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The Stock Interest.

THOROUGHbred STOCK SALES.

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

- SEPTEMBER 7—Bert Wise, Poland-China swine, Reserve, Kas.
SEPTEMBER 19—W. H. Babcock, Poland-China swine, Hiawatha, Kas.
SEPTEMBER 27—June K. King, Berkshire swine, Marshall, Mo.
OCTOBER 2—C. C. Keyt, Short-horn cattle and Poland-China, Verdon, Neb.
OCTOBER 3—W. H. Wren, Poland-China swine, Marion, Kas.
OCTOBER 4—J. A. Worley, Poland-China swine, Sabetha, Kas.
OCTOBER 5—Eli Zimmerman, Poland-China swine, Hiawatha, Kas.
OCTOBER 24—F. M. Lall, Poland-China swine, Marshall, Mo.
OCTOBER 24—J. B. Davis, Duroc-Jersey swine and cross-bred Short-horn and Red Polled cattle, Fairview, Kas.
NOVEMBER 7—Martin Meisenheimer, Poland-China swine, Hiawatha, Kas.

STEER-FEEDING EXPERIMENT AT KANSAS EXPERIMENT STATION.

Bulletin No. 47 of the Kansas station gives the results of the third experiment. It says:

Our third steer-feeding experiment was carried out the past winter. It was devised with a view to ascertain if there is any merit in the practice of soaking corn for fattening steers as against feeding it dry. Many of our best feeders claim to be able to produce more beef with a given amount of corn when it is soaked than when it is fed dry; and if so simple a process as soaking it in water can enhance the feeding value of corn, it is worth while to give the matter careful study. For this purpose, ten grade Short-horn steers, 2 1/2 years old, were bought and brought to the station on October 30, 1893. As shown by the weights given hereafter, they were a remarkably even lot, thrifty and well grown for their age. All had been dehorned as yearlings. They were raised on Kansas farms here in the neighborhood, and had been collected by a farmer who intended to feed them for market. The cost price was \$3.60 per hundred-weight.

These steers were fed outdoors, in two lots, separated only by a wire fence, each lot having access to a shed erected on the north side of the lot, open to the south but closed on the other three sides. Both lots were fed on shelled corn—that for lot I being soaked until it began to soften before it was fed, while that for lot II was fed dry. The corn for lot I was, of course, weighed before it was put to soak. In addition, they were fed roughness, consisting first of corn fodder and then successively Kaffir corn fodder, oat straw, millet hay and prairie hay, both lots having the same kind of fodder at the same time.

To avoid the freezing of the soaked corn, which might interfere with their appetite and consequently with their gain, they were fed frequently and but little at a time, so that the wet corn could be eaten up before it would freeze; and although this precaution would not have been necessary except in cold weather, it was thought best to follow a uniform practice throughout the experiment. The grain feed of both lots was, therefore, fed five times daily—at 7 a. m., 9:30 a. m., 12 m., 3 p. m. and 6 p. m., one-fifth of the weight of the feed for that day being given each time. If any was left uneaten when the time came for the next feed, it was weighed and deducted on the record tables from the amount fed. To get an exact estimate of the weight of the soaked corn which thus ought to be deducted, given weights of corn were soaked for different periods and then weighed. We thus ascertained the weight of the water absorbed, which proved to be nearly uniform for the same length of time. The figures thus obtained enabled us to estimate what per cent. of the weight of the uneaten soaked corn should be deducted from the amount charged to the lot. It was not often, however, that any of the grain fed remained uneaten, as we studiously sought to give them just what they would eat and no more. Beginning with the weight of 50 pounds of dry corn for each lot, this was gradually increased until a weight of 135 pounds was reached as the daily feed for each lot; but this proved to be too much, and was, therefore, soon reduced to 125 pounds, which they ate up clean without impairing their appetite, and yet

they were fully satisfied. One hundred and twenty-five pounds, dry weight, was the daily feed per lot until February 16. It then became apparent that they could no longer eat this amount, and the weight was gradually reduced to suit their appetite. There was one exception made to this rate of feed, during the first half of January. We were trying to ascertain how much of the corn passed through each lot undigested, and during this period of fifteen days the feed was reduced to 100 pounds dry corn for each lot, in order to see if the per cent. of undigested corn remained the same when less was fed than was necessary to satisfy the appetite.

But although these features of the experiment are interesting and useful, the practical bearings of the experiment could not be fully brought out unless account was also taken of the value of the droppings for the production of pork, and for this purpose eight shoats of an average weight of 88 pounds per head, were placed after each lot, and their gains noted. At first, when the steers were fed 125 pounds of dry corn per lot, the hogs found about all they could eat in the droppings; but as the steers ripened up, and hence ate less, and the hogs grew larger and demanded more, it became necessary to feed them some corn in addition, each lot receiving the same quantity, with a record of the weight. Steers and hogs alike had access to fresh water at their pleasure. No record could therefore be kept of the water drunk, as has been our custom when feeding in the barn, nor could we ascertain the amount eaten by each separate steer, as they all fed together. But a record was kept of the individual gains, both of steers and hogs. The steers were weighed every Tuesday morning before they were fed, and the hogs were weighed once a fortnight. Finally, a balance has been struck between the actual cost of the feed consumed by each lot and the value of the beef and pork produced by each lot.

As stated, the ten steers arrived at the station October 30. They had been fed on pasture up to that time, and during the latter half of October they had in addition been fed a little corn. All ten steers ran together in the yard for one week, during which time they collectively ate 575 pounds ear corn and 750 pounds corn fodder. On October 31, November 2 and November 4, each steer was weighed, and, based on the average of those three weights, they were divided into two lots of almost exactly like weights. On November 7 the experiment began, when they were again weighed, and the weights of that date taken as the starting point. [The experiment continued until April 6.] The hogs were not put after them until a week later, November 16, when they were in like manner weighed and divided into two lots.

Lot I, fed on soaked shelled corn, made gains as follows: Total gain of lot, 1,632 pounds; average daily gain, 10.88 pounds; average daily gain per head, 2.176 pounds. Lot II, fed on dry shelled corn, made gains as follows: Total gain of lot, 1,468 pounds; average daily gain, 9.78 pounds; average daily gain per head, 1.957 pounds.

The steers made very good gains and most of them with considerable regularity. On February 11 a very severe snow storm set in, which was followed by excessively cold weather for several days. This storm made the steers feel very uncomfortable, and for two weeks after they did not show satisfactory gains. Exposure to cold and wet not only affects the animals for the time being, but its effects are felt for days and, sometimes, weeks after the storm is over and pleasant weather has again set in. This was the severest storm of the season, and the only one which had any decided effects on the steers. A cold wave from the 21st to the 27th of January, when for several days the temperature was below zero, did not affect them in the least, but the weather was dry and clear.

The total food eaten [by lot I] (shelled corn, 15,787.5; corn fodder, 2,558; Kaffir corn fodder, 3,840; oat straw, 273; millet, 661; prairie hay, 1,008), 24,127.5

pounds. Average food eaten per head (shelled corn, 3,157.5; corn fodder, 511.6; Kaffir corn fodder, 768; oat straw, 54.6; millet, 132.2; prairie hay, 201.6), 4,825.5 pounds. Total gain, 150 days, 1,632 pounds; average gain per head, 326.4 pounds; average daily gain of lot, 10.88 pounds; average daily gain per head, 2.176 pounds; total cost of feed, \$90.613; average cost of feed per head, \$18.122; average cost per pound of gain, 5.55 cents; food eaten per pound of gain, 14.78 pounds.

Total food eaten [by lot II] (shelled corn, 16,244.5; corn fodder, 2,567; Kaffir corn fodder, 3,667; oat straw, 273; millet, 660; prairie hay, 960), 24,371.5 pounds. Average food eaten per head (shelled corn, 3,248.9; corn fodder, 513.4; Kaffir corn fodder, 733.4; oat straw, 54.6; millet, 132; prairie hay, 192), 4,874.3 pounds. Total gain, 150 days, 1,468 pounds; average gain per head, 293.6 pounds; average daily gain of lot, 9.78 pounds; average daily gain per head, 1.957 pounds; total cost of feed, \$92.57; average cost of feed per head, \$18.51; average cost per pound of gain, 6.30 cents; food eaten per pound of gain, 16.60 pounds.

It will be seen that, although lot II ate 457 pounds of corn and 213 pounds of fodder more than lot I, they, nevertheless, gained 164 pounds less than lot I, and the gain they did make cost three-fourths of a cent per pound more than the gain of lot I. This difference, I think, can fairly be ascribed to the soaking of the corn fed to lot I.

[Consideration of the experiment as it relates to the pigs which followed the steers will be presented next week. —EDITOR.]

Farm Animals in the United States.

The following are the official estimates of the Department of Agriculture, of the number and value of farm animals in this country for ten years. The table will be useful, by way of comparison as well as reference:

Table with columns: Period, Population, Horses, Mules, Oxen and other cattle, Sheep, Swine, Total value of farm animals. Rows for years 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892, 1893, 1894.

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decades and for the three years of this decade, are given as follows, compared with the increase of population. Decrease is denoted by the minus (-) sign:

Table with columns: Total farm animals, Swine, Sheep, Oxen and other cattle, Milch cows, Mules, Horses, Population, Period. Rows for years 1870-1880, 1880-1890, 1890-1896.

Although there was an increase of a little more than 2 per cent. of sheep from 1890 to 1894, there was a decrease of 2,225,536 from January 1, 1893, to January 1, 1894, and this year will doubtless show as much decrease if not more.

Wheat-Feeding Information.

So general has the matter of the use of wheat as a stock feed become that from every part of the country come requests for information. The latest bulletin from official sources is the one just out from the United States Department of Agriculture, of Washington, D. C. It was compiled by D. E. Salmon, Chief of the Animal Industry Bureau of the department and is in response to inquiries as to the value of wheat for growing and fattening animals, suggested by the important change in the comparative prices of wheat, corn and oats.

The bulletin advocates the use of screenings and imperfect wheat as animal food and the placing of only the best wheat on the market. A statistical table shows the near approach, chemically, of 26.6 pounds of wheat to the German standard ration for growing cattle from six to twelve months of age, and the fact that thirty-three and one-third pounds of wheat comes much nearer the same quantity of corn. Equal parts of wheat and corn, should, however, prove better for fattening animals than either of these grains alone.

"When wheat and corn are the same price per bushel," says the bulletin, "it is preferable to feed wheat and sell the corn. First, because wheat weighs 7 per cent. heavier per bushel than corn; second, because wheat is weight for weight an equally good grain for fattening animals and better for growing animals; and third, because there is much less value in fertilizing elements removed from the farm in corn than in wheat. Wheat should always be fed in small quantities and, when possible, be mixed with some other grain and care taken to prevent any one animal from getting more than the quantity intended for it. Precautions are especially necessary when wheat is

fed to horses. The best form in which to feed wheat is to roll or grind into a coarse meal. From Canadian experiments it appears that wheat exceeds corn in feeding value, while in South Dakota corn was found to exceed wheat."

Agricultural Matters.

COST OF WHEAT-GROWING.

If former statements of wheat-growers are correct, much of the last crop was grown at a positive loss. The export price for the last fiscal year was a fraction less than 80 cents, the average farm price only 62 cents, while the average price in Nebraska was only 50 cents; in South Dakota, 51 cents; North Dakota, 52 cents at the nearest railway delivery, and at points remote from market only 40 cents or 45 cents. It is not long since the growers in these districts declared that the crop would not pay the expense of cultivation at less than 60 cents. As the yield of this region was not much more than twelve bushels per acre, the gross proceeds were only about \$6 per acre. What sort of cultivation would this pay for, defray the expense of threshing and delivery, and meet the interest on the investment, to say nothing of profit? I will not here go into the details of cost, which vary so much with the condition of the soil, methods of culture, efficiency of teams, the implements used, and energy of management. If there are soils and treatment that give sixteen or more bushels, the compensation is greater and probably the profit; but for the fields that yield only six to ten bushels, it is difficult to see how a loss could be avoided. Such prices, with the deterioration of soil resulting from continuous cropping, in disregard of rotation, must result in ultimate degradation of fertility and value.

Official investigation, by State authority, has been made of the cost of wheat-growing in Illinois, and comparisons made with the value of the crop. In some years a profit is declared, in others a loss. The cost, as reported, varies somewhat from year to year; rarely less than \$10 per acre, often considerably more. The difference between New York and Dakota is not one of rate of wages, but of amount of labor. More cultivation is given, and the larger cost sometimes secures the better margin of profit. Further east the cost is still greater, the yield quite as good, and the profit possibly as large, from higher prices of grain and the value of the straw. In New England wheat may not be a profitable crop, and it is little grown in competition with the West, but the yields are generally greater per acre than in the best wheat-growing regions of the prairies, because of the better cultivation and care of the crop.

In Great Britain, where land is held at several hundred dollars per acre, wheat is still grown, though not as extensively as formerly. It seems incredible that rent and tithes to an amount greater than the gross income of a Dakota wheat field could be paid by an English grower, and that other expenses should swell the cost of cultivation to an equivalent of \$30 per acre, and still making a profit while selling the crop at 85 cents a bushel. Yet I have such a statement from credible authority. The cultivation included two three-horse draggings, drilling, harrowing twice, and rolling in spring; cutting, carrying, threshing, winnowing and marketing were subsequent labors. The yield was forty bushels, price 28s. (\$7) per quarter of eight bushels, and the straw, one ton, ten hundredweight, brought two pounds (\$8) per acre. The straw alone brought about as much as the entire crop is worth in Illinois. The lessons that these facts teach are thoroughness, high culture, rotation and sustained fertility. Primitive methods are unprofitable. Makeshifts and temporary expedients may secure a small present profit at the expense of loss of fertility. The exclusive wheat belt is receding. It is well that it is. Long since, miscellaneous agriculture and horticulture took the place of excessive wheat in

western New York. Twenty-five years ago one could scarcely find butter enough in eastern Minnesota to grease a griddle, while the autumn nights were lighted with bonfires of thousands of tons of wheat straw, where now diversified production and plenty rule. Now there are counties in South Dakota where such a change has already been effected. Perhaps low prices will prove a godsend to Western agriculture, by driving exclusive wheat culture out of existence. Let wheat have a place in rotation, with twenty to thirty bushels per acre as a yield, but put labor to a better use than swelling a surplus product to the depression of prices. There is no need of growing wheat at a loss, where other products are demanded at fair prices, and it is unwise to persist in competing with half-price labor in Russia and the few cents per day competition of India. It is perversity that nothing but hard times can cure. There is a conservatism that resents advice to quit unprofitable culture as impertinent interference with one's right to do a foolish thing. If anything will cure the wheat craze, the present price ought to suffice.—J. R. Dodge, in *American Agriculturist*.

Feeding Value of Hays.

To determine the comparative feeding value of timothy, lucerne and wild hay, the Utah Experiment Station selected three lots of steers. One lot was fed forty-five pounds of timothy per day, another forty-five pounds of lucerne [alfalfa], and a third the same amount of native hay. The animals were confined in box-stalls, one in each lot being tied. At the end of five weeks it was shown that the lot on timothy did the poorest, and those on the lucerne the best. However, the timothy-fed steers wasted 116 pounds more of their feed than did the others. This experiment, while not at all conclusive, indicates that lucerne hay in all probability will compare favorably in feeding value with other forage crops.

In order to test still further the feeding value of these three hays, a similar experiment was tried at the same station with sheep. Three lots of sheep were used and they were confined in small pens. Practically the same results were reached as with the cattle, except that the amounts of the different hays eaten were approximately the same. The sheep did poorest on timothy and best on lucerne. Both experiments concur in showing that lucerne in the barn as hay is a more valuable food than either timothy or wild grass. This, however, is contrary to the results obtained in pasture experiments in Utah. Invariably the green lucerne has been found less valuable than other grasses for grazing purposes.

From these two experiments it may be concluded:

1. That cattle appear to do better on lucerne hay, pound for pound, than either timothy or wild hay.
2. That wild hay, pound for pound, is more valuable than timothy.
3. Lucerne hay is more valuable for sheep than timothy hay.
4. Pound for pound, wild hay is more valuable for sheep than timothy hay.
5. In both experiments it appears that the appetites of the animals was not good, and that in former experiments the best results were only obtained where exercise was given regularly and systematically, and that trustworthy experiments cannot be made where the appetite is not good and the feed not appetizing. These two experiments then further confirm the opinion that exercise is indispensable in obtaining proper growth.



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Dr. Neal, of the Oklahoma Experiment Station, has begun correspondence with botanists in semi-tropical and somewhat arid regions of the world, with a view of obtaining seeds of all forage and food plants that endure extreme droughts.

Prof. Georgeson's Experiments With Wheat.

[From Kansas Experiment Station Bulletin No. 47.] There is but little to record in the line of wheat experiments this year. The wheat crop was almost a complete failure here, as in some other parts of the State. The injury was caused by a week of cold weather in the latter part of March, following some two or three weeks of unusually mild weather, with the thermometer frequently ranging from 70° to upwards of 80° in the shade. This stimulated the wheat into a growth which was unusual for the season, and the severe cold weather which followed cut this growth entirely to the ground, putting back and almost destroying the wheat that was not killed at once.

The meteorological record of the college for March shows that the minimum temperature from the 22d to the 29th was daily much below freezing, and on the 25th, 26th and 29th there were 20°, 24° and 23° of frost, respectively. This was too much for the wheat, which had previously been forced unduly ahead by the warm weather, as noted, and it succumbed to such a degree that most of the experiments were worth nothing. Add to this a freeze on the 20th of May, at a time when much of the wheat which survived was in bloom, which made the destruction well-nigh complete. When it was discovered that a large percentage of the heads did not fill, owing to the destruction of the bloom, we decided to cut the wheat for hay, such as it was; and the few plats which, besides those noted hereafter, remained until harvest, turned out so poorly, and represented the experiments under way so incompletely, as to make publication of their yields ill advised.

As the readers of these bulletins know, the Currell has for several years been the leading variety of wheat at this station, and all our experiments, except the variety tests noted below, were sown in this variety. It is an early-maturing wheat, which starts growth early in the spring, and probably this may have been the reason why it suffered so badly. The yield of the experimental acre and the rotation plats, all of which were in Currell, are the only ones recorded here besides the variety test.

The acre which has been continuously in wheat without manure since 1880 was seeded September 19, 1893, with one and one-fourth bushels of Currell. The drill used was the Champion shoe press drill. The wheat made a good growth in the fall, and stood the weather well until the latter part of March, as noted. What was not then killed was further retarded by dry weather during April, in which month there was a total rainfall of only one and one-third inches, precipitated in nine light showers. The result was that only 6.05 bushels wheat and 496 pounds of straw were harvested. The record of the acre, up to date, stands as follows:

WHEAT CONTINUOUSLY WITHOUT MANURE.

Year.	Variety.	Yield.	
		Grain, bushels.	Straw, pounds.
1880-1881....	Early May....	9 00
1881-1882....	Early May....	47 00	7,845
1882-1883....	Early May....	28 19	3,281
1883-1884....	Zimmerman....	37 00	4,525
1884-1885....	Zimmerman....	12 30	2,233
1885-1886....	*Zimmerman....
1886-1887....	*Zimmerman....
1887-1888....	Zimmerman....	30 31	3,766
1888-1889....	Zimmerman....	37 00	3,619
1889-1890....	Zimmerman....	22 90	1,841
1890-1891....	Zimmerman....	30 75	3,435
1891-1892....	Currell.....	31 30
1892-1893....	Currell.....	11 65	1,131
1893-1894....	†Currell.....	6 05	496
Produce of fourteen years....		303.45	
Yearly average.....		21.67	
Average of the twelve crops harvested.....		25.28	

*Winter-killed.

†Partly winter-killed.

[Other experiments will be given next week.—EDITOR.]

Of the thirty-five samples of wheat examined at the Iowa Experiment Station, the Volo, grown at Berkely, Cal., had the highest specific gravity, 1.503, and a specimen of Turkey Red, grown at Ames, Iowa, the lowest, 1.407, the average of all the samples being 1.469. The smallest number of seeds per pound and per bushel was found in the

Mothers,

when nursing babies, need a nourishment that will give them strength and make their milk rich.

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Missogen, grown at Berkely, Cal., which had 8,164.66 seeds per pound and 489,879 per bushel, and the sample showing the highest number was the specimen of Turkey Red already mentioned, grown at Ames, which had 19,744.88 seeds per pound and 1,184,693 per bushel. The difference in specific gravity is not very marked, but that shown between the numbers of seeds per pound and per bushel is very striking, the greatest number being about two and a half times larger than the smallest. The average of all the samples showed 12,836.67 seeds per pound and 770,200 per bushel. Other specimens of Turkey Red, one of which was furnished by the Iowa Seed Co., and the other grown at Manhattan, Kas., gave upwards of 900,000 seeds to the bushel.

September Notes.

Sow grass and clover as soon as the conditions of the soil will admit.

It pays to take considerable pains to prepare the soil in a good tilth before sowing the seed.

In nearly every case it will pay to harvest and store away everything that can be used for feed during the winter.

It will be far better to commence feeding the growing calves and colts early rather than to allow them to run down.

One advantage in reasonably early seeding of wheat is that the plants will secure a good start before cold weather.

Push the feeding of the fattening stock. The next two months is the best season for securing the best gains at the lowest cost.

Look after the sheep good. Sheep can still be made to pay. Sheep in a good, thrifty condition late in the fall are half wintered.

When the potatoes are dug, sort them carefully. A better price can always be secured for the larger ones, and the smaller ones can be fed to the hogs.

With stock, as with nearly all other farm products, the best time to sell is when they are fully ready. There is usually very little advantage in feeding later.

In nearly all cases it is poor economy to attempt to winter more stock than can be sheltered comfortably, or than there is sufficient feed to keep in good condition.

Look after the shelter. It is better to have the shelter ready two weeks before it is needed than to be one day behind and have the stock exposed to a cold storm.

About the only condition that will admit of purchasing feed on the farm is when there is plenty of roughness, and bran middlings and oil meal are needed to help feed it out.

While with nearly all classes of stock it is usually advisable to let run out during the day as long as the weather will permit, it is often a good plan to commence sheltering at night in good season. N. J. SHEPHERD.

A hacking cough keeps the bronchial tubes in a state of constant irritation, which, if not speedily removed, may lead to chronic bronchitis. No prompter remedy can be found than Ayer's Cherry Pectoral. Its effect is immediate and the result permanent.

Irrigation.

SAVE THE RUN-OFF WATER.

An address delivered by Mr. Ira C. Hubbell, of Kansas City, at Russell, Kansas, May 4, 1894.

"Some of the ancient works for irrigation were stupendous." Such are the opening words in a standard encyclopedia, and then follow references to the canal of the ancient Pharaohs, which connected Pelusium with the Red sea, and which was an irrigating canal. Irrigation was practiced in Arabia presumably prior to the days of Solomon, and to an extent beyond anything in existence prior to that time or since, says the authority to which reference has just been made. Again we are re-discovering a lost art, and one that was first practiced in the United States in 1848 by the people who settled in the Utah valley under the leadership of Brigham Young. The plains of Assyria and Babylon were intersected with a system of canals for irrigation and navigation, into many of which the water was raised by mechanical means. This authority also cites the fact that irrigation was practiced in Egypt 2,000 years before Christ.

Your speaker first visited Colorado in October, 1873, when but little was done in irrigation, and that principally about Golden, Greeley, Boulder, etc. In the years 1881, 1882 and 1883, being a resident of the State and connected with the building of the Denver & Rio Grande railway, my duties necessitated extended trips over Colorado, Utah, etc., and so I have seen acre upon acre, which, without the irrigating waters, would not grow white beans, made fertile and magnificent crops of fruit, cereals and vegetables produced. I have seen sections in Utah and Colorado absolutely barren of vegetation of any description, where even cactus would not grow, and where there was not even a sprig of sage brush, made productive through irrigation.

You do not need to accept the unqualified statement of any one individual upon this question. If you are inclined to doubt, it will cost but little to make a trip to Salt Lake City and return; go via Denver and Grand Junction, and you will have an object lesson you will not soon forget. Side by side of the fertile fields you will see thousands of acres of the same kind of barren, unproductive and out of which the fertile ones have been created, and how? By water.

The question is often raised with regard to good and bad lands. A certain scientist is reported to have made the statement that if the Parisian gardeners were allowed the privilege of using the asphalt paved streets of Paris and supplied with sufficient water, these gardeners would grow magnificent crops. In 1882 I purchased a little home in Denver, Colo., the front yard of which was as beautiful a barren sand lot as the eyes of man ever rested upon. I sowed this with grass seed in the month of June, and by the use of water had as perfect a lawn before the season was over as was possessed by any resident of that State, and no one has ever seen a better grass plat than this little one just referred to. All the soil of Kansas needs in order to grow good crops is simply to give the growing crops water at the time the crops need the moisture. It is not the soil so much as water that contributes to the success of the agriculturist.

In many instances water is obtained at justified expense by the building of canals, and in other places by pumping. Water in few localities in Kansas can be had for irrigation by ditches, by wells in others, and in most localities by the construction of dams across the innumerable draws and thus retain the run-off waters of our rains for use as the growing crops may need. You cannot too carefully consider the subject of building these dams.

Irrigation is not only a possibility, but upon the people of the State recognizing the fact, and with recognition taking affirmative action, depends the future of a large portion of the State, and without the fear of successful contradiction I make the statement that the day is not so far distant as some

may imagine when irrigation will be extensively practiced throughout the United States. We can foretell the future from the past. The population of the United States has doubled each thirty years since the first census. Commencing with 1790, in 1820 the population is doubled. In 1850 it is twice 1820; 1880 is twice that of 1850; 1830 is double that of 1800, and so on until 1890 shows a population double that of 1860. From this little piece of history we can rely upon a population here in 1920 of over 100,000,000. Contemplate what the population will be in 1950. Many of us will see the 100,000,000 mark, but all of us will be called home before the results of the census of 1950 are announced. This fact is mentioned simply to show that at a comparatively early day intense farming will be a necessity as a means of feeding our own people, and intense farming is possible only by irrigation.

The question demands the serious thought of our people, and it is of vital importance that our people shall cease to look to the general government for the accomplishment of the problem. To repeat what I have already said upon this subject, a little money expended in irrigating will bring immediate results; whereas, the person who waits for the government to act will perhaps not live to learn that irrigation is a possibility. Nothing succeeds like individual determination to accomplish a good end, and if I can assist any one here or elsewhere in a solution of the problem, my services are subject to that person's command, in that my reward is sure to come with the building up of our country.

Irrigation Meetings in Southwestern Kansas.

EDITOR KANSAS FARMER:—Judge J. S. Emery, of Lawrence, Judge D. M. Frost, of Garden City, and Hon. E. R. Moses, of Great Bend, last week held a series of irrigation meetings in the extreme southwest part of the State (in the Thirty-second Judicial district), at Santa Fe, in Haskell county; at Liberal, in Seward county; at Hugoton, in Stevens county; at Richfield, in Morton county, and at Johnson City, in Stanton county. All the meetings were well attended.

The people of southwestern Kansas have reached the conclusion that to irrigate is the only sure method of farming for them. They were eager to hear of the success of others in that direction and to learn how to proceed in the way that will make farming pay.

The speeches were highly entertaining and instructive and valuable ideas and suggestions were given to those who came to southwestern Kansas with the purpose of making it their home. The effect of the meetings, with the words of encouragement from all the speakers, was immediately apparent. County irrigation associations were organized in each of the five counties named and some are preparing at once to put in irrigation plants, and others who thought of leaving the county have determined to remain and try it in the new and better way. The people are very grateful to those speakers, who so kindly favored them with encouragement and information in this work, and hope to have them visit the same territory again, when it will show in a measure the result of these meetings. The speakers seemed to enjoy their ride over the country, having driven about 200 miles in a carriage to attend these five meetings, and they were agreeably surprised at each of the places by being greeted by a crowded house, something they did not look for in a sparsely settled country. H.

No apology is needed for again presenting a thoughtful paper on irrigation from the pen of Mr. Ira C. Hubbell, of Kansas City. Mr. Hubbell's skill and experience as a hydraulic engineer and his familiarity with all kinds of machinery, no less than his widely extended observations in the arid and semi-arid regions, give especial value to anything he says on any branch of the subject of irrigation. That he is well provided with stenographers and typewriters is a fortunate circumstance for the hundreds of irri-

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gators, both present and prospective, who have had occasion during the last few months to avail themselves of his advice as to some proposed plan of irrigation. Readers of the KANSAS FARMER may be depended upon to give his efficient clerical force enough work to keep them from becoming lonesome. When you want to know something definite about irrigation or irrigation machinery, write to Mr. Hubbell. He is jolly and good-natured as well as thoroughly informed.

Ownership of Lands in the United States.

From an address by Major J. W. Powell.

I have spoken now, gentlemen, of irrigation. I now want to call your attention for a few minutes to another matter which is of some interest. I have here a map showing the condition of ownership of the lands of the United States. In this great region here, the lands never belonged to the general government, but to the States and colonies. Texas owned its own land. Those are colored white. But on the organization of the government, and on the accession of new territory, the government acquired possession of a vast body of land. Those lands which are colored red on this map have been sold, and the titles to those lands have departed from the general government into the hands of individuals. You will see that there are still some government lands in Florida, Alabama, Mississippi, Louisiana and Arkansas, and quite a large tract also in Minnesota and some scattered bodies in the Indian Territory. There are also several large tracts of land which are not open for settlement; these are utilized for Indian reservations, and are colored yellow on the map. Then there are other large tracts which are not open for settlement, which are held as timber reservations; those are colored green. There are large tracts of land which have been granted to certain great railroads. A part of those lands have passed into the hands of private individuals. There is litigation now pending over a portion of those lands. How much of these railroad lands will ultimately pass out of the hands of the general government into the hands of the railroad companies, I do not know, but the railroad lands, as they are called, are all marked on this map. You will see, in looking at this arid and sub-humid region, how the whole country seems to be streaked with red. All of those lands have passed into the hands of individuals. They are curiously situated, as you see. Looking at the map at a little distance, and it seems to be threaded with red rivers. These lands have been taken up along the streams. The lands immediately adjacent to the streams, or the irrigable lands, have been largely taken up, so there is not left in the hands of the general government any very large body of land which can be irrigated. Scattered here and there, however, there are some important ones, on the lower Colorado, and some on the Columbia, but there are not many million acres left in the hands of the general government which can be irrigated. The lands which are left are in part timber lands and in part desert lands.

The general government owns one thing, though. I want to tell you of one thing which the government owns which does not pertain so much to you here as those further west—to the people who have, to a large extent, acquired titles to the lands about the springs, brooks, creeks and rivers, where the catchment areas that their waters are to be caught from are yet in the possession of the government. The final success of the management

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of these farm lands depends upon the regulation of these catchment areas, and the question now of the greatest importance to the people of those regions where they depend on irrigation from the streams is the management of these catchment basins or areas, if their farming industries are to be made permanently successful. Will you allow me—I do not often enter into a political discussion, but I believe these catchment areas should belong to the farmers who cultivate the soil under them. I think it will be a great mistake to dispose of these catchment areas to cattle-raisers. I believe that in every basin, and in every valley the people who irrigate from the waters of that stream which runs down the valley—the farmers who depend upon that stream for success in irrigation, should themselves own those lands and control them.

FAIR NOTES.

JOHNSON COUNTY (MISSOURI) FAIR.

The twelfth annual meeting of the Johnson county fair was held last week at Holden, Mo., under the direction of Wm. Steele, President, and J. V. Murray, Secretary. The attendance was up to the average, exceeding 10,000 on Thursday. The management was of the liberal, old-fashioned kind, no charges being made for grand-stand or quarter-stretch privileges, which doubtless has something to do with making the object of the fair popular and, best of all, a success. The speed ring came in for four days' attractions, there being about one hundred head of trotters, pacers and runners entered for the contests. Saddle and all-purpose horses, jacks and mules were out in strong array and fully up to the standard of "old Missouri" requirements. Swine, sheep and poultry were shown, with swine the strongest and the poultry the second strongest feature of the live stock exhibit. The display from field, orchard and garden was an excellent one and attested that the climate and rich soil of Johnson county had brought forth all that the most hopeful hand of man could wish for. Space forbids that extended description that the general make-up of the display merited, but suffice it to say that it betokened that a no more successful agricultural and hospitable people can be found within the confines of practical and modern husbandry.

Among others that made an exhibit of swine was Wakeman Bros., of Odessa, La Fayette county, who entered ten head of Poland-Chinas, one aged boar and nine, the representatives of three litters. The strongest was a litter of seven that were sired by Young Stem 10298 A., and he by Stem Winder; they were out of Moll Jones 62604 A., and she by Johnny Cake 14141 A., and he out of Kansas 7664 A. The representatives of this herd shown were the broad, straight-backed, well down to ham, and of the early-maturing kind, that weigh at six months on an average 190 pounds, and readily sell for \$25 as breeding animals. The eighth and ninth were full as good as the others, but were no kin. This little draft made a good showing and was one of the leading attractions of the swine exhibit.

R. Scott Fisher, of Holden, Mo., came out with ten of his one hundred and twenty-five head of Polands and made a strong showing. Among others of his entries was the very excellent brooder, Sunset W., that was bred by W. P. Hayzlett, of Missouri. The yearling boar U. S. Chip, by All Right, and he out of Dolly K., that was bred by R. A. Korr, of Ohio, is an individual whose get confirms his worth as a breeder. In adjoining pens were eight spring pigs, three boars and five sows, that were good ones and were shown as representatives of Mr. Fisher's one hundred head of spring pigs that he expects will go out to new hands during the fall and com-

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.

To the Past.

To-day I passed through a lovely way,
That linked me with a long forgotten day.
Perhaps less fair to another eye
Would seem that road in its dusty dye.

But it led beside the fields of corn
That shimmer beneath the rays of morn;
It led beside the fields of wheat,
Tossed with its thousand golden sheaf,

Beneath the hedge's cool retreat,
Where the locust singe his music, bitter-sweet;
Beneath the boughs that sway above the lane,
Where the dove coos to his birdlings twain.

And spreading away, like a whitened sheet,
Is the river that cools the dusty feet.
I stood for a moment in its soothing plash,
And watched the sunlight on its waters flash.

Above its ever-dripping ford
The ripples lay like a silver cord—
Like that cord that will ever last,
Linking my present with a forever past.

A past of trembling summer hours,
A past of lovely blooming flowers,
A past filled with thy childish smile,
Ere age had chilled that youthful wile.

But now my heart is filled with a never soothing
wring,
For life goes on as it has gone,
Yon moon, dancing with her golden horn,
Will lightly float till the break of morn.

The waters that flashed all through the day,
Still play on their onward way.
I know summer days will come again,
Come and coming sadly wane.

Some vine will creep up yonder wall,
If creeping but to fade and fall.
Some other birds the dreaming earth
Will wake with their charming music mirth;
But o'er yon lovely bloom-draped stile,
No more I'll see thy childish smile.
Princeton, Kas. JOHN E. COWGILL.

AMERICAN KITCHENS.

As the heart, by its ceaseless throbbing, sends the stream of life through every part of the human system, carrying disease or health, so the influence from the kitchen brings to the entire household weal or woe. No matter how the heart is affected, the whole system is similarly affected. And, according to the working of the kitchen, the entire household is ruled. This has been true in past years, it is true of the present, and can we expect it to be less true in the future? As the power of the kitchen is more and more realized, changes for the better are made, not only in the utensils but in the foods. Thus, the conditions of the country are in accordance with the advancement of the art of cooking.

The first woman had one advantage over the rest of womankind—her husband could not compare her food with his mother's. Yet she was justly blamed when sorrow followed after he partook of the food she offered him.

To realize the great progress in household economy, let us compare the past with the present, and take a glance into the future. Grandmother used the fireplace, with spiders and griddles that had long handles and short legs; the back-breaking iron pots that held the "bean porridge nine days old." The brick oven with its rake, swab and paddles, was used for large bakings, and the tin Dutch ovens for small bakings. She had no recipe book, but learned the art from her mother and by practice. Pie was the favorite dainty, and many and varied were the kinds, yet doughnuts and seed cakes were always relished. The good things were kept in the buttery, and the entire meal was placed on the table at the same time. Though the utensils were few and of pewter, iron and brass, her advantages limited and her materials meager, yet grandfather prized grandmother's cooking highly and it is even now quoted by her sons.

When mother went to housekeeping the kitchen was still large and roomy, for it was used as a dining-room and sitting-room also. The double-oven stove came into use. The spiders and griddles lost not only in size but part of their handles and all of their legs. The pots diminished in weight and were sometimes lined with porcelain. These, with the steam cooker, were used for special cooking. The utensils were more in number and easier to handle. The dishes were of ironstone and china. The pantry was filled with good things made from the copied recipes that were dictated to her by her mother and friends. Cake, and not pie, was the favorite treat and was served with the rich preserves put up in stone jars or tin cans. Father thought mother wise in teaching her girls the art with which she was so well acquainted. But the kitchen is still improving. It is no longer used for the sitting and dining-room. For winter use we have the range, while for summer, the odorless, non-explosive

gasoline stove. Soon the demand for the patent cookers will be great. For by their use the cook can take advantage of "equal suffrage," and the food will be cooking without the necessity of her immediate supervision—thus enabling her to perform public services without slighting home duties. The cooking utensils are principally of granite, agate, steel or tin. They are light, easy to handle and to keep clean. The coffee and teapots are so arranged that the hot liquid is filtered through the tea or coffee, much to the improvement of the drink. The good things are brought from the pantry and refrigerator and put on the table in courses.

Many are the helps that the cook may use. Most of the printed recipe books are reliable. The canned goods of all kinds in endless variety are wholesome and cheap. She may go to school and learn of the values of foods and the proportions in which they should be used.

And now, shall I attempt to picture the kitchen of the future? What shall we see? A room evidently planned by a woman. It will be pleasantly situated, completely furnished and conveniently arranged. Such a marvel of daintiness and neatness! So cozy and inviting. Artistic beauty and the genuinely practicable blending in one harmonious whole, governed by the strictest hygienic laws. Electricity, a most willing servant, will there be found. Aluminum dishes will feel themselves vulgarly common. The laboratory in connection with the kitchen will contain delicate and accurate scales, thermometers of various kinds, together with the best food-testers. And over all will preside, as ever before, the queen of the realm, and more than ever before will her kitchen speak truly of her that rules therein. Happy her subjects, for they can truly feel that "Paradise Lost" is found.
MARTHA A. COTTRELL.
Wabauensee, Kas.

Some Abuses of Foods.

Nourishment which is obtained directly or indirectly from foods, is essential to all life. Anything is considered a food if it supplies nervous force and energy and builds up the tissues of the body. The value of foods cannot be judged accurately, as "what agrees with one man is another man's poison." What will supply the body with ample nourishment in certain occupations and at certain periods of life will only be starvation measures under different circumstances.

Man is an omnivorous creature, eating everything that satisfies the pangs of hunger or pleases his sense of taste, whether it is digestible or not. Taking the world over, we are surprised at the variety comprised in the daily fare and are led to believe that the stomach is the greatest chemical laboratory that ever existed.

The average daily diet necessary for an adult is two ounces of albuminoids, half an ounce of fats, twelve ounces of carbohydrates and half an ounce of salts, in all making fifteen ounces of food consumed each day. A hard-working man, exposed to all kinds of weather, will need from fifteen to thirty ounces.

To judge accurately of the nutritive value of foods we must know how much of each is assimilated. And every advancement in the different sciences, which are related to domestic economy, has thrown new light upon this subject.

The cry about adulteration of foods is mostly a false alarm, made by the newspapers to create a sensation and fill up space.

It was found by chemical analysis that none of the staple articles of food were adulterated. Out of fifty samples of sugar that were examined not one was found impure. Flour is so cheap that it is not tampered with at all. And the only articles that are adulterated to any extent are condiments, coffee and tea. The foreign materials are easily detected in the spices and coffee, if they are bought before being ground.

For economy's sake the housewife resorts to many little schemes in cooking that are more injurious to the body than anything done by the manufacturer.

Using soda to sweeten foods that have long since lost their nutritive value; making cake with strong butter, hoping to reduce its strength by putting in extra sugar and spice. Ah! vain hope. That butter will make itself known, no matter how many good things are mixed with or piled on top of it.

Bits of meat and bread are saved, from time to time, so that a hash can be prepared in the future, no matter if the meat be tainted and the bread seems to be good soil for a fungous growth. All this can be covered up by adding onions, garlic and plenty of seasoning.

Bread is allowed to raise toward the bottom of the pan because mixed with the housewife's carelessness, indolence and ignorance.

A nice, tender, juicy piece of steak is put in a skillet of half-warmed grease and allowed to sizzle and sizzle over a smouldering fire until every fibre is thoroughly

grease-soaked and it has become as tough as the animal's hide.

Through ignorance and carelessness canned goods as bought in the market become poisonous after they are in the consumer's hands. Ignorance opens the can and leaves the contents exposed to the air, all unconscious that the oxygen of the atmosphere, through the acid of the food, is vigorously uniting with the thin lining of tin. Carelessness says we have never yet been poisoned, though we have done this many times. Perhaps this time, also, mercy will prevail over justice.

Every particle of food taken into the system has its influence, either for good or for evil, and if our American girls could properly cook and neatly place upon the table, food of a pleasing variety, which should at the same time be dainty and appetizing, yet contain sufficient nourishment to satisfy the hunger of the hardest manual laborer, there would be no need of her having the ballot.
SARAH E. COTTRELL-WRIGHT.
Lake Arthur, La.

Bread in History.

It has probably occurred to few persons to ask who was the inventor of bread. In our stage of civilization this form of food is in such universal use that it is treated as the symbol of all food. The Christian, in his daily prayers, petitions God for his "daily bread." The Romans, in their decadence, clamored only for their "bread and their circus."

There is an article on the subject in *Cosmos*, Paris, by M. Laverune, who has collected a vast amount of interesting information on this familiar article of food.

"It seems," says M. Laverune, "as if, in some way, bread fell down from heaven, and, also, that it must always have been something like the bread with which we are so familiar. This is, nevertheless, far from being the case; men were not always familiar with the preparation of wheaten flour which we call bread; indeed, in our own day there are entire populations wholly ignorant of its use. The black races of Africa and the red man of America have no notion of it. In the vast empire of China, containing a quarter of the human race, bread is almost unknown. Only in the province of Kan-Son is bread, such as we use, made. The people of Hindostan use only unleavened bread.

"Archaeology furnishes evidence of the use of unleavened bread toward the close of the prehistoric period. Charred bread has been found in the lake dwellings of Switzerland and in the subterranean vaults of Egypt. These specimens afford precise evidence of the state of bread-making among the Helvetians of the stone age and the Egyptians thousands of years before our era. The bread of that age shows that the grain had been crushed by beating it between two stones. It contained much sand, and to its presence is attributable the ground down state of the teeth so frequently observed in mummies and the skeletons of the lake dwellers.

"In the days of the patriarchs the Hebrews used unleavened bread, and it does not appear that they knew of any other bread before their sojourn in Egypt. The use of unleavened bread is no less ancient among the peoples of the Aryan stock. The Greeks ascribed its origin to the remote mythological ages of Ceres and Pan. In heroic days, depicted by Homer, the Greeks had nothing but unleavened bread, and even that the poet mentions only in connection with some feasts.

"The loaves in antiquity were flat, and they were so prepared that there was no necessity to cut them; they were broken, hence the expression 'to break bread,' so common among the old writers.

"Athenaeus, describing the festivals of the Gauls, remarks that they served the bread 'all broken.' According to Fortunati the saintly Queen Radegonde lived on coarse bread in a spirit of mortification to habituate herself to poverty; and this was the only nourishment of so many unfortunates in the sixth century. Even in this nineteenth century the use of unleavened bread is habitual in certain cantons of Spain and Italy. The griddle cakes of Ireland, the pogatch of Bosnia, the pumpernickel of Westphalia, the flat-bread of the Norwegian peasants, are all varieties of unleavened bread.

"The ancients attributed the discovery of leaven to the Egyptians, and it was from them that the Hebrews learned it.

"We learn from the dream of Pharaoh's chief baker, interpreted by Joseph, that baking had become a distinct pursuit; and that it had reached a high state of development may be safely inferred from the chief baker's dream of the three 'baskets which contained all manner of baked meats.' This was nineteen centuries B. C., and about four centuries later, when the Israelites left Egypt, leavened bread was their chief article of diet, as it was also in general use throughout the East. Herodotus tells us that Croesus erected a statue of gold to his baker in memory of his talents, and the same author tells us that the number of women engaged in making bread

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for Xerxes' army of 1,700,000 men was beyond count.

"The first bakers who followed their craft in Rome were slaves captured during the expedition against Phillip, 171 B. C. The substitution of beer yeast for leaven appears to have been adopted by the ancient Gauls, but the custom fell into disuse and was completely forgotten until the middle of the seventeenth century, when it was rediscovered in London. This innovation was very energetically opposed by the medical profession. The faculty of Paris on being consulted by the lieutenant of police, decided profoundly, on March 4, 1668, by a vote of 45 to 30, that the leaven of beer was opposed to health and prejudicial to the human frame on account of its acidity, due to the decomposition of wheat and barley. Guy-Patin and the more ardent of the physicians characterized yeast as 'villainous foam.' But public opinion favored the innovation, the faculty had to give way, and two years later the use of yeast was sanctioned by special act of Parliament.

"For a long time every family continued to make its own bread. It was the universal custom among all the Germanic peoples. The terms 'lord' and 'lady' are indeed derived from the Anglo-Saxon, the first hlaforð, which signifies the author or custodian of bread, and the second hlaebdige, the one who employs herself about the bread. Even in France until the seventeenth century there were no bakers except in the cities.

"The bread-eaters are still a minority throughout the world. The number of civilized persons who habitually consume wheaten bread is not estimated at more than five hundred millions. Even in Europe the great part of the population is reduced to the use of inferior bread made of coarse cereals and pulses, and indifferently prepared. France grows and consumes more wheat than any other country in Europe, and numbers 6,000,000 of its population who do not even know the taste of bread made of rye, buckwheat, maize or chestnut meal. But it appears really that the world progresses only very slowly toward the realization of the familiar prayer of Christendom, 'Give us this day our daily bread.'

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

Uncle 'Rastus, Reminiscent.

Dey haint no use er talkin', sah, dey haint now, dat's a fac';
I 'members marstah's chikens, sah. Yes, 'members clar way back
Afo' de wah, when he brung home from Kunnel Alec Silza's
Dem great big ostrich chickens—de ones he called Shang-hisee.

Um, u-m-m! Yo' ort a seed dem fowls—'bout five foot high, I 'spec;
Wid great long yaller legs, sah, an' de fines' kind ob neck;
Dey eat out ob de hose troff, an' laid eggs by de cord—
An' honey, dem ar eggs was as big as any gourd.

De Bremmers an' de Langshams an' de fowls yo' all call fine,
Kain't rusticate wid dem Shang-hisee wen dey war in dar prime;
I disremembers 'zactly what dey weighed in numbers roun',
But I fink dem birds would tip de scales at ninety-seben pound!

'ne day de Yankee sogers cum a shootin' froo our place,
An' yo' ort to seed 'de blue-coats an' de chickens in de race.
Ki, yi, hi, hi! Hit made me laugh—hit was de mostest fun;
But dey haint no Shang-hisee roun' de place when de soger boys got done.

Dey haint no use er talkin', er argyfen, sah, wid me;
I knows de possum's climbin' up de luscious 'simmon tree—
An' I knows dat dese yer chickens yo' all buys at de sto'.
Kaint promulgate wid de Shang hisee we had afo' de wah!
—J. H. Davis, in Ohio Poultry Journal.

Crowns.

"Crowns?" I've always worn them.
In the beautiful "Long-ago,"
When life was a sunny day-dream,
With never a cloud of woe;

My own true soldier lover,
Placed on my girlish brow,
The royal crown of Wifehood,
Which I wear untarnished now.

And then, one blessed morning,
There knocked at my chamber door
A messenger, straight from the Father,
And—Motherhood's crown I wore.

Now, Time with tireless fingers,
Is weaving a crown of white,
As a silent, yet sure reminder,
I'm nearing the "mansions of light."

Strange I should be thought worthy,
These crowns, so fair and sweet,
Will each jewel they hold be in the crown
I shall cast at the Savior's feet?
—Aunt Louisa.

CARNEGIE AND OPPORTUNITIES.

EDITOR KANSAS FARMER:—I am, and have been for years, a subscriber and reader of the KANSAS FARMER, and am surprised that such an article as "Rise of a Messenger Boy" should get into the "Young Folks" department of the "Old Reliable," and especially do I object to the last sentence: "All in Andrew Carnegie's career has been one to be studied with profit by every American boy." Have you forgotten the Homestead strike and rotten armor plate fraud? I would have my boy despise a character that can brag of an income of more than \$10,000 per day ground out of the sweat, in the industrial mill, of thousands of his fellow men.

In the interest of the American boy.
Concordia, Kas., August 29, 1894. H.

The writer of the foregoing is an old-time friend of KANSAS FARMER, and as such we respect his opinion and favor very highly. The article about Carnegie which he refers to was published in KANSAS FARMER, July 25, alongside of another concerning a "boot-black" who also had become a wealthy man; both had commenced business at the foot—the latter especially—and had succeeded in quickly making themselves independent. These two articles were preceded by a stanza expressive of the fact that all are not so fortunate.

"The world is like a crowded 'bus;
A few good men, perhaps,
May find a seat, but most of us
Must hang on by the straps."

Now, Mr. Carnegie needs no vindication of the charge made against him that he has an income of \$10,000 per day. If you or I had that sum each day to drop into the little tin-savings bank on the mantel-shelf behind the looking-glass, we wouldn't be searching very hard to find a large quantity of vindication. We could not use it, if it was given us by the half-bushel.

But it is desirable to express a thought or more, defending the act of including the article in question in "Young Folks" department of KANSAS FARMER.

That which grows is usually more to be desired and studied with benefit for future action than that which destroys or pulls down. Andrew Carnegie's wealth and his business grew rapidly. As these grew, thousands, yes, tens of thousands of men were given employment, who would have had to search elsewhere had it not been for Carnegie's enterprise. Many thousands of homes were built and paid for by men who received fair wages in Andrew Carnegie's many locations of business. H. refers to the great Homestead strike of 1892 and the

armor plate frauds, neither of which we have inclination to defend, but simply to say that Carnegie had abandoned control to others before either of these things were heard of or begun. Probably he owned a very great deal of the stock of all the enterprises, and possibly does yet. H. C. Frick seems to have been the man in immediate control at the time of the Homestead riots, and the troubles did not begin while his chief was in active management. Still, it was shown in the subsequent investigations that the wages paid in 1892, which were less than former scale, ranged from \$1.50 to \$14 per day, according to the skill of the workmen. H. knows how much more than \$1.50 per day can be earned by a farm hand working three hours longer than the Homestead men labored.

It is not always the successful business man and the successful business which injure and oppress the laboring man. The unsuccessful business and the unsuccessful business man very often cause the greatest loss and oppression to those who labor. It is better that our youth study the history of successful ones rather than that of the unsuccessful—only observing the latter in order to avoid their mistakes. The bad in Andrew Carnegie's life is not to be emulated—only the good—and it might be well for those interested to examine his case carefully and learn all the bad things of oppression or otherwise that Andrew Carnegie was ever charged with. When he gave a million dollars to the Pittsburgh library, he not only furnished a beautiful and instructive place for the laboring thousands, but he put in circulation among just such ones this large amount of money. When he built his "palace" at Cresson he improved a "spot of God's green earth" which was barren before, and in doing it furnished occupation to a multitude of those seeking employment. Whatever is found of bad in his career, do not emulate, but avoid.

It is easy to find objections to the career of the greatest among those who have encumbered this earth. History, sacred or profane, only records the life of one "perfect man."

We all love the story of Joseph and his career in Egypt. But if you want a case of first-class oppression, read Genesis xlvii, 13-27, and learn how he took advantage of the necessities of the unfortunate ones, and bought them and all their possessions for bread. Joseph was a poor boy, and rose to distinction and wealth as rapidly as any one of recent years. Shall we not study the story of his life because he oppressed ten thousand times greater than Carnegie was able to do?

Do we not love to read the story of David, the poor boy of Bethlehem, who became "the sweet singer of Israel?" From poverty he became the most opulent and powerful man of his time. But if you want a unanimous opinion of the morality and kindness of the gentleman, don't ask Uriah to pass judgment in the case. II Samuel, xl., 14-18, also verse 25.

We sing sweetly:

"Where, oh! where, is the good old David?
Safe now in the promised land."

Uriah might not change the actual location, but he would assign him a seat way back under the gallery.

We study the history of Napoleon, and call him the greatest General of his age. What did he ever build up for the benefit of his fellow man? All of his greatness and wealth was obtained by the blood of myriads of poor human beings. Yet we can continue the study of his career with profit to ourselves. Andrew Carnegie was never even charged with destruction of anything.

It is profitable to us to study the history of the acts of Washington, Jackson, Grant, Sherman and Lincoln, yet their lives, good though they were, still were not devoid of acts subject to honest criticism.

Andrew Carnegie is not a Joseph, a David, Napoleon, Grant nor Sherman, yet he, like they were, was successful in the opportunities which were presented to him. We cannot all become wealthy Carnegies, nor such a wealthy bootblack as the one who got rich by paying his men less than a dollar a day, but we can all strive to take advantage of good opportunities which present themselves at least once in the life of every man. The trouble is, we do not recognize the opportunity when it arrives. Andrew Carnegie, Napoleon and Grant did. Opportunities for evil should never be recognized nor used for oppressing fellow men.

About Schools.

Your correspondent, Mr. J. B. Brown, has hit the center mark when he assumes that the term of the district schools should be nine months; as a general average, instead of six, as at present. Every farmer should carefully read that article in your issue of 15th inst. Also, if the schools were more generally visited by the parents the results obtained at the close of the term would be much more satisfactory. Boys and girls always are pleased to see father and mother interested in that which concerns them. Besides, in many cases the teacher is a stranger, and in that case it is but exercising a Christian spirit to visit the

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school frequently and help to smooth the path for him or her, as the case may be. The faithful teacher is deserving of all the care and attention bestowed on him.

JAMES KERR.

Topeka, August 24, 1894.

His Acute Discernment.

"Speaking of the human voice," said the disagreeable man, "have you ever thought what an indication of character it is? Place a woman I have never seen in another room, and let me but hear the tones of her voice, and I can tell what kind of a woman she is."

"You are entirely right about that," replied Von Blumer, "and I recently had this very thing manifested to a remarkable degree. A woman called on my wife the other day, and although I had never seen her before, I knew, by hearing her speak, just what she was."

"What sort of a woman was she?" inquired the disagreeable man, with intense eagerness.

"Why," replied Von Blumer, complacently, "she was Irish."—Harper's Bazar.

Red-hot Pokers for Rheumatism.

"Rheumatic persons are constantly being advised by their friends to try new cures," said B. L. Dibble, of New Haven, at the Laclade yesterday, "and if the sufferers are of an experimental turn of mind they at least gain from their affliction an occupation for the rest of their lives. Of all the cures for rheumatism that I ever heard of I think that one which is common in India is most extraordinary. There they have what are called fire doctors, who sit in the more frequented streets waiting for rheumatic patients. Each doctor has a little furnace, a pair of bellows and a number of queer-shaped iron rods before him. When not operating he reads incessantly from a prayer book, repeating the sentences aloud. When a patient appears the doctor lays down the book, blows up the fire with his bellows, and sticks the rod into the coals. While waiting for the irons to get hot he repeats several prayers. When all is ready the patient pays his fee, lies down on his face, and draws his clothing upon his back. After invoking the aid of God the fire-doctor passes a red-hot iron with great

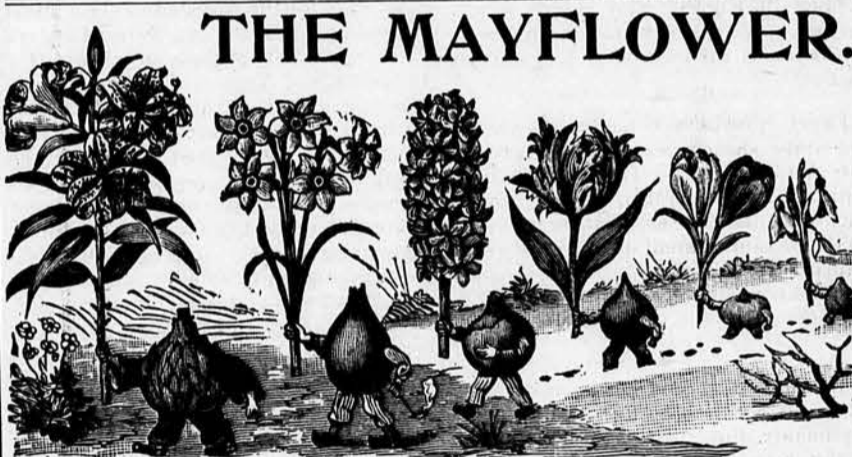
deliberation over various parts of the back. It makes a sizzling noise and a smell of burning flesh pervades the air. Meantime a crowd of men have collected to witness the operation, during which they incessantly pass their fingers through their beards and praise God and Mohammed. Frequently the patient, after one operation, lies still for awhile, perhaps waiting for another twinge of the disease. If it comes he perceives that he is not quite cured, and demands another installment of the treatment, for which he pays an additional fee." Globe-Democrat.

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All advertising intended for the current week should reach this office not later than Monday.

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Address all orders **KANSAS FARMER CO., Topeka, Kas.**

The greatest present concern of Wall street appears to be the persistent reluctance of the "lambs" to browse in that pasture.

Agents of Eastern merchant tailors are notifying their patrons that the prices of worsted suits have declined \$5 per suit since the new tariff went into effect.

It is with considerable satisfaction that an almost universal increase of bank clearings is noted, both this and last week. As business is done, the bank clearings of the country furnish a tolerably correct index to the amount of exchanges.

Dr. Neal, of the Oklahoma Experiment Station, has begun correspondence with botanists in semi-tropical and somewhat arid regions of the world, with a view of obtaining seeds of all forage and food plants that endure extreme droughts.

NAMES WANTED.

It is not often that this paper makes a special request of its readers, but we want the name and address of every farmer in Kansas who is not a subscriber. Will every one of our readers favor us with a postal and a list of names?

Every breeder and feeder of swine in the State should become a member of the Kansas Swine Breeders' Association. The membership fee is \$1; annual dues 50 cents. The association holds annual and semi-annual meetings of great interest to all swine-growers. Apply for membership to the Secretary, W. E. Gresham, Burrton, Reno county, Kansas.

Our readers should not permit themselves to be in ignorance as to their new enemy, the Russian thistle—which by the way, is not a real "thistle" at all, but worse. Secretary F. D. Coburn, of the State Department of Agriculture, will be glad to send, free for the asking, an illustrated bulletin showing what the plant looks like, and the importance and methods of destroying it, which is very important before its seed are ripened and scattered.

Mr. W. R. Grace, of Garden City, has grown from the seed a new plum which was so favorably regarded by Prof. H. E. Van Deman that in his official report for 1893, as Pomologist of the United States Department of Agriculture, he named it the Grace plum in honor of its propagator. Samples received at this office on the last day of August show it to be a fruit of superior table qualities. Its season of ripening is in itself a great merit. It has not been propagated for sale, Mr. Grace holding all of the stock. It is a good, heavy bearer, ripens its fruit all at one time and is claimed to be unaffected by curculio.

Health, comfort and happiness abound in homes where "Garland" Stoves and Ranges are used.

AS WALL STREET EXPECTED.

The weekly financial review of Henry Clews, dated at Wallstreet, New York, September 1, 1894, says:

"As might have been expected, the Wall street markets have, during the past week, shown a partial reaction from the advance and the activity immediately following the settlement of the tariff question. It was natural that an advance, after such a long period of dullness, should be followed by sales to realize profits. A luxury so long out of reach was seized with prompt avidity; and the consequent decline in prices has been encouraged by 'bear' sales. One fact, however, deserves to be noted as a symptom of the market. The realizing has been mostly by the smaller class of operators, who had bought for a 'turn' upon the prospect of the passage of the tariff bill. The large holders, who have been carrying big lines of stocks, bought around panic times and held ever since, have as yet sold very few stocks. They appear to be of the opinion that the real advance is not to be expected upon the transient sensational effect of the first settlement of this question, but upon the later effects, arising from the outworkings of the readjustments and the general expansion of business. The starting up of manufacturing and merchandising now apparent on every hand is, with them, a reason for expecting a permanent revival of confidence, an increase in the earnings of the railroads and improving dividends upon corporate capital generally. That, the capitalist holders consider to be the true time for realizing; and, with money still abundant and cheap, they see no reason for parting with property which a few weeks or months hence is likely to be worth much more than it would bring upon large sales to-day. Another motive influencing this class to cling to their holdings is the fact that, owing to the large amount of stock held stagnant through receiverships, this is, and for some time must remain, a comparatively narrow market, not best calculated to draw into Wall street a large outside interest. The practical significance of this factor is that until a considerably higher range of prices is reached, the market is likely to be sustained by comparatively light offerings of stocks and by the countenance of a very influential class of holders.

"The crop reports show improving prospects for the railroads. The latest estimates indicate a probability of fully 500,000,000 bushels of wheat. Up to the 20th of August, the crop of corn was estimated at about 1,500,000,000 bushels; but later weather conditions have encouraged the hope that the yield may prove to be close upon an average. So far as respects transportation interests, the increase in wheat, amounting to something near 100,000,000 bushels, will probably quite offset any possible falling off in corn; for, relatively, a smaller portion of the corn crop than of the wheat crop is subject to long hauls; and the large increase in the latter crop will have to travel from West to East for export. It therefore would not be surprising if the earnings of the railroads out of this year's crops quite equal those of average years. So far as the crops affect the farming interest and its ability to purchase supplies at the East, the chances are much better than they were earlier in the season. If the price of wheat is low, yet its yield is now estimated at 25 per cent. greater than last year's; and, for any reduction, of say 10 per cent., in the crop of corn, there is, at present, the compensation of an advance over last year's prices of the same date of fully 30 per cent. The farmers' prospects may therefore be reckoned as fully up to the average of late year's, which, after all, did not prevent the agricultural sections from suffering much less than any other under the trials of last year.

"The reports on the world's crops made at the Vienna fair are here generally regarded as materially underestimating the probable output. The opinion gains ground that the aggregate supply of wheat from all sources will turn out to be the largest in the world's history. Should this prove to be the case, it will afford a valuable

help towards the abatement of political discontent and the recovery of suppressed industry among the European nations. In England, Germany, France, Belgium, etc., the recovery of trade comes slowly. Large expectations (in England especially) have been built upon the adoption of a lower tariff in this country. It remains to be seen how far the event will justify that hope; but it will, at least for the present, give a stimulus to European industries, and that may possibly suffice to break up the prevailing stagnancy and start old world commerce upon a fresh era of activity.

"The enactment of the new tariff has had less effect upon the English market for our securities than had been expected. Like our own market, London had bought moderately on the prospect, and it sold promptly on the advance. British investors have been so discouraged by the recent receiverships of our great railroads, that time must elapse and those events be forgotten before London will become a considerable buyer either for investment or speculation. Here, this is expected; and the effect of this loss of the usual London co-operation has been already discounted and has no further effect for the New York market."

SPECIMENS RECEIVED.

The State Department of Agriculture has received from Mr. L. P. Worden, of Syracuse, Hamilton county, some excellent samples of this year's crop of wheat, oats and alfalfa, showing the growths and yields from similar soil and seed, with and without irrigation. With irrigation the wheat yielded from twenty to thirty-five bushels per acre, and the oats sixty-five bushels. Without irrigation they yielded two and one-half and seven bushels, respectively.

Mr. H. R. Hilton, of Topeka, has presented the museum with samples of Soy beans, grown on the poorest of gumbo soil in Topeka, which show a remarkable yield of both forage and beans, under conditions very unfavorable as to weather as well as soil.

Secretary Coburn has also obtained two typical and well-developed specimens of Russian thistle from Mayor C. E. Wightman, of Tribune, in Greeley county, which will be used as object lessons to teach State house visitors just how these vicious tumble-weeds look and wherein it differs from the ordinary tumbler. Since reading about the "Russian" plant many farmers have jumped to the conclusion that the very common "bull nettle" must be the same thing. They are not at all alike.

Kansas Swine Breeders' Association.

The Kansas Swine Breeders' Association, will meet at the office of the Secretary of fair, Wichita, Kas., October 4, 1894, continuing over the 5th. An interesting program is promised and all breeders and feeders are invited to be present.

PROGRAM.

Address of Welcome, President Geo. W. Berry; "The Good of our Meetings and Organization," R. S. Cook; "Elements of Successful Swine Husbandry," W. S. Hanna; "Care of Sow and Litter," Jas. Mains; "Why I Prefer Poland-Chinas," J. H. Sayles; "Why do Farmers not Feed Swine More Profitably?" Dr. P. A. Pearson; "Care of the Male Hog," W. B. McCoy; "The Berkshire Hog," N. H. Gentry; "Line Versus Inbreeding," Wm. Whitby; "The Pig from Farrowing to Market," D. Trott; "Preparing Show Hogs," M. B. Keagy; "General Talk on Fitting and Selling Swine," Hon. T. A. Hubbard; "Conducting Thoroughbred Herds, Selling Stock on Orders, etc.," Secretary State Board of Agriculture, F. D. Coburn; "Nature of Different Feeds, Cost Per Pound of Pork Produced by Same, etc.," Professor of State Agricultural college, C. C. Georgeson.

Hundreds of young people are going to attend the Wichita Commercial College this fall. Y. M. C. A. Building.

The Kansas Weekly Capital publishes more Kansas news than any other weekly paper. A free sample copy will be sent on application to THE TOPEKA CAPITAL CO., Topeka, Kas.

DEVELOPMENT OF THE FOOD VALUE.

Questions as to the possibility of improving the qualities, as well as the yields, of farm crops by the various plans of development, are more important than the practical man is apt to admit. It is shown by various feeding experiments that three and a half or five pounds of the best grain foods are required to produce one pound of meat. If any one should now assert that at some time in the future the production of meat will be entirely superseded by the production of plants and plant products possessing the food values of meat, that person would be smiled upon as a mild sort of lunatic likely to waste a good deal of time in experiments which could come to nothing. But the experimenters are at the problem, and though they have not avowed the expectation of supplanting meat with vegetables, they have made some progress in the direction of so improving plants as to render them a little more capable than formerly of supplying the elements of nutrition which characterize animal foods. This is accomplished in an entirely rational way. It is well known to farmers that the character of plants varies greatly with variations of the soil in which they grow. Now the greater percentage of substances formed from compounds of nitrogen is the most universal distinguishing characteristic of animal as compared with vegetable substances. It is true that vegetable substances contain nitrogen, and some in much larger proportion than others. Nitrogen compounds are formed in all fertile soils. The question which has been propounded is: "Will a larger percentage of nitrogen in the soil produce a larger percentage of nitrogenous substances in the product?" Prof. C. D. Woods, of the Connecticut Experiment Station, has reported the results of his experiments with the use of varying amounts of nitrogen as a fertilizer. The summarized results give the nitrogenous compounds in the products as protein, as follows:

PROTEIN IN CROPS GROWN WITHOUT NITROGEN AND WITH DIFFERENT AMOUNTS OF NITROGEN.

Mixed minerals and 75 pounds nitrogen per acre.	Per cent.	Mixed minerals and 50 pounds nitrogen per acre.	Per cent.	Mixed minerals and 25 pounds nitrogen per acre.	Per cent.	Phos. phoric acid and potash (mixed) minerals.	Per cent.	Number of experiments.	Per cent.	Kind of crop.
12.1	12.1	11.4	11.4	11.3	11.3	10.9	22	22	22	Corn (grain)
16.3	16.3	15.7	15.7	15.4	15.4	15.1	5	5	5	Oats (grain)
7.6	7.6	6.6	6.6	6.6	6.6	6.3	22	22	22	Oats (straw)
6.0	6.0	5.5	5.5	4.7	4.7	4.3	5	5	5	Mixed straw
8.8	8.8	8.8	8.8	7.6	7.6	7.6	5	5	5	Mixed grasses
12.6	12.6	10.2	10.2	10.2	10.2	9.9	5	5	5	Orchard grass
11.7	11.7	8.1	8.1	8.1	8.1	7.7	5	5	5	Timothy
12.1	12.1	10.2	10.2	10.2	10.2	10.2	5	5	5	Redtop
										Seven other pure grasses.

*Included more clover than other plants.

"In each case, except that of oat straw, the percentages of protein were greater when nitrogen was applied in the fertilizers than when it was not. In general the percentages of protein increased with the amount of nitrogen applied, though in most cases the application of the largest amount of nitrogen seemed to have the most marked effect upon the protein of the crop."

One other question of great moment remains for experimental answer. It is strongly suspected that the seed of these plants whose nitrogen has been thus increased will have a tendency to produce highly nitrogenized plants. If this tendency shall be met with a liberal supply of nitrogen in the soil, and the same plan be continued through many generations of plants, may there not result new varieties of these use-

ful plants whose food values shall be greatly above those of their progenitors?

Supplemented by scientific seed selection the field for experimentation is most inviting and is rich with promise.

Business in the United States.

R. G. Dun & Co.'s "Weekly Review of Trade," for the week ending September 1, says:

"The activity which came with exhausted stocks, and the pressure of delayed fall demands, and was increased by the removal of uncertainty about the tariff, has continued with heavy entries of foreign goods since the bill became a law.

"The gain is not yet what was expected, and business, if good in comparison with last year, is still poor in comparison with years preceding. Presumably there has not been time to feel the full effects of the change, and gradual gain will be more healthy and encouraging than a spasmodic rise, but the expansion of commercial loans has suddenly ceased; prices of manufactured products show weakness rather than strength, and there has been a reaction in the stock market; prices of railway stocks averaging 32 cents and of trust stock 2.11 per share lower than a week ago.

"Wheat moves largely and Western receipts were 5,762,777 bushels for the week, against 2,923,901 last year and for August, 28,500,000 bushels, against 15,500,000 last year, which does not fit crop predictions. Atlantic exports for the month have been only 14,000,000 bushels, against 24,000,000 last year, and the price has risen a shade during the week.

"Receipts of corn are only 1,423,302 bushels, against 3,460,646 for the week last year, while exports are insignificant and the price has advanced 3 1/2 while pork has risen 25 cents per barrel and lard 55 cents per hundred pounds. Fears of frost, the crop being late, are argued as a reason for quotations otherwise unwarranted.

"Cotton has declined an eighth for the week, but the year closes with every indication of a yield materially exceeding the world's maximum consumption of American and with 1,600,000 bales of old cotton in sight. If all the mills were running full force, the situation would not promise much.

"The demand for products of iron and steel have increased, but prices tend downward where any change appears, as there is not enough business yet to employ the works in operation. Steel bars are sold at 1 cent at Pittsburgh and wire nails at 1.05 cents, with Bessemer iron at 11.65, several additional furnaces having gone into blast. An encouraging sale of 40,000 bundles of cotton ties in competition to foreign ties, duty free, warrants hope that current prices in other branches may be low enough to meet the coming rivalry and a sale of Messaba ore at \$2.25 delivered at lower lake ports is reported. There is a better demand for structural work, though one considerable contract for Cuba was broken off by the advance in Spanish duties.

"Failures are still small. For the third week of August reported liabilities were \$2,976,518, but for three weeks only \$8,214,470, of which \$2,845,338 were of manufacturing and \$3,884,414 of trading concerns. The average is only \$11,521 per firm failing. The failures this week have been 188 in the United States, against 356 last year and 40 in Canada, against 29 last year."

Rye for Pasture.

EDITOR KANSAS FARMER:—I have believed for twenty-five years that most of us, in what is called "the West," did not sufficiently appreciate the value of rye as a late fall and early spring pasture crop. Where conditions are at all favorable it furnishes an astonishing quantity of rich, succulent, grazing just at a time of year when it is most relished and most needed by all kinds of farm animals, even including poultry. It pieces out to great advantage other feed that may be scant or poor, and while especially agreeable to all the stock it will make poorly nourished cows practically double their milk in quantity and quality. In fact, I have never seen a Kansas farmer so

well fixed that a good piece of rye pasture wasn't a genuine bonanza to him. There has never been a season in all the central West when something of that sort was more of a comfort to its possessor than it will likely be within the next nine months. Hence I would say to every farmer who reads this, do not fail to sow, and sow early (in fact just as soon as the ground can be put in proper condition), a goodly area of rye for pasture. Don't sow it for grain, but for pasturage; make the most of it for grazing, and if eventually it also yields some grain worth harvesting, well and good. If you can't secure the seed readily, sow wheat just as you would the rye; if it is not a plump, high-grade article, that will out but small figure, if sound. If of small or shrunken berry I would not sow less than five pecks to the acre; if plump a bushel and a half would be none too much; at all events use a plenty, and don't be afraid of having too many acres. I haven't discovered anything that was a better regulator for the pigs, the colts, the calves, the cows or the old blind mare than a good bite of green rye or wheat. It is excellent in years of greatest abundance; in years when other feed is scarce or poor it is simply indispensable—really a benefaction. Sow it with a drill or broadcast, as you think best, but do a good job, as if you desired success and meant to deserve it.

F. D. COBURN.

Crawford County Fair.

Special correspondence KANSAS FARMER.

The outlook for crops in eastern Kansas is remarkably good, taking all things into consideration, especially so along the Kansas City, Fort Scott & Memphis railway, better known as the "Memphis Route." A visit to the Crawford county fair, this week, clearly shows that Kansas can produce enough and to spare, even in an unusually dry season. The farm product display was first-class in every respect. In size of product and quality the samples exhibited certainly would be hard to beat. One gentleman, from near McCune, had on exhibition a wagon load of yellow corn that can't be beaten anywhere for size and quality, some of the ears measuring fourteen and one-half inches in length and well filled from nub end to the very tip. There is any quantity of just such corn in the county of Crawford, and thus the farmer feels that a bonanza in the way of good prices awaits him. Immense corn, potatoes and vegetables of all sorts and varieties was the general order of the farm product display. And last, but not least, the small fruit, apple and pear was a grand feature of the fair, showing development in horticulture worthy of careful consideration by orchardists in every part of the State. The fruit shown was very choice. W. C. Wortley, a leading exhibitor, took ten first premiums on apples, first on cider vinegar and two premiums on display of grapes, while his wife took ten first on canned fruits and preserves, also first on sugar-cured domestic hams.

The fine arts and floral departments presented an excellent chance to see fine specimens of handiwork. A student of Baker University—art department—Miss Emma Taylor, residing near Mulberry, exhibited of her own production two oil paintings, a screen and a mirror and two pastelle pictures, representing winter scenes. She received two first premiums. Certainly Baker University can justly feel proud of her students, especially when they produce such elegant works of art as executed by their student, Miss Taylor, and exhibited at this fair for the first time.

One thing, however, marred the good results of the Girard fair, and that was the admittance of fakirs, gamblers, thugs and joint-keepers. Their numbers appeared to be legion, for one could meet them on every turn, fleecing everybody right and left as fast as a chance would admit. Scores of parents came with their children to attend the fair; they paid their admission fees, but after entering the grounds and seeing the condition of surroundings they would not remain and be a party to leading their children and those of their neighbors into the very pit of damnation, such as existed so openly within the confines and jurisdiction of the association's grounds and by consent of the fair management. By the way, the Secretary who issued the permits allowing Satan's imps to have full swing on the fair grounds, is the nominee for State Auditor upon the ticket of one of the parties now before the Kansas people, and his name is Cole. Any fair management that will cater to the wishes of the gambler and those who follow in his wake cannot hope nor expect to have the better class of people to endorse their work, and how they can face the people of their county and ask them to support a county fair so managed is more than I am able to decipher.

September 1, 1894.

HORACE.

Johnson County Fair.

Special correspondence KANSAS FARMER.

An early ride down to Kansas City over the celebrated Santa Fe Route, and from thence over the Memphis Route to Olathe, soon brought me to the grounds of the Johnson County Fair Association. This being their second annual exhibition, speaks well for the efforts put forth to let the outside people know of the many good things of which Johnson county is capable of producing. The farm product exhibit was exceptionally good, there being as fine corn—extra large ears—as ever shown anywhere, no matter what year or in what country, while the display of large Irish and sweet potatoes, beets, turnips, cabbages and mangels was the surprise of all. The small grains exhibit was of the very best.

In the line of small fruits, apples and pears, the showing was indeed remarkable, both in quantity and quality. One farmer living near Gardner exhibited of his own raising samples of choice white, yellow and butcher corn, pop and sweet corn, wheat, oats, flax, pumpkins, squash, beets, cabbages, potatoes, onions, tomatoes, blue grass seed, clover, timothy, native grasses, two varieties of pears and twenty-six varieties of apples, besides stalks of corn with two very large ears to each stalk.

In the live stock department there appeared many fine specimens of cattle, horses, swine and sheep. Mr. J. M. Marvin, of Olathe, exhibited twenty-one head of Large English Berkshires, and captured three first and sweepstakes on boar any age or breed with six of his get; also first on best herd bred and owned by one exhibitor. Mr. Marvin's herd is headed by Royal Model Duke 2d 31408, son of Gentry's Model Duke \$750 boar, and grandson of the famous Longfellow. The get of Royal Model Duke 2d, as exhibited at this fair, proves his choice qualities as a premium-getter.

By another year the fair management expects to provide better facilities for exhibitors in buildings, grounds and general accommodations. In the meantime, should you have occasion to visit Olathe, remember that the best and most reasonable place to stop at is the Cottage hotel, just opposite the Santa Fe depot.

HORACE.

Weather Report for August, 1894.

Prepared by Prof. F. H. Snow, of the University of Kansas, from observations taken at Lawrence:

The warmest August of our record, except that of 1874. There were twenty-one days on which the mercury reached 90°. The precipitation was less in only one August of the twenty-six years of our record. The total run of the wind was lower than the August average.

Mean temperature was 79.37°, which is 4.43° above the August average. The highest temperature was 102.5° on the 14th, the lowest was 51.5° on the 4th. Range, 51°. The mercury reached 90° on twenty-one days. Mean temperature at 7 a. m., 71.53°; at 2 p. m., 91.36° at 9 p. m., 77.16°.

Rainfall was 0.49 inch, which is 3.47 inches below August average. Rain fell on three days. There were three light thunder showers. The entire rainfall for the eight months of 1894 now completed has been 18.45 inches, which is 5.17 inches below the average for the same months in the preceding twenty-six years of our record.

Mean cloudiness was 23.42 per cent. of the sky, which is 11.20 per cent. below the August average. Number of clear days (less than one-third cloudy), twenty-three; half clear (from one to two-thirds cloudy), five; cloudy (more than two-thirds cloudy), three. There were seven entirely clear days and none entirely cloudy. Mean cloudiness at 7 a. m., 20.96 per cent.; at 2 p. m., 33.19 per cent.; at 9 p. m., 16.12 per cent.

Wind was south sixteen times; north sixteen times; east ten times; southwest twenty-nine times; northeast twenty-one times; southeast twenty-two times; northwest twenty-nine times; west eight times. The total run of the wind was 7,095 miles, which is 1,206 below the August average. This gives a mean daily average of 229 miles and a mean hourly velocity of 9 1/2 miles. The highest velocity was thirty-five miles an hour, from 4:25 to 4:45 p. m. on the 20th.

Barometer.—Mean for the month, 28.980 inches; at 7 a. m., 29.008 inches; at 2 p. m., 28.989 inches; at 9 p. m., 28.945 inches; maximum, 29.188 inches, on the 4th; minimum, 28.873 inches, on the 13th; monthly range, 0.315 inch.

Relative Humidity.—Mean for the month, 55.01 per cent.; at 7 a. m., 65.70

per cent.; at 2 p. m., 41.77 per cent.; at 9 p. m., 57.58 per cent.; greatest, 90 per cent., on the 21st and 25th; least, 24 per cent., on the 18th.

Weekly Weather-Orp Bulletin.

Issued by the United States Department of Agriculture, in co-operation with the Kansas State Board of Agriculture, for the week ending September 3, 1894, T. B. Jennings, observer:

The extended drought was broken Saturday in the southern portion of the middle division and central portion of the eastern; good rains have fallen through Barber, Harper and Sedgwick and fair rains from Comanche and Sumner northeastward to and through Leavenworth, Atchison and Doniphan. Showers have occurred in the southeastern counties, with light showers scattered over the central and northwestern counties.

High temperatures have prevailed but the unbroken sunshine was partly veiled by a dense smoke during the week.

The continued unfavorable conditions this week have told severely on pastures, compelling many stockmen to begin feeding, and a large number to drive various distances for water.

Corn is largely in the shock and ranges from five to forty bushels to the acre, while some fields along the river bottoms will pass the latter figure.

The prairie hay is in the stack but is a light crop. Apples continue falling badly and are ripening prematurely. Potatoes are generally small and a light crop, though sweet potatoes promise better. Grapes distant from trees and hedges have done much better than those in proximity to them.

Little plowing for wheat has been done yet, owing to the dryness of the soil, but it is believed the heavy rains in the southern counties of the middle division will start the plows there.

FARMER'S ACCOUNT BOOK.

The keeping of farm accounts is one of the important elements of farm prosperity which is too often neglected. This results largely from the feeling of uncertainty as to the correct method of making the entries. This is entirely overcome by the use of a book prepared expressly for the farmer and embracing a system both simple and satisfactory. Anybody who can write can keep all necessary accounts intelligibly by the use of this book. The KANSAS FARMER has, during the past, supplied many of its subscribers with copies of this book and has given them the advantage of discount rates, whereby they obtained a \$2 book for \$1. The FARMER Company has just now bought out the entire stock of these excellent books at panic prices and is now able to supply it to any subscriber, postage or express prepaid, to any address in the United States, for only 60 cents, or as a premium for three subscribers and \$3. The book contains 222 pages, 8x12 inches in size, substantially bound in cloth-covered boards.

The following is the table of contents:

Table with 2 columns: Item and Page. Includes Directions and Explanations (4), Introductory (5), Diagram of Farm (6), Inventory of Live Stock (7), Inventory of Farm Implements (15), Inventory of Produce on Hand (23), Cash Received from all Sources (32), Cash Paid Out (33), Field Account (63), Live Stock Account (79), Produce Account (81), Hired Help per Month (103), Hired Help per Day (119), Household Expense (131), Accounts with Neighbors (147), Dairy and Fowls (155), Fruit Account (167), Notes and Obligations Owning (176), Notes and Obligations Due You (179), Interest, Taxes and Insurance (183), Physician and Druggist Account (187), Miscellaneous Accounts (191), Improvement and Repairs (199), Weather Report (203), Recapitulated Annual Statement (211), Useful Information, etc. (219).

The sooner you adopt the business methods of all money-makers, the sooner you will begin to correct mistakes and prosper.

A Nice Present.

If any reader of this paper who expects to buy a steel range or cooking stove this fall, will send us their full address and 10 cents in stamps, we will have them forwarded a cook book of 100 pages and a nice memento reminder. Address, MAJESTIC MFG. CO., care KANSAS FARMER, Topeka, Kas.

Horticulture.

DETAILS OF BUDDING.

So long as the bark of the stock will separate smoothly and easily from the wood, it is not too late to perform the operation of budding. The needful articles are a round-cornered knife and some good tying material, like basswood matting.

When everything is ready for the work, prepare a lot of bud-sticks by cutting off all but about one-half inch of the leaf stalks. These sticks should be carefully protected from wilting, and it is customary to carry them in the field wrapped up in moist cloth or oiled paper. If it is necessary to store them after they are cut, they should be kept in a cool, moist place in moss or sawdust, or cloths, but not in water. They are often kept for a week before using, but should be used as soon as may be convenient after they are cut.

To insert the bud a smooth place should be selected (on small stocks this should be about two inches from the ground) and on the north side if practicable, since buds are less liable to be injured by freezing on that side than on any other. A cross cut should be made at this point, and from it downward a cut about one and a half inches long; at the same time the bark should be raised. A bud-stick is then taken and a bud cut off with the bark and a thin piece of wood extending about one-half inch above and below the bud. The lower point of the bud (by which is meant the bark and wood cut off as well as the bud) is now inserted under the bark at the cross cut, and is gently pushed down by the leaf stock and knife blade. If the bark of the stock will not raise when the bud is thus pushed down the stock is not in the best condition for budding, and it will be necessary to raise the bark with the back of the knife blade, or with the ivory blade previously referred to, in order to let the bud come into its place. The sides of the bud should come under the bark, but if the wound is not large enough to admit quite all the bud, any small part that may project above the cross cut should be cut off by again drawing the knife through the cross cut. The bud must now be secured and firmly tied in place, taking care to draw it down evenly and firmly and to cover all the wounds with the tying material, but not to draw the string over the bud itself. After the bud is tied the bands should be watched so that when the growth of the stock becomes so great that the bands are too tight for it (which is generally in about a week) they should be loosened, and when the bud is well united the band should be cut off altogether. The buds will generally unite in about two weeks, but sometimes they will require a longer time, and it is often desirable to leave the ties on for some little time after this period. It is a bad practice to neglect the bands and allow them to severely cut the stock.

The inserted buds should not start at all until the next spring. If they start into growth the season they are inserted they are almost certain to be killed the following winter. If the bark of the inserted bud shrivels, or if it remains fresh and the bud falls off, the work is entirely lost, though the stocks that have missed one year may be budded the next, and even while loosening the bands it may not be too late to again bud those that have failed. To make the work more certain, two buds are often inserted in each stock, although only one is allowed to grow.

In the spring just as the buds begin to swell the budded stocks should be cut off at least one inch above the inserted bud, and sometimes seven or eight inches of the old stock is left above the bud to serve as a stake to support the shoot starting from the bud. All the shoots that come from the stock should be rubbed off so that all its strength shall go into the inserted bud.

Late in the season the stock should be cut down to just above the bud. The growing shoot should be trained to a single stem if its stock is a low one, so as to make a straight tree. If the root

is strong the bud will make a growth of from two to four feet the first year. Some kinds of trees readily take on an upright form, while others naturally grow very crooked and need special care to induce them to grow straight.

Roses for Trellises.

The use of climbing roses as screens to cover unsightly portions of the yard, or to obscure some unornamental outbuilding, is not so much practiced as it might be, considering the beautiful effects that can be secured. For this purpose the several varieties of Prairie roses are by far the most satisfactory, these being very hardy and of vigorous and rapid growth, frequently making shoots of from ten to fifteen feet in length during a season, providing the plants are well established in good soil.

The original Prairie rose (*rosa rubifolia*), is a native of some of our Western States, and was first taken in hand for experiment and improvement by the Messrs. Feast, of Baltimore, between fifty and sixty years ago, and as a result of those experiments we have Baltimore Belle and Queen of the Prairies, two varieties that still stand in the front rank among the roses of this class.

These two varieties are about equally vigorous, the color of Baltimore Belle being pale blush, fading to nearly white as the flower becomes aged, while that of the Queen of the Prairies is somewhat larger, of deeper color and quite double.

A third variety of the class in question is Gem of the Prairies, a later introduction than those above mentioned, the flowers of which are rosy-red, sometimes marked with white, and are also fragrant, the last being a qualification not noticed in the other two sorts.

In common with all climbing roses, these varieties should not be pruned very closely at any time, the pruning being confined to the removal of superfluous shoots and all dead wood, and simply shortening the rest of the growth after the manner practiced with raspberry canes. Of course the general treatment should be liberal if the best results are expected, the ground being well prepared by deep digging and plenty of good manure, and after the plants are established a liberal top dressing of manure in spring will be beneficial.

As an example of what may be had from the use of Prairie roses, I have a vivid recollection of the fence of an old garden about two hundred feet long, which was entirely covered with a mass of the varieties noted above, and at about midsummer this fence was truly a thing of beauty, being almost covered with innumerable blossoms over its thicket of growth.

The so-called "Evergreen rose" is also a useful sort for trellis work, and probably the best variety of this section is Felicite Perpetual, this having rather small, dark green leaves and medium sized semi-double white flowers. The foliage of this variety is very bright and glossy and seldom seems to be attacked by insects.

The Cherokee rose is also a very handsome climber, but is probably not reliably hardy north of Washington, though well worthy of a trial in any suitable latitude. The foliage of the Cherokee rose is also glossy and dark, but much larger than that of the Evergreen rose, and the flowers also larger, pure white and single, the buds reminding one of small Niphotos buds just before they open.

As far north as Philadelphia Marechal Niel and Gloire de Dijon are sometimes hardy, and may be included among the climbers for outdoor use, but both are liable to severe injury during hard winters, and therefore, cannot be entirely depended upon, but where they can have some protection during extreme weather, these two most beautiful varieties produce a succession of lovely flowers through quite a long period—in fact, during very mild seasons I have seen good flowers from an outdoor Marechal Niel as late as the early part of December.—W. H. Taplin, in *American Gardening*.

See Chicago Sewing Machine Co.'s advertisement in next week's issue.

Spinning Mites on Red Cedar.

EDITOR KANSAS FARMER:—My cedars are affected with something that looks like cobweb, appearing first on the tips and then going all over the boughs, until they present a dull, mouldy appearance. Small black insects are netted close in the center of the web. Please advise through the Horticultural department of the "Old Reliable." F. P. F.

Referred to Prof. Popenoe, who replies as follows:

"The insect which is at work on the cedars, as described by F. P. F., is, no doubt, a spinning mite closely related to, if not identical with the so-called red spider of the greenhouse. These spinning mites are much more troublesome in dry weather—indeed, their work is checked, if not stopped entirely, by a few good showers, and in seasons of ordinary moisture they are not sufficiently numerous to be noticed.

"The proper application, then, is water sprayed upon the tree, the application made in such a manner as to drench the insects themselves, and repeated until they are no longer seen at work. While this treatment is applicable in case the protection of a few choice or small trees is the end desired, it is doubtful if it should be considered of general utility, since the trees now attacked will probably show little difference in next year's growth, whether they are treated or not."

Thayer's Berry Bulletin for September.

Perfect the growth and maturity of your berry plants with continued good care in September.

In early spring, every leaf and bud and blossom inspires us to new efforts. In summer the ripening fruit showers its bounty upon us, hope is renewed, and our table is graced with these aids to health and comfort; but with the lessening product and waning inspiration too often comes entire neglect.

At this time the plant is exhausted with the double duty of producing new plants and maturing both fruit and seeds. At this time the old canes and wood should be carefully removed, the new growth thinned out, retaining only the strong, healthy canes. This treatment gives more light, a better circulation of air and guards against insect pests and fungous diseases.

New plants of the black raspberry are started this month by covering the tips with moist soil, two or three inches deep and allowing them to remain until spring.

Plants from the currant and gooseberry may now be made by selecting strong, new growth, cutting in pieces six or eight inches long and setting at once in moist, rich dirt, leaving one or two quds above the ground. Cuttings may also be buried in sand, away from frost, and set in early spring.

In blackcaps the Ohio, Palmer, Progress and Older for early, and Nemeha and Gregg for late. Shafer's Colossal (purple) for quality and productiveness is unexcelled, for family use. Marlboro and Cuthbert for reds are the best well-tested varieties. The London, a grand berry on the grounds of the originator, now being introduced, promises to supersede all others.

The value of a berry often depends on location and cultivation. Many new varieties, made promising by extra cultivation, are of no value with ordinary care, hence the large list of high-priced novelties that come and go in a single season. As poor berries improve with high culture, so good deteriorate with neglect. Best berries are produced only by best culture.—M. A. Thayer.

Spraying grape vines with arsenite of lead, or a weak solution of Paris green, to kill the leaf-rollers and other grape insects, will be in order at the Oklahoma Experiment Station as soon as the grapes are gathered.

Homes for the Homeless.

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

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

Get up a Club for KANSAS FARMER.

"For Years,"

Says CARRIE E. STOCKWELL, of Chesterfield, N. H., "I was afflicted with an extremely severe pain in the lower part of the chest. The feeling was as if a ton



weight was laid on a spot the size of my hand. During the attacks, the perspiration would stand in drops on my face, and it was agony for me to make sufficient effort even to whisper. They came suddenly, at any hour of the day or night, lasting from

thirty minutes to half a day, leaving as suddenly; but, for several days after, I was quite prostrated and sore. Sometimes the attacks were almost daily, then less frequent. After about four years of this suffering, I was taken down with bilious typhoid fever, and when I began to recover, I had the worst attack of my old trouble I ever experienced. At the first of the fever, my mother gave me Ayer's Pills, my doctor recommending them as being better than anything he could prepare. I continued taking these Pills, and so great was the benefit derived that during nearly thirty years I have had but one attack of my former trouble, which yielded readily to the same remedy."

AYER'S PILLS

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

FITS CURED

(From U. S. Journal of Medicine.)

Prof. W. H. Peeke, who makes a specialty of Epilepsy, has without doubt treated and cured more cases than any living Physician; his success is astonishing. We have heard of cases of 20 years' standing cured by him. He publishes a valuable work on this disease which he sends with a large bottle of his absolute cure, free to any sufferer who may send their P. O. and Express address. We advise anyone wishing a cure to address, Prof. W. H. PEEKE, F. D., 4 Cedar St., New York.

AGENTS WANTED & 'STRIKING LIFE'

Laborers' side of the labor question, by John D. Swinton, the pillar of light of labor movement. Send 10c. for agents' outfit. Quick, large profits. Address NATIONAL PUBLISHING CO., Chicago.

FARMERS ? ARE UNEASY ?

Send a postal to the Bureau of Immigration, Spokane, Wash., for special information upon a rare offer made you by that great and naturally rich state.

Gearhart's Family Knitter

Knits a stocking heel and toe in ten minutes. Knits everything required in the household from homespun or factory, wool or cotton yarns. Most practical knitter on the market. A child can operate it. Strong, Durable, Simple, Rapid. Satisfaction guaranteed. Agents wanted. For particulars and sample work, address J. E. GEARHART, Clearfield, Pa.

MY WIFE CANNOT SEE HOW YOU DO IT AND PAY FREIGHT.

Buy our 2 drawer walnut or oak Em-proved High Arm Singer sewing machine finely finished, nickel plated, adapted to light and heavy work; guaranteed for 10 years; with Automatic Bobbin Winder, Self-Threading Cylinder Shuttle, Self-Setting Needle and a complete set of Steel Attachments; shipped anywhere on 30 Day's Trial. No money required in advance. 75,000 now in use. World's Fair Medal awarded machines and attachments. Buy from factory and save dealer's and agent's profits. FREE catalogue, testimonials and glimpses of the World's Fair. OXFORD MFG. CO. 342 Wabash Ave. CHICAGO, ILL.

"The Great Leak On The Farm"

is a valuable pamphlet relating to corn fodder, and also descriptive of that wonderful machine, the

"Keystone" Corn Husker and Fodder Cutter, combined.

It is sent free.

KEYSTONE MFG. CO., Sterling, Ill.

(Mention this paper.)

In the Dairy.

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

To Farmers and Dairymen Throughout the State of Kansas--Greeting:

It has been demonstrated in the last few years that Kansas is entitled to take rank as one of the leading dairy States in the Union, and that dairy farms and creameries have increased to such an extent that thousands of farmers are dependent upon them for their livelihood, and furthermore, that the margin of profits under protective laws would be more certain than from any other branch of agricultural industry.

At the last meeting of the Kansas Dairymen's Association, in Topeka, a committee was appointed to look after coming legislation to the end that the dairy industry be properly guarded by legal measures. The insidious enemy that is invading the market for pure, honest butter is oleomargarine. It is a counterfeit and holds its place by fraud and deception, relying for success on the most subtle methods of bringing it before the consumer.

It is commonly agreed among Kansas dairymen that there should be a law passed at the next session of the Legislature similar to those now in vogue in Massachusetts, Connecticut and Iowa, which forbid the manufacture or sale of any imitation of pure butter or cheese; this means that oleo and similar compounds must not take on the yellow color of butter with which to add to its power of victimizing the public.

The object of this appeal is to awaken thought concerning the necessity of vigilant action on the part of dairymen, cheese factory and creamery owners, among all parties, regarding candidates for the higher State offices and those for the next Legislature. These law-makers and arbiters should be above suspicion in relation to their loyalty to dairy interests in this great commonwealth.

The enemies of this industry have, by open lobbying, conspired against the material interests of their own State and have resorted to nefarious methods of advertising and putting before unsuspecting people this villainous production. We hope to make of every Kansas dairyman an ardent co-worker in this great interest, and to that end there must be resolute, earnest labor during the next few months among us all. Be sure that the candidates named are all right on this question of future legislation, as by them must our rights be defended against the corrupt and unscrupulous oleomargarine combination. The committee to whose keeping this important work was assigned will use every honest endeavor to secure such a law as will be satisfactory to their constituents.

A. E. JONES,
J. L. HOFFMAN,
PETER HEIL,
Legislative Committee.

Topeka, August 31, 1894.

Protecting the Public Health.

When a man's stomach is "gone," or seriously injured, by abuse or unhealthful food, every one believes that he could not be in a more pitiable condition if he had heart disease or "quick" consumption. In the first case he would not be in immediate danger of death, but always suffering; and in the second case he would be likely to die at any moment, though not constantly suffering acute pain.

In Paris, France, ever since 1881 there has been a special branch of the police department whose duty it is to inspect and control the quality, character and condition of food products sold to the masses of the people. The office of this "special" health detective department is located in the prefecture, or central police station. In seventeen rooms there is a large corps of chemists, bacteriologists and microscopists. They are furnished with a splendid equipment of instruments and apparatus; in short, everything known to modern science.

Here are examined by the unerring eye and infallible rules of science,

backed by keen and trained intellects, the meat, bread, butter, milk, coffee, tea, confectioneries, canned goods, wines, etc., sold to the people.

If a householder or head of a family buys some article of food—no matter what it is—and below the standard in quality, or is suspected of adulteration, the article or substance may be taken to this special department; the name and address of the party from whom the articles were purchased; the name and address of the party making the complaint is carefully recorded, and then the articles or substances are submitted to the experts for examination.

Under such a system there is no such thing as deluding a customer into the purchase of butterine under the belief that it is creamery butter, without fear of severe punishment. Watered whole milk, diluted blue skimmed milk that has been liberally "doctored; the milk from diseased cows is as easily detected as a mistake in the addition of a column of ten figures. And woe unto the man who is found guilty of adulteration or of selling adulterated articles! He is fined heavily or imprisoned or both. Paris, with its 2,300,000 people, uses an enormous amount of milk and butter. This special police health department, by its power to seize and examine milk at any time, anywhere within the corporate limits, has saved the lives or protected the health of thousands of children who have grown up to a useful manhood and womanhood to bless the world. By the aid of science, intelligence and law the production of pure cheese and butter has been promoted, and the stomachs and digestion (and consequently the general health) of thousands have been saved from the ravages of corrupting butter substitutes.

The officers have authority to go into grocery stores, butter stores, milk depots, bakeries, restaurants—anywhere that butter and milk is sold, or butter and milk is used largely in the products of substances that form a large part of the general diet, such as bread, pastries, confections, etc.—and take samples for inspection and analysis. The amount of the adulterations of articles of most common use is simply appalling, and but for the vigilance, skill and hard work of this department for ten years it would soon have become impossible for the lower and middle classes to get any pure, wholesome milk or butter or cheese at all. We have confined ourself to milk and butter and cheese. All the other articles and substances mentioned in the opening of the article, and many others, are subject to an equally rigid supervision.

The writer has lived in a number of the large cities of the United States, and has frequently had occasion, as a member of the staff of daily metropolitan newspapers, to investigate cases of food adulteration, especially of milk, butter and cheese. It is quite evident to the writer that just such a department as this (varying in size according to the population of the city) is needed in all cities of over 50,000 inhabitants; and would be a very great benefit to the public health. If it protected us from nothing else than adulterated milk, butter and cheese, it would do sufficient good to warrant its establishment and maintenance.—*National Dairyman.*

Dairy Notes.

It is earnestly enjoined upon every newspaper in the State that is favorable to honest dairying, that the appeal from the Legislative committee in this issue of the KANSAS FARMER be given a prominent place in its columns.

Dr. James A. Law, the distinguished veterinarian, thinks that no one suffering with consumption should be allowed to milk cows or work in a dairy. In the matter of tuberculosis, cows are often more sinned against than sinning.

Corn fodder and corn stover are quite commonly used as synonymous terms and interchangeable. Their exact import should be clearly understood. Corn fodder is the name properly given to the corn plant when gathered, including the grain, and corn stover applies only to the stalks when cut and secured for feed after the ears have been removed. These are not technical

Do not be deceived.—The following brands of White Lead are still made by the "Old Dutch" process of slow corrosion. They are standard, and always

Strictly Pure White Lead

"Southern," "Red Seal," "Collier."

The recommendation of any of them to you by your merchant is an evidence of his reliability, as he can sell you ready-mixed paints and bogus White Lead and make a larger profit. Many short-sighted dealers do so.

FOR COLORS.—National Lead Co.'s Pure White Lead Tinting Colors, a one-pound can to a 25-pound keg of Lead, and mix your own paints. Saves time and annoyance in matching shades, and insures the best paint that it is possible to put on wood.

Send us a postal card and get our book on paints and color-card, free; it will probably save you a good many dollars.

St. Louis Branch,
Clark Avenue and Tenth Street, St. Louis.

NATIONAL LEAD CO.

terms; they are only common names, and should be universally adopted.

N. B. Franklin, the experienced dairyman, hits the nail on the head in a recent communication to the *Jersey Bulletin*: "With all the aids so easily at command for weighing and testing milk, there is absolutely no excuse for any Jersey breeder not knowing precisely the capacity of each cow in his herd. And knowing their several capacities, the man who hesitates about which to keep and which to discard has no business breeding Jerseys. He is out of his place, be he ever so good or great elsewhere. A cow that has been a good cow, but is by some accident injured as a milker, may be kept as a breeder, on account of her good pedigree, but a poor performer, one that never has paid for her feed at the pail, is not a cow to breed from, be her pedigree ever so fine. That is, if you wish to improve your herd."

Milk amounts to something. It is stated upon excellent authority that if accurate means were at hand to secure perfect statistics the value of the milk product in this country would likely prove to be above a billion dollars annually, more than twice the value of the wheat crop of the entire country, and exceeding the entire banking capital of the United States, which is about \$685,000,000. The entire product of silver bullion is valued annually at about \$45,000,000; the value of pig iron is less than \$75,000,000 per year; the value of the wool clip is estimated at \$50,000,000, and the gold production of the entire country reaches only \$31,000,000 per year. The grand total of these four interests, aggregating \$201,000,000 annually, represents less than one-fourth of the value of the dairy products of the country.

The Poultry Yard

How He Raises Eight Hundred Chicks.

I am somewhat interested in raising chickens artificially, and have been bothered more or less with first one thing and then another until I have got where I think it would be hard to find any business that required more patience and perseverance. As I only raise from 400 to 800 chicks in a year, and those in broods of 100 to 150, my chief bother has been to get a brooder that is economical and safe. I am now using something that I think is out of the ordinary for a brooder. It is simple, cheap, durable, and, with care, successful. It is on the principle of a kerosene stove.

I make a box three feet long by two feet six inches wide and about ten inches deep. I cut off six inches of the width with a partition six inches high and wire over this with common screening. In this partition I place a five-inch elbow of common stovepipe, and under that a lamp of the diamond pattern, and on the front I cut a hole nine inches wide by six inches high for the chicks to go in and out.

I have a walk through my brooder house, ten inches below the brooders, in notches of which I place my lamps, two together. The heat of the lamp draws fresh air along with the fumes of the light through the five-inch elbow, and the space around the elbow is

not covered, so the fresh air from the walk is drawn in that way also.

It was a long time before I would send the fumes through the brooder, but I came to it, and my chicks will. I raise more now than I ever did. The fumes do not kill them when mixed with fresh air.—A. Johnson, Jr., in *Poultry Keeper*.

Poultry Notes.

Better not spread ashes over the chicken house floor; it may cause the hens to have sore feet.

Some give the flesh of the guinea the preference above that of the duck. It would be more popular if it were known that it is so palatable.

Every cold snap interferes with the egg supply. At such times make the house a little warmer and sunnier, and add to the food that which is a little stimulating.

The early chicks will make the early layers when eggs are high next spring. In good warm quarters they will begin business in midwinter and keep it up, if properly fed.

Ship only sound, healthy, well fattened fowls. Put in whole grains only for feed, as meal will sour. Do not overcrowd, as the excessive heat will cause feverishness and sickness.

There is better health among roving fowls because they get the food which is best for digestion, and get the necessary grit to help the gizzard do its work. We should make this a study and profit by it.

Every year the people are learning more and more of the value of eggs as an article of diet, and are healthier in consequence; but production is not keeping pace with consumption in the egg business.

In summer, when eggs are cheap, gather daily, wipe clean, store in a cool, dry place and then make a special effort to find private customers. When they find they can trust you they will readily pay a little more than the market price.

There is not anything much better than kerosene oil upon the perches. Sprinkle it about freely with a whisk-broom. It penetrates every crevice, and the fumes will enter the feathers of the fowls at night and protect them, to a great extent, from insect enemies.

Slake half a bushel of good fresh lime in boiling water, keeping it covered during the process. Strain it and add a peck of salt dissolved in water; three pounds of ground rice boiled to a thin paste; half pound powdered Spanish whiting, and a pound of clear glue, dissolved in warm water. Mix these well together and let the mixture stand for several days. Keep the wash thus prepared in kettle or portable furnace and put on as hot as possible. This makes a very durable wash for either outside or inside work. If used for outside work and you prefer some color to pure white, add any coloring you desire. But what is neater than white?

There are oceans of advice published about raising chickens. After it is all summed up it amounts to just this: There are really only two requisites for success—first, you must be prepared to take care of them; second, you must take care of them. G. D. BAKER.

The Family Doctor.

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

Good Patients Make Good Physicians.

Walking along the street the other day I overheard a portion of a conversation that was both amusing and exasperating. A fourth-rate lawyer seemed to be enlightening a hack-driver on the qualities of medical men he knew, and just as I was passing out of ear-shot of his voice he said: "I don't know what is the matter with Dr. D. He has been my family doctor a long time, but when I sent for him the other night he would not come." I wanted to go back and tell him the probable reason, and yet, it being none of my business, I went my way, and as I went up the street my thoughts ran back fifteen years to the summer I began practice in this city. Walking up the same street one July day that summer, I met and was introduced to that same seedy, garrulous limb of the law, who asked me all kinds of pertinent and impertinent questions about my professional and personal history. The next day he came to me and said he wanted me for his family physician, saying he did not think Dr. D. knew his business. I said: "How long have you had the same physician?" He said: "Eight or nine years." I said: "I suppose you have paid him quite a sum of money in that time," and he replied: "Well, no, not exactly. The fact is we have never settled up yet. The account has just run along and I don't know how much it is." I said: "You are a stranger to me, but I cannot accept the appointment of family physician to any family that has not paid its doctor for eight or nine years. Good morning!" And I left him, while poor old Dr. D., who never collected his bills, but waited for people to be honorable with him, was sold out by the Sheriff long ago, and I presume if I should ask my would-be patron about it he would now tell me he had not settled with his doctor for twenty-three or twenty-four years. I do not wonder that the old doctor, who is just creeping into his grave in a very shabby suit of old clothes, at the expense of his neighbors or the public charge, finally found a night in which he concluded he could not or would not go to Mr. A.

But from now on, while Mr. A. wags a blistering pettifogger's tongue, the old doctor will get "Hail Columbia" for his meanness. After twenty-three years of unrequited toil and responsibility, he will get a hot blast every time the old lawyer sees him on the street or hears his name mentioned. Who is to blame? Both! The lawyer is to blame for not paying his bills and the doctor is to blame for not making him pay, or holding him up to public scorn for not doing it, just as he is now being held up to scorn for not responding to a night call after a score of years of unpaid service in that family.

A good patient can always command a good physician. "Like master, like servant," is a trite old adage, and applicable to-day. If you are generous and just with your physician he will be generous and just with you. If you pinch and squeeze and higgie and haggle with him, and complain that his bills are too large and that his service was not worth what he charged for it, that Dr. So-and-so only charges half as much for a visit, you will be luckier than most men if you do not, at least thereafter, get grudging, unwilling service from your physician. To a large degree the patient determines the character of the medical service he receives. As I look out of my office window, I see passing up the opposite sidewalk to his place of business a gentleman who can ring my door bell or telephone, no matter what I am doing, whether I am sick or well, whether I am tired and jaded and sleepy, or getting ready for church or picnic, I make haste to learn what he wants. He can call me from my dinner, from church or theater, from my bed at midnight, in the wildest storm that ever swept through our streets, and I will go to him with alacrity and zeal, and do my utmost for him and wish I could do more. To command me as against the world, he has but to suggest to me that his baby is sick, or his wife is ailing, or he himself needs advice. And why? Because, to start with, he is a generous, whole-souled man himself, and he treats his physician as a man of consequence, as a gentleman, as a scholar, a friend and adviser. He shows by his words and actions that he appreciates a physician's efforts and solicitude for the family placed in his professional care. When I first came to the town, he made inquiry as to my qualifications and professional standing, as any intelligent man should do who has a family which may need a skillful physician any day, and that unfortunate day soon came. His only child, a beautiful girl, fell dangerously ill. But he knew every physician in town; he had investigated the skill and standing of

all of them. I was called; the case was critical from the start. He said: "Doctor, the only thing I require of you is to save my baby. Spare no expense or time, and if you want counsel, call it, but save my baby." For three days the case was critical; counsel was called, and he said he could do no better. On the third day the father walked into my office and said: "Do you think you can save the baby?" "Yes," I said. "Thank God for that!" he said. And then in a burst of emotion he said: "Then I hold you responsible for that child. Go and see it as often as you like; twenty times a day if need be. Whenever you want \$2 just walk up and see that baby." I left everything that was not serious and remained with the patient most of the time for two more days and nights. Then the danger disappeared, and the child is a most beautiful young lady to-day, in whom, save only her father, I have most interest of any man on earth. When death furled his black plinions and quit that home, that man, with a radiant face, came to the office and called for the bill, and gave me a check for a larger sum, saying: "There is a little more for good luck. We owe you a debt that money cannot pay."

Yonder goes another man, for whom, at various times, I have left my bed, my dinner, my church or theater, my books and friends, and for whom I have rendered some of the best service I ever rendered to any mortal. In his behalf I have fought some of the hardest battles of my life against that foe that all men fear, and yet I recall many instances when my bills were disputed, my services berated, my collector bullied and insulted, and invidious and odious comparisons made between my charges and those of some of the laziest, lowest and most inefficient medical men in the town, whom he would not have in his house if they would go for nothing. But I never go to him gladly. I pity his family, who seem to be nice and well-disposed people. They like me and I like them, and so I go when called, but were the head of that family alone, I would never darken his door. He would call in vain for me.

Just behind that man goes another one, who thinks it the essence of smartness to tell some story, the drift and point of which is to belittle and disparage the doctor. All the mean and contemptible stories he has ever heard about any of the profession he has treasured up like well-committed texts in Scripture, and when he comes in sight of any medical man, gentleman or quack, he begins firing off his mitrailleuse of a mouth with the volubility of a machine gun, and he keeps up his squibs and quips and inuendoes, his puns and jibes on the profession until that doctor goes out of his hearing. He is one of those self-righteous wind-bags who, in his own conceit, knows more about medicine and surgery than the ablest man in the profession. I listened patiently to his jibes for years and went on doing the very best I could for him and his, knowing, alas, too well that we must meet many little souls hunting for themselves on this great planet. But the fatal day came at last. His wife turned her ankle out of place, and after he had prescribed just the wrong thing for it, as usual, and it grew worse and worse, he called me. It was then too late to get very prompt or very satisfactory results, and a solid cast had to be put on the joint to make it rigid for a few weeks. When I advised one thing he prescribed another and insisted that I should apply his dressing. Knowing full well as I did, that should I apply a second or third-rate dressing as he wanted me to, and it should happen, as it often does, that it should turn out badly and prove an injury instead of a benefit, this same man would be swift and sure in denunciation of the plan and eager to hold me responsible for the failure of his own method, I declined to apply any dressing except the one I knew was best. Then he broke faith with the man who only wished to do him the very highest grade of service and went to a professional rival and did me what injury he could, as he had done all doctors before me and will do to all after me, while he unworthily walks the earth.

Such men make bad doctors. Either the doctor must submit to their ignorant dictation and father their stupid prescriptions or break with them and be slandered for their honest conduct in the matter. How mean and mercenary and servile, how cringing and cowardly must a man become who, for a little money, permits himself to play the puppet for these wise ignoramuses? But intelligent doctors, like all other intelligent men, are very prone to resent such indignities and to stand for their right at any cost to their pocket or fame. Large-hearted and competent physicians will have little to do with stingy, niggardly patrons, and if they serve them at all, serve them grudgingly. You can make your doctor fight for you with all the zeal and energy of a gladiator and disregard his own affairs and comfort for you and yours, if you treat him rightly. But treat him badly, and if he does not let you and yours suffer or die, it will be because he is a better man than you, and not full of just resentment.

Get up a club for the KANSAS FARMER.

Answers to Correspondents.

(NUMBER 33.)

J. N. C., Creswell, Kas.—Your trouble is lumbago, and the primary cause of lumbago seems to be internal hemorrhoids. When they are cleared out by a suitable operation and the contraction of the rectal sphincters taken out, the lumbago, like the wicked, will cease from troubling and the back will be at rest.

Publishers' Paragraphs.

One of the letters of recommendation which J. E. Gearhart, of Clearfield, Pa., sends us concerning his knitting machine is as follows: "Mrs. Henry Rosensteel, of South Bend, Pa., says: 'As I have fully tested my knitting machine I will now write and tell you that you could not get it back for \$25 with the freight added.'" Mr. Gearhart has made the announcement of the value of his machine for several years past in KANSAS FARMER and many of our readers have become familiar with his name.

Among the many staple and useful things manufactured and placed on the market, so that the people may the better inspect and select such as meet their immediate needs, none seem to be more popular than the goods sent out by the J. B. Sickles Saddlery Company, of St. Louis, Mo. We are credibly informed that, notwithstanding the panic times, their trade on the "Sickle's Brand Harness" is very good and that a major portion of their increased trade comes from parties who have used their goods, which tends to confirm one in the belief that the Sickles brand of harness has superior merits and is giving good satisfaction. Write them.

Kansas City Stock Markets.

Our correspondent at Kansas City writes under date of August 30:

"Our receipts this week 50,100 cattle, 35,400 hogs, 8,600 sheep, against 47,000 cattle, 49,000 hogs and 6,500 sheep the previous week; and 34,600 cattle, 48,100 hogs and 6,400 sheep the same week a year ago.

"Receipts to-day, 8,572 cattle, 6,000 hogs, 578 sheep and 881 calves.

"Our cattle receipts the past week the heaviest of any week this year. With the heavy receipts there has been a small proportion of good fat ripe native cattle, and when here sell considerably better, about 25 to 35 cents higher than one week ago, the best Colorados selling about like a week ago; good medium Colorados below 4 cents are selling a little lower; Texas steers and cows but little change, while half fat Western and natives 10 to 15 cents lower; but little change in native cows, bulls and veal calves; best style feeders and stockers steady, common ones some lower.

"Hog receipts 14,000 less than previous week and prices about 25 cents higher. Tops to-day \$5.92½ against \$5.65 last week.

"Fat native sheep about steady, common ones very dull.

"We have had no rain for six weeks and still dry and warm, needing rain badly for fall pasture and stock water."

A stimulant is often needed to nourish and strengthen the roots and to keep the hair a natural color. Hall's Hair Renewer is the best tonic for the hair.

Washburn College,

Located at Topeka, Kansas, admits both sexes. Facilities excellent. Expenses reasonable. Fall term opens September 12, 1894.

M. A. Pond's Business College,

601 Topeka avenue, Topeka, will re-open September 17, at 9 a. m. We guarantee the lowest rates of tuition, the best teaching talent, the best course of instruction in the city or State. Our text-books received the award at the World's Fair. \$20 saved on tuition. Write for particulars.

Bethany College, Lindsborg, Kas.

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DR. C. A. SWENSSON,
Lindsborg, Kas.

Excursion to Pittsburgh.

The Baltimore & Ohio Southwestern railroad will sell excursion tickets, September 5 to 10, to Pittsburgh, Pa., account G. A. R. National Encampment, at special low rates, good returning until September 25. Best line from St. Louis, Springfield, Louisville or Cincinnati to Pittsburgh.

For rates or further information apply to any agent of the B. & O. S. W. railroad, or address A. C. Goodrich, Western Passenger Agent, P. O. Box 264, Kansas City, Mo.

WORLD'S CARNIVAL CITY.

St. Louis Offers a Continuous List of Attractions—Her Unrivalled Fall Festivities Commence September 5, and Hold Full Sway Until October 20, 1894.

The successful series of carnival seasons inaugurated by the citizens of St. Louis some fifteen years ago, continue as ever for the season of 1894, and from the morning of September 5 to the evening of October 20 the city will be one scene of gayety and splendor. Many new, novel and unique features have been added to the long list of standing attractions, and from every point of view this reign of high carnival will outshine all previous attempts.

THE ST. LOUIS EXPOSITION, the only one of its kind in the United States that has lived year after year with flattering results, will throw open its doors to the public September 5, and remain in a state of activity until the evening of October 20. Sousa's Grand Concert Band has been re-engaged for the season and will give the usual number of concerts during the afternoons and evenings. The entire Missouri exhibit which appeared at the World's Fair will be transplanted here, and find space in the commodious building.

The exhibitors, both foreign and home, will present new ideas in displaying their goods, and, in addition to other features, a full complement of specialty artists will perform on the stage of the Music hall.

THE GREAT ST. LOUIS FAIR, which will open Monday, October 1, and continue during the week, promises to afford many pleasant surprises. The "Midway Pleasance" feature at the World's Fair will be reproduced in full, and the people of the West and Southwest given an opportunity to see in real life the inhabitants of every civilized and uncivilized country on the face of the globe.

The "Streets of Cairo," "Old Vienna," "Moorish Palace," "Hagenbachs," "Ferris Wheel," etc., will be faithfully portrayed.

His Royal Highness, the MIGHTY VIKING PRINCE and retinue, will enter the gates of the city on the evening of October 2, and parade through the principal thoroughfares as of old. Visitors to the city will arrive at the handsome new Union station, the largest railway edifice in the world, and the most perfect in every appointment. Great inducements to visit the Carnival City are offered via the MISSOURI PACIFIC RAILWAY AND IRON MOUNTAIN ROUTE, from all points on the system.

For a complete program, giving each week's attractions in detail, address any agent of the company, or H. C. Townsend, General Passenger Agent, St. Louis, Mo.

NOW FOR PITTSBURG.

28th Annual Encampment G. A. R. Low Rates via B. & O.

For the national encampment of the G. A. R. at Pittsburgh, September 8 to 15, and the meeting of the Naval Veterans Association, September 8, the B. & O. R. R. Co. will sell excursion tickets to Pittsburgh from stations on its line, September 5 to 10, valid for return passage until September 25 inclusive. The rate for the round trip from Chicago will be \$10, and correspondingly low rates for other stations. Tickets will also be placed on sale at all the principal offices throughout the West and Northwest.

No matter where you start from ask for tickets via Historic B. & O.

For information in detail write L. S. Allen, Asst. G. P. A., B. & O., Grand Central Station, Chicago, Ill.

Low Rate Home-Seekers' and Harvest Excursions.

On September 11, 25 and October 9 the MISSOURI PACIFIC RAILWAY AND IRON MOUNTAIN ROUTE will sell tickets at half rate (plus two dollars) to the following territory: All points in Arkansas, Texas, southwest Missouri, Kansas, Nebraska, Colorado, Wyoming, Utah, Idaho (east of and including Nampa), Montana, Mexico (except points on the Southern Pacific and Atlantic Pacific railways), Tennessee (except Memphis), Mississippi, Alabama, Louisiana (except New Orleans), Indian Territory and Oklahoma.

Tickets will be good for return twenty days from date of sale, with privilege of stopping off either going or returning. For further information, descriptive pamphlets of the different States, map folders, etc., call on or address nearest coupon ticket agent or H. C. TOWNSEND, General Passenger Agent, St. Louis, Mo.

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

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.

LAME PIGS.—I have some pigs that get lame in their hind parts and in about a week their legs swell and they get worse very fast and at last lose all use of their hind parts and in about a day they die.

Answer.—Your pigs may be rheumatic from sleeping on damp ground; or, if you have cholera among your hogs, very likely that is what is affecting them.

STALLION AILING.—About six weeks ago I bought a four-year-old Percheron stallion that had been driven about two hundred miles.

Answer.—The horse is suffering slightly from indigestion, and he may also be troubled with stone in the bladder.

CHRONIC GARGET.—I have a Jersey cow that dropped a calf in April, and every few days one-quarter of her udder becomes very much swollen and the milk is of an orange color, and thick.

Answer.—Your cow has become subject to frequent attacks of garget and a permanent cure is very doubtful.

The cause which produces sick headache is more promptly removed by Ayer's Pills than by any other medicine.

Annual Meeting Swine Breeders.

The regular annual meeting of the Nebraska Swine Breeders will be held on Wednesday evening, September 12, 1894, at the usual place of meeting on the State fair grounds.

MARKET REPORTS.

LIVE STOCK MARKETS.

Kansas City, September 3, 1894. CATTLE—Receipts, 5,811 cattle; 1,041 calves. Dressed beef and shipping steers, \$3 10@4 15;

Chicago, September 3, 1894. CATTLE—Receipts, 23,000. Best steady, others weak. Cows in big supply. Beef steers, \$3 00 @5 85; stockers and feeders, \$1 50@3 00; bulls, \$1 40@2 00; cows, \$1 00@2 75.

GRAIN AND PRODUCE MARKETS.

Chicago, September 5, 1894. The following table shows the range of prices for active "futures" in the Chicago speculative market for the speculative grades of the commodities.

Table with 5 columns: Commodity, High, Low, Closed Aug. 27, Closed Sept. 4. Rows include WHEAT, CORN, OATS, PORK, LARD, S. RIBS.

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The Kansas City Stock Yards. Are the most complete and commodious in the West and the second largest in the world. Higher prices are realized here than further east.

Table with 5 columns: Cattle and calves, Hogs, Sheep, Horses and mules, Cows. Rows include Official Receipts, Slaughtered in Kansas City, Sold to feeders, Sold to shippers, Total sold in Kansas City.

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Send us *two subscriptions* and *two dollars* (\$2) and we will send you *three Artfolios*. And for each dollar subscription, after the first one, we will send you *two numbers* of the Artfolio. A little work at odd times, in any neighborhood, will soon entitle one to the whole series *FREE*. There are twenty (20) numbers in all.

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PROPOSED AMENDMENT TO THE CONSTITUTION.

Substitute for Senate Joint Resolutions Nos. 1 and 2.

Be it resolved by the Legislature of the State of Kansas: two-thirds of the members elected to each house thereof, concurring therein.

SECTION 1. The following proposition to amend the constitution of the State of Kansas is hereby submitted to the qualified electors of the State for their approval, or rejection, namely: That section one, article five of the constitution of the State of Kansas be amended so that the same shall read as follows: "Section 1. Every person of the age of 21 years and upwards belonging to the following classes, who shall have resided in Kansas six months next preceding any election, and in the township or ward in which she or he offers to vote, at least thirty days next preceding such election shall be deemed a qualified elector. 1st: citizens of the United States. 2d: persons of foreign birth who have declared their intentions to become citizens of the United States conformable to the laws of the United States on the subject of naturalization."

SEC. 2. This proposition shall be submitted to the electors of this State at the general election of the Representatives to the Legislature in the year eighteen hundred and ninety-four, for their approval, or rejection; those voting in favor of this proposition shall have written or printed on their ballots "For the suffrage amendment to the constitution;" those voting against the said proposition shall have written or printed on their ballots "Against the suffrage amendment to the constitution;" said ballots shall be received and such vote taken, counted, canvassed and returns made thereof, in the same manner and in all respects as provided for by law; as in the case of the election of Representatives to the Legislature.

SEC. 3. This resolution shall take effect and be in force from and after its publication in the statute book.

I hereby certify that the above resolution originated in the Senate January 16, 1893, and passed that body February 8, 1893.

FERRY DANIELS, President of Senate.
W. L. BROWN, Secretary of Senate.

Passed the House March 1, 1893.
GEO. L. DOUGLASS, Speaker of House.
FRANK L. BROWN, Chief Clerk of House.

Approved March 6, 1893, 3:50 p. m.
L. D. LEWELLING, Governor.

STATE OF KANSAS,
OFFICE OF SECRETARY OF STATE,
I. R. S. OSBORN, Secretary of State of the State of Kansas, do hereby certify that the foregoing is a true and correct copy of the original enrolled resolution now on file in my office, and that the same took effect by publication in the statute book May 18, 1893.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed my official seal.
Done at Topeka, Kansas, this 25th day of July, A. D. 1894.
R. S. OSBORN, Secretary of State.

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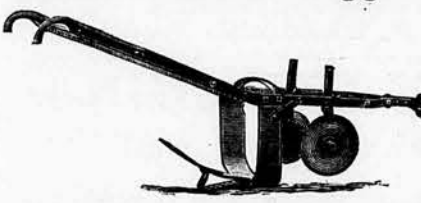
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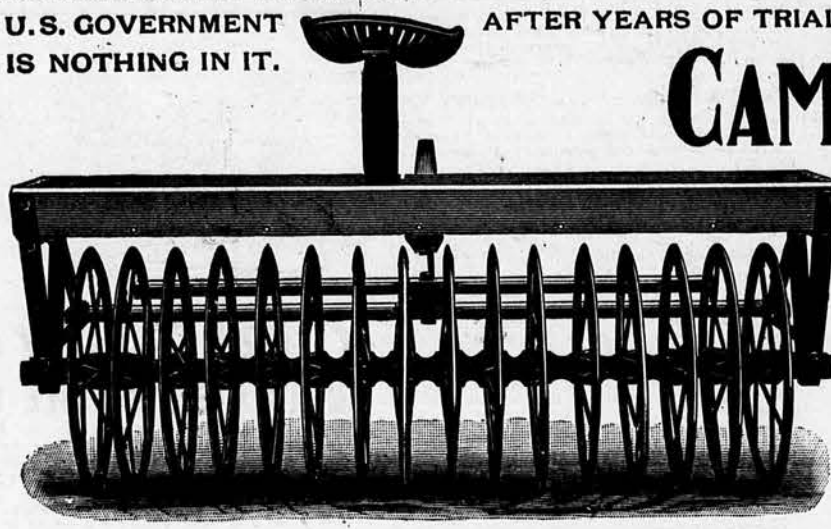
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