have cured; all forms and the worst cases. After years study and experiment I have found the remedy.—Epilepsy is cured by it; cured, not subdued by opiates—the old, treacherous, quack treatment. Do not despair. Forget past impositions on your purse, past outrages on your confidence, past failures. Look forward, not backward. My remedy is of to-day. Valuable work on the subject, and large bottle of the remedy—sent free for trial. Mention Post-Office and Express address.

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

Nerve Tonic Blood Builder

DR. WILLIAMS' PINK PILLS FOR PALE PEOPLE

Send for descriptive pamphlet.

DR. WILLIAMS' MEDICINE CO., Schenectady, N.Y. and Brockville, Ont.

50c. per box. 6 for \$2.50.

PILES, FISTULA,

And all other Diseases of the Rectum cured by Drs. Thornton & Minor, Kansas City, Mo., without knife, ligature or caustics—no money to be paid until patient is cured. We also make a specialty of Diseases of Women and Diseases of the Skin. Beware of all doctors who want any part of their fee in advance, even a note. In the end you will find them expensive luxuries. Send for circular giving names of hundreds who have been cured by us, and how to avoid sharpers and quacks. Office, No. 100 West Ninth Street. Rooms 30-31-32 Bunker Building.

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. This department is intended to help its readers acquire a better knowledge of how to live long and well. Correspondents wishing answers and prescriptions by mail will please enclose one dollar when they write.

Medical Specialists.

In the progress of civilization and social science it becomes more and more the habit of the race to subdivide trade and labor into what are called specialties. In the earlier days of this and other civilized countries, it was the habit of merchants to keep stocks of what were called general merchandise, and that habit yet prevails largely in small towns and villages. Such a merchant kept in his store a little hardware, some groceries, boots and shoes, drugs, stationery, notions, knickknacks, confections and toys. Later they divided up. One merchant took hardware and carried a larger and better stock, and came to know more about that branch of trade. Another took groceries, another boots and shoes, another books and stationery, another drugs and chemicals, and thus a better knowledge of all branches was gained and better profits made.

In manufacturing the same spirit of division of labor was put in practice. One man devoted all his time and talent to making a single article, and finally to a single piece of a compound article. In many factories one man does nothing but drill holes, while another heads down rivets. Thus, by doing one thing over and over continually, men become very expert and are able to accomplish marvels.

The same rule holds good and the same custom prevails to a large extent in the domain of medicine. The medical field is so large and its departments so numerous that no man can possibly master it all. So it comes to pass that if people want special skill in any branch of the medical art, they must of necessity go to the specialist in that branch.

Some men spend their whole lives, after acquiring the necessary general knowledge of medicine, in cultivating special knowledge of the eye, or the throat, or the chest. And thus, with special workers and students in the special branches, the whole science of medicine is greatly advanced. It is related of a celebrated linguist, who had spent most of his life in studying the Greek verb, that when dying he regretted that he had not spent all his time on the dative case. And a very eminent oculist, whose labors greatly advanced our knowledge of the eye, was once asked how he acquired such almost superhuman skill in eye surgery, and replied, "By first sacrificing a bushel of good eyes I have learned how to save a million bad ones." The old maxim that the man who is "jack of all trades is master of none" is true the world over. The man who does one thing continually and learns all that may be known about that, towers away above his fellowmen who divide up their time and talent among several things. So it comes to pass that intelligent and wise people who want good surgery go at once to the man whose life and all his thoughts and energies are spent in that department of medicine. It is entirely through that means that surgery has achieved all those marvelous results of later years. The surgeon who has opened the skull a hundred times knows vastly more about that wonderful globe and its contents than the man who never knocked at the door of that marvelous palace. When Henry Disston began making saws he set out with the determination to make the best saws in the world, as did Ames in the manufacture of shovels, and now Disston's saws and Ames' shovels cut the lumber and move the dirt of the whole earth.

When Lawson Tait, of Birmingham, England, set out to become an abdominal surgeon, he kept persistently to that work until today he is the foremost surgeon of the world in that branch of work, and has now opened the abdomen many thousands of times, removing from that cavity all manner of false growths and abnormal conditions, until now his achievements are little short of miracles. And yet, in the face of all these facts, there are thousands of people who do not know but that one doctor is as capable as another and will trust an important surgical operation as readily in the hands of the general practitioner, who is the jack of all medical trades, as in the hands of a specialist. And a great many general practitioners, knowing full well that the trained surgeon knows vastly more about surgery than they do, will, nevertheless, for the sake of a fee, keep patients away from the specialist until often it is too late to save them, holding out promises of drug cure, that nothing can possibly achieve but high grade surgery. In some cases that habit becomes little if anything less than a crime. It is the common experience of all high-grade surgeons that thousands of patients linger in the hands of merely medical men—non-surgeons—until little or nothing can be done for them but to dig them a grave, who at an

earlier stage of their maladies might easily have been saved. Only last Sunday we saw a patient with a decaying bone in one shoulder that should have been removed half a year ago, but which was withheld from it by a selfish or ignorant doctor on the plea that he had little use for surgeons and he might, maybe, find something himself that would cure it.

We recently heard of a case where an ordinary medical man was called to a complicated case of broken arm. He set the arm, as it is called, and the outcome was a very crooked arm. Then he broke it over and set it again, only to have another crooked arm result. He broke and reset the arm a third time and still it is crooked, and now the family is talking of a suit for malpractice and consulted us about it. We were compelled to say that the probabilities were against winning the suit, on the ground that the father had been quite as guilty of malpractice in choosing a doctor as the doctor had in choosing a method of treating the arm, and, therefore, was himself guilty of contributory negligence, which is a bar to recovery in such suits. It is not good sense to take a plow to a jeweler or a watch to blacksmith to be repaired. They are both mechanics, and yet how wide the difference between them. A wise public will wisely discriminate and take eye cases to eye doctors, medical cases to medical men and surgical cases to surgeons. Thus a good many funeral sermons will be omitted or delayed for a much longer time.

A Great Man's Mistake.

Recently the Rev. T. DeWitt Talmage preached a very eloquent sermon on the needs of Christianity knowing and being identified with all the teachings of science. Among other things he said:

"We want a clergy learned enough to discourse of the human eye, showing it to be a microscope and telescope in one instrument, with 800 wonderful contrivances and lids closing 80,000 or 40,000 times a day, all its muscles and nerves and bones showing the infinite skill of an infinite God, and then winding up with the peroration, 'He that formed the eye, shall he not see?' And then we want to discourse about the human ear, its wonderful integuments, membranes and vibration, and its chain of small bones, and its auditory nerves, closing with the question, 'He that planted the ear, shall he not hear?'"

And now the anatomists and well read medical men are all wondering how it happened that they never saw and never before read or heard of the bones of the eye. They wonder if Mr. Talmage has been dissecting some new kind of eye.

The Wool Situation.

Jesse T. Baker, President of the St. Louis Commission Company, writes the KANSAS FARMER, under date July 29:

"The wool market has not only been extremely dull, but there has been a decline in values. There were no redeeming features to the market, the situation being one of extreme depression, which was the case in every wool market in the country. In Boston the only prominent sale of the week was that of about 500,000 pounds Montana fine medium at 37 cents, which represented a decline of 5 cents on the scoured pound from late quotations. Most manufacturers have withdrawn from the markets, and it is feared there will be further shutting down in textile mills in the East. Receipts for the week, 288,495 pounds; shipped, 264,750 pounds.

"Kansas and Nebraska—Medium, 14 to 15 cents; light fine, 11 to 12; heavy fine, 9 to 10; sandy and earthy, 7 to 8; coarse, 13 to 14; fine medium, 12 to 13."

Review of Kansas City Stock Markets.

White & Rial, commission merchants of Kansas City, write the KANSAS FARMER, under date of July 29:

"Our receipts this week: 27,044 cattle, 42,328 hogs, 4,029 sheep, against 25,523 cattle, 31,118 hogs and 14,661 sheep last week. Our cattle market has been from 20 to 30 cents lower on fat cattle than the close of last week, and medium fat and coarse cattle even more. Texas and wintered range cattle have sold mean, both steers and cows.

"Bulls have sold about as quoted last week. Common stockers, steers and cows sell very bad. With good rains this week there has been more inquiries for best stockers and feeders, and the past two days have sold some higher. Fat cattle to-day steady to a little higher.

"Hogs advanced the first of the week the tops selling at 6 cents Tuesday. Since then have declined each day and to-day prices are 40 to 60 cents lower than Tuesday. Light hogs have declined less than heavy weights.

"Sheep receipts much lighter than last week, and some days have sold better, but the outlook is not very encouraging. With liberal receipts we will have low prices."

Disordered liver set right with Beecham's Pills.

The Canadian horse, Fides Stanton 2:15½, has not lost a race this year.

Publishers' Paragraphs.

Henry Vincent, formerly of the *Non-conformist*, announces his active charge of the *Chicago Express* to begin at once.

WANTED.—A few good men or women well recommended for the remainder of the year to canvass and have complete charge of the circulation of the KANSAS FARMER by counties. Good pay to the right man or woman.

Any of our readers desiring to exchange any property, or have any wants or for sale to advertise, should begin to use our 2-cent column, as we shall begin at once to distribute 100,000 extra copies, and a great deal of business may be done in this way at a trifling cost.

A RELIABLE KNITTING MACHINE.—Having had frequent inquiries concerning a reliable knitting machine, we have investigated the High-Speed Family Knitter, manufactured by J. E. Gearheart, Clearfield, Pa., and advertised from time to time in the columns of the KANSAS FARMER. We find the machine to be all that is claimed for it, and can recommend it to all who may want a cheap, practical, family knitter. Write to the manufacturer for interesting particulars and terms.

One lover is usually conceded to be enough for any young lady, but Miss Bessie Morgan had six, and the way this handsome society girl spent a summer in the country, where she was made "Queen," is fully set forth in the book entitled, "Bessie's Six Lovers," just published in Peterson's new 25-cent series of choice fiction, which now number over 100 volumes, and a complete list of them will be sent to any address, and when not to be had of your bookseller, copies will be sent by mail on receipt of retail price by the publishers, T. B. Peterson & Brothers, Philadelphia, Pa.

MRS. FRANCIS HODGSON BURNETT'S NOVELLETTES.—The seven early novelettes of Mrs. F. H. Burnett are published at the low price of 25 cents each by T. B. Peterson & Brothers, Philadelphia, Pa., in their new 25-cent series. Of all of Mrs. Burnett's romances those which first attracted public attention to her wonderful gifts were first published in *Peterson's Magazine*, and they are still her best. She has done more mature work, but never anything half so pleasing and enjoyable. These masterpieces of Mrs. Burnett's genius are all love stories of the brightest, happiest and most entertaining description. Their names are "Theo," "Kathleen," "Pretty Polly Pemberton," "Miss Crespiigny," "Lindsay's Luck," "A Quiet Life," and "Jarl's Daughter." This popular series of choice fiction now number 100 volumes, and a complete list of them will be sent to any address, and when not to be had of your bookseller, copies will be sent by mail, on receipt of retail price by the publishers, T. B. Peterson & Brothers, Philadelphia, Pa.

To the World's Fair.

Save time and avoid the crowd in the city by buying tickets over the "Great Rock Island Route" and stop off at Englewood near the World's Fair gate. Electric line from the "Rock Island" depot direct to the gate. Time, ten minutes. Fare, 5 cents. You can check your baggage to Englewood and avoid trouble and save expense, as Englewood is in the great suburban hotel district near the fair, and you can have your baggage sent to your quarters at once.

Remember, the Chicago, Rock Island & Pacific is the World's Fair line for reasons given above. JOHN SEBASTIAN, Gen'l Ticket and Passenger Agent.

Piles! Piles! Piles!

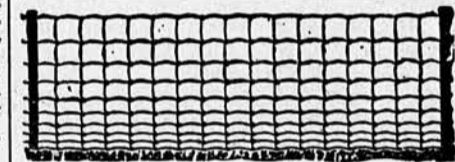
Not piles of worthless stuff, but Steketee's Ointment and Pile Remedy combined will cure the worst case of Piles in any form, and have plenty left to cure burns or any sores on man or beast. Was never known to fail to cure sore breast and scratches on horses. All for 35 cents. Do not pay \$1.00 when you can have this for 35 cents. For sale by druggists, or on receipt of 35 cents in U. S. postage G. G. Steketee, Grand Rapids, Mich., will send it. Cut this out and take it to a druggist first; 3 boxes for \$1.00.

Make Your Own Bitters

On receipt of 30 cents, U. S. stamps, I will send to any address one package Steketee's Dry Bitters. One package makes one gallon best tonic known. Cures stomach and kidney diseases. Now is the time to use bitters for the blood and stomach.

WHEATON, Ill., December 7, 1890. MR. STEKETEE:—Your Dry Bitters has no equal for kidney or liver complaint. Have been troubled for the past ten years. Find your bitters excellent. FRANK SCHUBERT.

Send G. G. Steketee, of Grand Rapids, Michigan, 30 cents, U. S. stamps, and we guarantee that he will send at once.



The Gov. of N. Carolina To Gov. of S. Carolina

"It's a long ways between posts." That's what he would say if he should see a string of our regular five foot farm fence now serving on one side of a pasture for deer. End posts 33 rods apart and only one post between. Send for particulars.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

A LIMITED SPECIAL.

\$4.00 Value for \$2.00 Cash.

The Cosmopolitan Magazine

THE KANSAS FARMER

Both for \$2.00 a Year.

The great illustrated monthlies have in the past sold for \$4 a year. It was a wonder to printers how *The Cosmopolitan*, with its yearly 1,500 pages of reading matter by the greatest writers of the world, and its 1,200 illustrations by clever artists, could be furnished for \$3 a year. In January last it put in the most perfect magazine printing plant in the world, and now comes what is really a wonder:

We will cut the price of the Magazine in half for you!

Think of it, 128 pages of reading matter, with over 120 illustrations—a volume that would sell in cloth binding at \$1

FOR ONLY 12½ CENTS.

We will send you *The Cosmopolitan Magazine*, which has the strongest staff of regular contributors of any existing periodical, and the KANSAS FARMER

BOTH FOR ONLY \$2.00 A YEAR. Address KANSAS FARMER Co., Topeka, Kas.

The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER.

LUMP ON LEG.—I have a three-year-old colt that got a wire-cut on the inside of the hind leg about half way between the hock and pastern.

SORE ON COW.—A cow has a running sore on her back a few inches forward from the tail. It has been there for several years; it is larger now than at first.

Answer.—There has been an injury to the bone at some time, and to effect a cure it will be necessary to open the sore and remove all loose and diseased bone with the forceps and bonespoon.

SUMMER SORES.—I have a ten-year-old mare on which are three sores on the belly close behind the fore legs. The sores are dry and scabby and are swollen a little and seem hard.

Answer.—"Summer sores" on horses are frequently due to a parasite—Filaria irritans—which, in some way, gets into the system and then manifests in small pimples or boils on the skin.

HARD MILKER.—I have a two-year-old grade Jersey cow that dropped a calf on April 18. The calf was turned to her night and morning for five weeks.

Answer.—If the orifice in the end of the teat is too small you may be able to enlarge it by making a small plug of hard wood or bone and inserting it each time after you get done milking.

Among the Ozarks.

"The Land of Big Red Apples" is the title of an attractive and highly interesting book recently issued. It is handsomely illustrated with views of south Missouri scenery, including the famous Olden fruit farm of 3,000 acres in Howell county.

WE GUARANTEE That one tablespoonful of GOMBALT'S CAUSTIC BALSAM

will produce more actual results than a whole bottle of any liniment or spavin cure mixture ever made.

THE LAWRENCE WILLIAMS CO., CLEVELAND, OHIO.

MARKET REPORTS.

LIVE STOCK MARKETS.

Kansas City.

CATTLE—Receipts, 7,011 cattle; 1,327 calves. The cattle which brought top prices would have brought about 25 cents more ten days ago.

Table with columns No., Wt., Pr., No., Wt., Pr. for DRESSED BEEF AND SHIPPING STEERS.

O-F. COL. STEERS.

Table with columns No., Wt., Pr., No., Wt., Pr. for O-F. COL. STEERS.

TEXAS STEERS.

Table with columns No., Wt., Pr., No., Wt., Pr. for TEXAS STEERS.

TEXAS COWS.

Table with columns No., Wt., Pr., No., Wt., Pr. for TEXAS COWS.

TEXAS CALVES.

Table with columns No., Wt., Pr., No., Wt., Pr. for TEXAS CALVES.

INDIAN STEERS.

Table with columns No., Wt., Pr., No., Wt., Pr. for INDIAN STEERS.

INDIAN COWS.

Table with columns No., Wt., Pr., No., Wt., Pr. for INDIAN COWS.

COLORADO STEERS.

Table with columns No., Wt., Pr., No., Wt., Pr. for COLORADO STEERS.

COWS.

Table with columns No., Wt., Pr., No., Wt., Pr. for COWS.

BULLS.

Table with columns No., Wt., Pr., No., Wt., Pr. for BULLS.

CALVES.

Table with columns No., Wt., Pr., No., Wt., Pr. for CALVES.

STOCKERS AND FEEDERS.

Table with columns No., Wt., Pr., No., Wt., Pr. for STOCKERS AND FEEDERS.

HOGS—Receipts, 1,523. The demand was light. Two packers bought nothing and one got what he could with New York exchange.

PIGS AND LIGHTS. No. Dock. Av. Pr. No. Dock. Av. Pr.

Table with columns No., Dock, Av., Pr., No., Dock, Av., Pr. for REPRESENTATIVE SALES.

SHEEP—Receipts, 665. The small supply caused a little better prices on the desirable grades.

Chicago.

CATTLE—Receipts, 14,000. Steady and slow. 3,000 Texans 10¢/15¢ higher. Westerns steady.

HOGS—Receipts, 23,000. Steady, closed firm. Mixed, \$5 15¢/50; heavy, \$5 00¢/50; light weights, \$5 35¢/50.

SHEEP—Receipts, 12,000. Market 10¢ lower. Lambs strong. Natives, \$2 00¢/45; lambs, per cwt., \$4 50¢/50.

CATTLE—Receipts, 2,500. Natives steady. Texans 10¢/15¢ higher. Native steers, common to best, \$1 50¢/25.

GRAIN AND PRODUCE MARKETS.

Kansas City.

In store: Wheat, 444,973 bushels; corn, 76,536 bushels; oats, 24,336 bushels, and rye, 1,981 bushels.

and trade demoralized. Lower cables, good receipts and an increase in the visible supply all tended to lower prices.

WHEAT—Receipts, 136,000 bushels; shipments, 36,000 bushels. No. 2 red, cash, closed at 53 1/2¢ bid; August, 53 1/2¢ bid; September, 57 1/4¢/57 1/2¢; December, 65 1/2¢.

CORN—Receipts, 176,000 bushels; shipments, 28,000 bushels. Cash, No. 2 mixed, 34¢; August, 34 1/2¢; September, 33¢.

OATS—Receipts, 39,000 bushels; shipments, 2,000 bushels. No. 2 cash, 23¢; July, 27¢; August, 22 1/2¢; September, 22 1/2¢.

WOOL—Receipts, 40,000 pounds; shipments, 76,000 pounds. Market was quiet. Medium—Missouri and Illinois, 16¢/17¢; Kansas and Nebraska, 14¢/15¢; Texas, Arkansas and Indian Territory, 8 to 12 months, 16¢/16¢; Montana, Wyoming and Dakota, 14¢/15¢; Colorado, New Mexico and Arizona, 16¢/17¢; Coarse—Missouri and Illinois, 15¢/16¢; Kansas and Nebraska, 13¢/14¢; Texas, Arkansas and Indian Territory, 13¢/14¢; Montana, Wyoming and Dakota, 10¢/12¢; Colorado, New Mexico and Arizona, 11¢/13¢.

Cash quotations were as follows: WHEAT—Receipts, 62,000 bushels; shipments, 167,000 bushels. No. 2 spring, 55¢/56¢; No. 3 spring, 50¢; No. 2 red, 56¢/57¢.

CORN—Receipts, 236,000 bushels; shipments, 785,000 bushels. No. 2, 36¢/37¢.

OATS—Receipts, 228,000 bushels; shipments, 286,000 bushels. No. 2, 21¢; No. 2 white, new, 25¢/26¢; No. 3 white, 26¢/25 1/2¢.

WHEAT—Market was dull and demand poor; holders offer freely. No. 1 California, 5s 10d @ 5s 11d per cental [50.85¢ to 50.84¢ per bushel]; red western spring, 5s 8 1/4d @ 5s 9 1/4d per cental [50.84¢ to 50.84¢ per bushel]; No. 2 red winter, 5s 5d @ 5s 9d per cental [50.82¢ to 50.84¢ per bushel].

CORN—Market quiet; demand poor. Mixed western, 4s 2 1/4d per cental [51.57¢ per bushel]. BUTTER—United States finest, 100s [24.33] per cwt.; good, 8 1/2 [20.44].

WHEAT—Receipts, 136,000 bushels; shipments, 36,000 bushels. No. 2 red, cash, closed at 53 1/2¢ bid; August, 53 1/2¢ bid; September, 57 1/4¢/57 1/2¢; December, 65 1/2¢.

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CORN—Market quiet; demand poor. Mixed western, 4s 2 1/4d per cental [51.57¢ per bushel]. BUTTER—United States finest, 100s [24.33] per cwt.; good, 8 1/2 [20.44].

WHEAT—Receipts, 136,000 bushels; shipments, 36,000 bushels. No. 2 red, cash, closed at 53 1/2¢ bid; August, 53 1/2¢ bid; September, 57 1/4¢/57 1/2¢; December, 65 1/2¢.

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HORSES AUCTION.

Kansas City Stock Yards Horse and Mule Depot. W. S. TOUGH & SON, Managers. Largest Live Stock Commission Company in the world.

HIGGS COMMISSION CO., Receivers and Shippers of Grain,

413 Exchange Building. KANSAS CITY, MO. Only authorized Grain Agents of Kansas Alliance Association. Liberal advancements made on all consignments. Market reports furnished on application, free.

Western Normal College

LINCOLN, NEB. The School for the Masses. Leading High Grade Normal. 26 depts.; 35 teachers, all specialists. Enter any time; take any class.

GARFIELD MEMORIAL UNIVERSITY, WICHITA, KANSAS.

A College of Liberal Arts, Normal, Preparatory, Commercial, Music, Fine Arts, high standards, modern ideals and methods. All courses practically elective after freshman year.

PROPOSALS.

SEALED PROPOSALS will be received at the office of the Board of Public Works of the State of Kansas, at Topeka, Kansas, until 2 p. m. on Monday, August 14, 1893, and opened immediately thereafter.

Each bid must be accompanied by a certified check for a sum not less than 3 per cent. of the amount of the proposal, made payable to B. M. Scott, President of the Board of Public Works, State of Kansas, and to be forfeited to the State of Kansas as liquidated and assessed damages by the successful bidder if they fail to enter into contract and give the required bond on or before August 8, 1893.

No proposal will be received after the time above designated. Each proposal will be enclosed in an envelope, sealed, and marked "Proposals for work and materials required in the erection and completion of a library and agricultural science hall, State Agricultural college, Manhattan, Kansas, under the provisions of House bill No. 137, approved March 10, 1893, in accordance with the drawings and specifications prepared therefor by Seymour Davis, State Architect, copies of which may be seen at the office of the board, State capitol grounds, and the office of A. A. Stewart, Manhattan, Kansas, after June 20, 1893."

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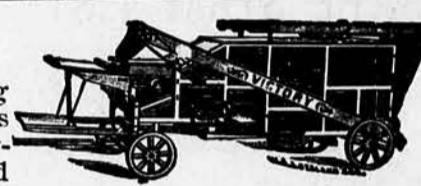
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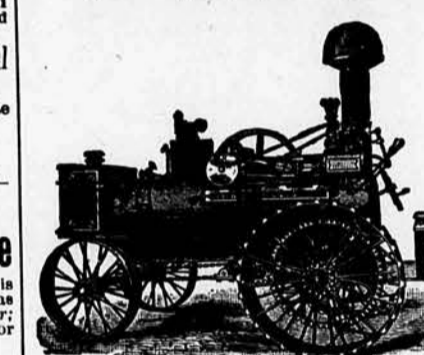
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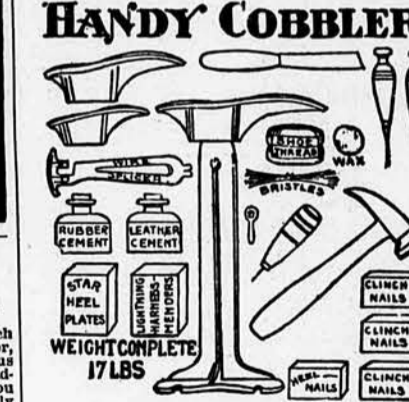
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GUARDIAN'S NOTICE OF PETITION TO SELL REAL ESTATE.

To Susan S. Jones, minor heir of Helen M. Jones, deceased: You will take notice, that on Tuesday, the 15th day of August, 1893, I will present to the Probate court of Shawnee county, Kansas, at the Probate court room in the city of Topeka, in said county, a petition asking for authority to sell your interest in the real estate therein described, to wit: A tract of land bounded as follows: Beginning at the northwest corner of Logan and St. well streets in Van Horn's addition to the city of Topeka, Kas., thence extending northerly on a right line with the west side of Logan street three hundred (300) feet, thence at right angles westerly one hundred and seventy (170) feet, thence southerly at right angles three hundred (300) feet, thence easterly at right angles along the north line of Saywell street one hundred and seventy (170) feet to place of beginning.

BUGGIES. HARNESS. ROAD CARTS, FARM WAGONS. Better quality and less price than can be found elsewhere. Frank B. Barkley Mfg. Co., CHICAGO.

MISCELLANEOUS.

F. M. WOODS, Live Stock Auctioneer, Lincoln, Neb. Refer to the best breeders in the West, for whom I do business.

D. R. S. C. ORR, VETERINARY SURGEON AND DENTIST—Graduate Ontario Veterinary College, Canada. Veterinary Editor KANSAS FARMER.

S. A. SAWYER, FINE STOCK AUCTIONEER, S. Manhattan, Riley Co., Kas. Have thirteen different sets of stud books and herd books of cattle and hogs.

THE STRAY LIST.

FOR WEEK ENDING JULY 19, 1893. Lyon county—C. W. Wilhite, clerk.

HORSE—Taken up by C. E. Brower, in Reading tp., July 10, 1893, one light bay horse, 8 or 9 years old, left hind foot white, collar marks, and star in forehead.

Russell county—Ira S. Fleck, clerk. MARE—Taken up by I. W. Hill, in Lincoln tp., P. O. Russell, June 30, 1893, one bay mare colt, 2 years old; valued at \$30.

Brown county—J. V. McNamar, clerk. HORSE—Taken up by W. H. Chandler, in Hinwatha tp., June 10, 1893, one sorrel horse, about 10 years old, weight about 1,300 pounds, a little under medium height, a white spot in forehead, slight saddle marks, no other marks visible.

Leavenworth county—J. W. Niehaus, clerk. HORSE—Taken up by Thomas Stone, in Fairmount tp., P. O. Ba-ehor, June 10, 1893, one bay horse, fourteen hands high, herd brand on right shoulder; valued at \$20.

FOR WEEK ENDING JULY 26, 1893. Riley county—Chas. G. Wood, clerk.

HORSE—Taken up by Geo. B. Gardner, in Zeandale tp., P. O. Zeandale, June 2, 1893, one small brown horse, white spot in forehead; appraised value, \$25.

Rawlins county—A. K. Bone, clerk. MARE—Taken up by E. C. Winter, at Chardon, May 25, 1893, one light bay mare, 3 years old, three white feet; no other marks or brands.

Cherokee county—P. M. Humphrey, clerk. MARE—Taken up by E. A. Ellis, in Shawnee tp., P. O. Crestline, June 24, 1893, one iron gray mare, 5 years old, four feet ten inches high, heavy mane and tail, light colored about the head.

MULE—Taken up by L. A. Crum, in Lowell tp., July 9, 1893, one light bay horse mule, about 1 year old, dark stripes or rings around his legs; no other marks or brands; valued at \$15.

FOR WEEK ENDING AUGUST 2, 1893. Coffey county—O. P. Mauck, clerk.

FILLY—Taken up by A. H. Edwards, in Lincoln tp., one black filly, 3 or 4 years old, star in forehead; no marks or brands; valued at \$40.

Morton county—W. L. Harris, clerk. MARE—Taken up by L. G. Morgan, in Cimarron tp., June 27, 1893, one chestnut sorrel mare, about thirteen hands high, 5 or 6 years old, branded F on left shoulder, small white spot in forehead; appraised value, \$25.

Wyandotte county—C. E. Bruce, clerk. HORSE—Taken up by Thomas Webb, in Shawnee tp., July 26, 1893, one bay gelding, 5 years old, fourteen hands high, black mane and tail, smooth shod all round, rag on left fore foot, scar on right fore leg; appraised value, \$50.

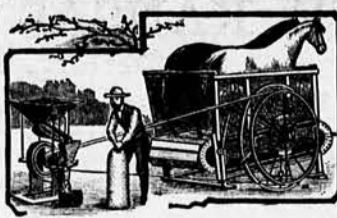
Franklin county—O. M. Wilber, clerk. COLT—Taken up by J. B. Thorp, in Williamsburg tp., P. O. Williamsburg, June 29, 1893, one gray-dun mare colt, 3 years old, five feet eight inches high; no marks or brands.

Cherokee county—P. M. Humphrey, clerk. MARE—Taken up by L. B. Storms, in Pleasant View tp., P. O. Pleasant View, one bay mare, 13 years old, fifteen hands high, branded D on left shoulder.

HORSE—By same, one very light cream-colored horse, 8 years old, fourteen and one-half hands high, light blue hips, heavy mane and tail.

Double Action Rubbing and Washing Machine. Washes as clean as the old hand wash board; will wash 14 shirts in 7 minutes. All machines warranted to wash cleaner, quicker and easier than any other made. Has great lever purchase. Agents wanted. Write W. J. POTTER, Manufacturer, Tama, Ia.

Yont's Automatic Hog Waterer. THREE SEASONS with thousands in use and not a complaint have proven it a Practical Device for watering hogs of all sizes with absolutely no attention beyond water supply. Attaches to any tank in five minutes. Works against any head of water. Has no nose-plate to annoy ringed hogs. Its good points—what it will do, are told in a circular to be had for the asking. Weight 8 Pounds. Price \$2.50. Address CHAS. A. YONT, Patentee and Maker, Brock, Nemaha Co., Neb.



BUY A MORTON TREAD POWER. WHY? BECAUSE It is the easiest and quickest moved and set. It occupies less floor space than the sweep power. It has an adjustable elevation and does not require a driver. It has a perfect automatic governor to control the motion. It is sold direct to the user and fully guaranteed. Also manufacturers of Corn Huskers, Feed Cutters, etc. Write for special 1893 prices and buy direct. Address MORTON MFG. CO., Muskegon Heights, Mich.

CARRIAGES, BUGGIES, PILETONS, SURREYS AND HARNESS. A Buggy \$90 \$110 \$135. ONLY CONCERN IN THE WEST DEALING EXCLUSIVELY WITH THE CONSUMER and giving him the benefit of manufacturers' prices. Goods are first-class in every particular; fully warranted for 2 yrs. A home institution entirely distinct from any Eastern concern. KANSAS CITY CARRIAGE AND HARNESS CO. 1209 Walnut Street, KANSAS CITY, MO.

THE SOUTHWICK BALING PRESS. A 12-Tons-a-Day Machine at a 10-Tons-a-Day Price. Our Warranty Goes with Each Machine. The Southwick Baling Press is a 2-horse, full-circle machine. It has the largest feed opening of any Continuous-Baling, Double-Stroke Press in the World. Bales tight; draft light. Capacity; Construction; Durability—all the BEST. SANDWICH MFG. CO., 126 MAIN ST., SANDWICH, ILL.

POWER FROM GASOLINE CHEAPER THAN STEAM. DIRECT FROM THE TANK. No Boiler. No Steam. No Engineer. BEST POWER for Corn and Feed Mills, Baling Hay, Running Separators, Creameries, &c. OTTO GASOLINE ENGINE. Stationary or Portable. 1 to 50 H. P. 8 to 20 H. P. OTTO GAS ENGINE WORKS, 33d & Walnut Sts., PHILADELPHIA, PA. CHICAGO, 245 Lake St. OMAHA, 107 S. Fourteenth St.

THE PRODUCT OF THE FARM! WE WILL SELL YOUR Grain, Hay, Dressed Hogs, Lambs, Veal, Wool, Butter, Eggs, Poultry, Fruit, Vegetables, Hides, Pelts, Furs and all kinds of Produce on the Chicago market for you on commission, to best advantage. Organize a league in your neighborhood—members participate in commission profit of sales of their own products. Send for tags with instructions for shipping, to our General Office, 706 Garden City Block. FARMERS & MANFRS. COMMERCIAL LEAGUE, Ship Produce to 174 S. Water Street, Chicago, Illinois.

KANSAS CITY HAY EXCHANGE Lately Established at 18th and Liberty Sts. Is in the interest of the producer and shipper. Exact weights are assured, honest practices compelled, and convenience given shippers, commission men and buyers. Two-thirds of the hay firms in Kansas City are doing business through the Exchange. See that your hay is billed to your commission man, care THE HAY EXCHANGE, and thus given honest weights and honest sales. All hay so billed is insured without extra cost. Mention this paper. FRED MORRILL, President. A. A. PULLMAN, Vice President. F. H. BAKER, Sec'y and Treas.

CAMPBELL COMMISSION CO. (Successors to JAMES H. CAMPBELL CO.) LIVE STOCK COMMISSION MERCHANTS. Chicago, St. Louis, Omaha, Sioux City and KANSAS CITY STOCK YARDS. The well-known firm PETERS BROTHERS, have consolidated with us and respectfully ask a continuance of their former patronage. Your business solicited. Money advanced to Feeders. Market Reports sent Free on application.

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.

	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts, 1892.....	1,571,155	2,397,477	438,268	32,505	97,462
Slaughtered in Kansas City.....	727,381	1,805,114	218,309		
Sold to feeders.....	213,923	4,290	29,078		
Sold to shippers.....	440,501	586,563	48,259		
Total sold in Kansas City.....	1,388,405	2,395,937	296,246	15,974	

C. F. MORSE, General Manager. E. E. RICHARDSON, Secretary and Treasurer. H. P. CHILD, Assistant Gen. Manager. E. RUST, Superintendent. PLEASE MENTION "KANSAS FARMER" WHEN WRITING TO ADVERTISERS.