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BREEDERS' DIRECTORY.

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(Breeder's Directory continued on page 18.)

Agricultural Matters.

ALFALFA, OR LUERN.

(*Medicago sativa* L.)

[From Farmers' Bulletin No. 31, United States Department of Agriculture.]

PREPARATION OF THE SOIL.

A clean piece of ground should be selected, and it should be thoroughly plowed and subsoiled. If the farmer has no subsoiling plow, the best substitute is two turning plows, the one following in the furrow made by the other. The best results from this crop are obtained after the second year, because alfalfa does not reach maturity until the third or fourth season. Hence the field selected should be one that can be kept in alfalfa for a number of years. The first cost of a deep and thorough preparation of the soil may seem large, but it must be remembered that the farmer expects to take two or more cuttings off the land each year for from three to thirty years. The primary expense of a thorough preparation is, in a sense, thus spread over a series of years. Deep plowing pays, because there will be a greater yield from the land than in the case of the too common shallow cultivation. After plowing, the field must be harrowed and rolled several times, or until the seed bed is perfectly smooth and mellow.

SOWING THE SEED.

In the East and Northeast—Alfalfa should be sown in the spring, as soon as the ground is warm and there is no further danger from hard frost. This usually is from about the middle of April to the middle of May. Young alfalfa plants are tender, and liable to be injured by cold. The seed may be sown either broadcast or drilled. Drilling is more economical of seed, and a better stand can usually be obtained. If sown broadcast, from twenty to twenty-five pounds of seed per acre may be used; if drilled, from fifteen to twenty pounds. When a permanent hay meadow is desired the larger amount of seed is the best; but when the crop is to be raised for seed, a smaller amount will suffice. To get a good quality of hay, the plants should be grown close enough together, so that the stems will be small and not woody; but when a crop of seed is desired, they should be grown so far apart that, while covering the ground, they will put forth the greatest number of flower clusters. A clean field will require less seed than one that is very weedy. The most even stand is to be had by drilling the seed and then harrowing the field lightly across the drill rows. Cover the seed very lightly; if sown broadcast, a light harrow or a brush will be sufficient; or, if there is rain immediately after sowing, no harrowing will be necessary. A better stand will be obtained if the land is rolled after sowing. In western New York the practice is to roll without harrowing. This presses the seed into the loose soil, and covers it to a sufficient depth. On light, sandy loams sow without any nurse crop. On clayey, cloddy soils, however, a light crop of wheat, oats or barley is by some considered beneficial. This practice is also to be recommended when the field is liable to be very weedy. But it is really a waste of seed to sow alfalfa on foul land. The young alfalfa plants are more tender than young red clover, and are easily choked out by weeds, or by the nurse crop, if the latter is too thick. A good and sufficient stand can not be counted on if the field is weedy, or if the seed is sown like that of clover and timothy, with some small grain.

Some farmers cut for hay the first season. This depends entirely upon the rapidity of growth during the first summer. If the field is weedy, the weeds must be mowed two or three times and raked off the field. This must be done as often as the weeds grow up and threaten to choke out the alfalfa. If the field is very weedy, it should be mowed early enough in the summer to keep the weeds from seeding. If this is done, the alfalfa will soon take possession of the ground, and there will be little trouble from weeds or grass until after the third year. If a good stand is secured and the field is not weedy, a small crop of hay may be secured the first season. As a result of frequent cutting during the first season, the plants will form a good root system and consequently make a better growth. The crop should not be cut too late in the autumn of the first year. The young plants will stand the rigorous cold of winter much better if they have been allowed to put out at least five leaves. In the preparation of a field for alfalfa, the farmer must keep in mind the fact that alfalfa will yield better the second year than the

first, and better the third year than the second; hence the advantage of enabling the crop to pass through the first winter in good condition.

In the South—Experiment and practice have proved that good results may be obtained from either autumn or spring sowing. In the Southern States more depends upon the condition of the land than upon the alfalfa itself. Farmers who have been successful with this hay crop agree, in the main, that the best stand and best yield follow sowing in drills, for enough apart to permit cultivation during the first season. The Southern farmer must fight continuously against the many weedy grasses that spring up in his fields, and that will choke out the young cultivated plants if allowed to gain the upper hand. If an attempt is made to establish a field of alfalfa by sowing the seed broadcast, crab grass and foxtail are on hand to choke out the seedlings before they can get fairly started, and it is only in exceptionally favorable years that a good stand can be obtained in this way. A sufficient stand can never be counted on. September and February are the two months which have been found best for the sowing of alfalfa. The seed should be drilled in rows sixteen inches to two feet apart, at the rate of twenty to twenty-five pounds of seed per acre. The stand must be thick enough to enable the crop to hold its own against the weeds and weedy grasses which would otherwise take possession of the field. As soon as the young plants are up high enough to mark the rows cultivation must be begun with a stirring plow or horse cultivator. Crab grass, foxtail, and Bermuda must be kept out of the field the first season, and all perennial weeds, such as Johnson grass, plantain, dock, and wild onion carefully destroyed. If the drill rows are kept clean and the soil is kept mellow by frequent stirrings, the alfalfa will have no difficulty in holding its own, and if cut often and not allowed to go to seed, it will, when once established, cover the field and keep ahead of the weeds.

As soon as the alfalfa is from twelve to sixteen inches high the first crop can be mowed, and from that time it can be cut as often as it grows high enough. It is very important that the plants get a good footing and develop good root systems the first season. Alfalfa, when fully established, yields as much as six, eight, ten, twelve, and sometimes sixteen tons of dry hay per acre per annum. The richer and cleaner the land, and the more thoroughly the soil has been prepared before sowing the seed, the larger will be the net profit from each acre.

Alfalfa in the South should follow some hoed crop, either cotton or corn, that has been kept free from weeds. In sections where the cotton root rot is prevalent it is not advisable to plant alfalfa in fields which are infected with this disease, for it is probable that the root rot of alfalfa is identical with that of cotton, and if the seed is sown upon land thus infected the crop will surely be lost. Turnips fed on the ground to sheep, or the long, white Belgian carrots raised for horse or cattle feed, make a good crop to precede alfalfa, especially if the ground has been carefully manured for them. This forage plant responds quickly to manuring; no other fodder plant responds more promptly to intensive cultivation. Yet it is not advisable to apply stable manure when preparing the ground. Such manure is always full of weed and grass seeds that have not been digested, and which are really in better condition to grow than seed scattered naturally in the field.

To fertilize the alfalfa field with barnyard manure is to deliberately sow a lot of injurious weed seeds. If the manure has been thoroughly rotted under shelter it will do, but not so well as though it had been applied to the previous crop, to be mixed and distributed through the soil before the ground was plowed for alfalfa. A dressing of commercial fertilizers, compost, or cotton-seed cake, cultivated in between the drills, will increase the yield of hay and green forage. If a heavy top dressing of oil cake be applied just after the young plants have come up, the growth will be stimulated and the yield be heavier. Barnyard manure may be applied in the second autumn and in each year afterwards, because there will then be less danger of the alfalfa being choked out by weeds. It is better to apply this dressing in autumn or early winter than in the spring, on account of the weeds. The average life of alfalfa in the South has not been definitely determined. The plant, however, will last just as long as the field can be kept clean, and will be profitable as long as the hay crop amounts to four or more tons per acre.

With good care the yield ought to be much more than this—say a ton per acre at each cutting, and seven or eight cuttings each year.

In the eastern Rocky Mountain region and the middle North and Northwest—Alfalfa is usually drilled or sown broadcast in spring as soon as the ground is warm, and when danger of hard frost is past. It is best to sow without a nurse crop. Where the land is under ditch, the field should be irrigated before seeding, and never after seeding until the young plants are at least six weeks old. The first six weeks or two months in the life of the plant is the critical period of its growth. It is at this time very susceptible to any sudden changes of temperature or to any excess of water in the soil. If the land be irrigated directly after it has been plowed and harrowed, the soil becomes a reservoir of water necessary for the growth of the young plants, and no further irrigation will be required until the alfalfa is well established and the plants are less susceptible to cold. The seed should be covered very lightly to the depth of not exceeding an inch. A light harrow or brush will be sufficient. Drilling is more economical, and a better stand is usually obtained. If the farmer has a press drill, it would be better to use that; but care must be taken not to cover the seed too deep. If the seed is sown broadcast just before a rain, no harrowing or brushing will be necessary. In most of this Western region where alfalfa is extensively grown rains can not be counted on. In many localities the average yearly rainfall is very light, and this plan of irrigating the plowed field before the seed is in the ground is the best that has been tried.

The field must be mowed and raked off several times during the first season to prevent the weeds reseeding themselves, or as often as the weeds grow up and threaten to smother the young alfalfa. To sow a field broadcast or to drill with a machine, from twenty to twenty-five or even thirty pounds of seed per acre may be necessary to insure a good stand. A better quality of hay will be got from an acre on which thirty pounds of seed are used than from one on which only half that amount has been sown. Alfalfa stems become hard and woody if the plants are too far apart, and the hay from such a field is coarse and unpalatable. There will be more waste in feeding to cattle or horses than if the stems are thinner and softer, as they surely will be if more seed is sown and there is a thicker stand. If the land is under ditch, water may be turned on the field once or twice during the first summer, or oftener if needed.

Land on which alfalfa is to succeed must be well drained here as in the East. It is a mistaken idea that alfalfa fields must be kept continuously water-soaked. The plant can not and will not grow with wet feet. The soil must be deep, rich, and mellow, and the ground water not less than six or eight feet below the surface. The soil in which it most delights is dry and well drained, and if, in addition to these qualities, the lay of the field is such that water can be turned on once or twice during the hot, dry summer, the very best conditions for the growth of alfalfa will be attained.

In preparing the field great care must be taken to have the surface smooth and mellow. If it is intended to irrigate, the land must be thoroughly leveled, and this leveling process will be much facilitated if the field is irrigated before the seed is planted. The high and low places will thus show themselves, and they can be scraped down or filled up. It will pay to have the land perfectly smooth; more ground can be irrigated by one man in a day, and the water can be put to more economical use. Deep plowing is necessary to obtain the best results. Alfalfa will grow, and has often been reported as growing, on land the surface of which had been just lightly scratched; but the yield from such a field is never as heavy as when the ground has been thoroughly and deeply stirred for the reception of the seed. If the ground is clayey or heavy, and has any tendency to form a crust after being wet, the field should be harrowed as soon as the alfalfa is three or four inches high, so that this crust will be broken up. Such a harrowing, if done after the plants are fairly well started, will not injure the stand. If the alfalfa is irrigated two or three times the first season, to enable the young plants to make a good growth and form large roots, there is not much danger that it will winter-kill. However, the field must not be irrigated too late in the season, when the ground is cold. More water is needed the first year than afterwards. Alfalfa

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Hair Vigor to keep my hair of good color, to remove dandruff, to heal itching humors, and prevent the hair from falling out. I never hesitate to recommend Ayer's medicines to my friends."—Mrs. H. M. HAIGHT, Avoca, Nebr.

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

Take Ayer's Sarsaparilla for the Complexion.

is sometimes grown without irrigation. In such cases the success of the crop depends very largely on the thoroughness with which the ground has been prepared for the crop. Sandy soils require a larger quantity of water, but less often, than stiffer, clayey ones. If sown as soon as the ground becomes warm, the plants will rapidly develop deep roots, and when once well rooted they will stand more dry weather than any other forage plant.

In California and the Southwest—Pulverize the soil to the depth of from twelve to twenty inches—the deeper the better. Twenty-five pounds of seed is about the average amount to sow per acre. Many farmers report fair results from a less amount, say twelve to fifteen pounds per acre; but when such a small amount of seed is sown the hay will be coarser, more woody, and less nutritious than when the larger amounts are used. The seed can be drilled in rows or cultivated or sown broadcast. The time of seeding varies much in practice, being any time from August to the middle of December or from February to April. Good results will not follow seeding during the hot, dry summer months, from May to July and August. Those who practice spring sowing usually sow with oats or wheat as a nurse crop, and either cut the latter for hay or harvest the grain with a header, and immediately afterwards mow the stubble. If this method is followed, one or two crops of hay can be cut the first season, after the grain crop has been taken off. The value of a field of alfalfa depends largely upon the start which the crop makes the first season. Some farmers are liable to lose sight of the advantage to be received the second, third or fourth year, and will hesitate to plant alfalfa on account of not receiving cash returns the first season.

It is better to sow without a nurse crop and get a good stand than to get a crop of wheat or oat hay or a small crop of grain and have a poor stand of alfalfa, resulting from so many of the plants being choked out. There is some little advantage, however, in this system, in that the rank growth of weeds is prevented; but the accompanying small grain is liable to be just as injurious as a rank growth of useless weeds would be. If a nurse crop is used, the alfalfa should be sown after the grain, and should be covered to the depth of not more than one inch with a light harrow or brush. Still better results will follow if the seed is rolled in after the oats or wheat have been harrowed or drilled in. All kinds of grasses, clovers, and small grain grow better, and a better stand is always secured, if the soil is pressed down around the seed, and this can best be done with a roller. Alfalfa will not winter-kill if it is not cut too late in the season.

In some parts of California small birds are quite a pest at seeding time, and it is necessary to use more seed per acre than would otherwise be required.

Alfalfa grows better on land requiring

irrigation than on naturally moist soil, simply because the latter do not, as a rule, have good drainage.

The Stock Interest.

THOROUGH-BRED STOCK SALES.

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

- SEPTEMBER 6—Walter Latimer, Garnett, Kas., Poland-China swine.
- SEPTEMBER 11—W. H. Wren, Marion, Kas., Poland-China swine.
- SEPTEMBER 18—Martin Meisenheimer, Hiawatha, Kas., Poland-China swine.
- OCTOBER 1—M. S. Babcock, Nortonville, Kas., Holstein-Friesian cattle and Poland-China swine.
- OCTOBER 4—Winterscheidt Bros., Horton, Kas., Poland-China swine.
- OCTOBER 9—Geo. W. Null, Odessa, Mo., Poland-China swine.
- OCTOBER 10—M. Waltmire & Son, Fountain, Kas., Short-horn cattle and Poland-China swine.
- OCTOBER 10—J. R. Killough & Sons, Richmond, Kas., Poland-China swine.
- OCTOBER 22—J. H. Pegram, Virgil, Kas., Poland-China swine.
- OCTOBER 1—C. G. Sparks, Mt. Leonard, Mo., and G. L. Davis, Elmwood, Mo., Poland-China swine.
- OCTOBER 29—Kirkpatrick & Son, Connors, Kas., Aberdeen-Angus cattle and Poland-China swine.
- OCTOBER 29—Chas. Cannon, Harrisonville, Mo., Poland-China swine.
- OCTOBER 30—L. N. Kennedy, Nevada, Mo., Poland-China swine.

STEER-FEEDING EXPERIMENTS.

A Comparison Between Pure-bred Short-horns and Scrubs.

[The following account of the carefully and impartially conducted experiments of Prof. Georgeson is taken from the latest bulletin of our Agricultural College Experiment Station.]

(Continued from last week.)

THE FATTENING PERIOD.

On November 1, 1894, the steers were put in the feed lot for final preparation for market. The plan was to feed the two lots exactly alike, as heretofore, and under the conditions that steers are usually fed by farmers. The two lots were put in adjoining yards with open sheds for shelter. They were fed twice daily, between 7 and 8 in the morning and between 5 and 6 in the evening, and they had access to water at all times. Salt was likewise kept within their reach constantly. The steers could, of course, not be fed individually, but records were made weekly of their individual weights and gains. The record not only shows the usual fluctuation in weights, to which all cattle are subject, but it shows also that this fluctuation was much greater in the Short-horns than in the scrubs. During the first seven weeks all made good gains and the Short-horns in particular, but from that time on the fluctuation in their weekly gains is at times very great in individual steers. Thus, steer No. 3 shows a gain of fifty-nine pounds on January 10, and a loss of ninety-eight pounds on January 17, and steer No. 4 shows a loss on February 7 of sixty pounds from the previous week's weight, but the week following he shows a gain of ninety-five pounds. That particular steer did, in fact, not do well from December 13 to February 7, during which period he lost a total of 125 pounds. Several others show more or less loss during the same period, particularly No. 6 and No. 3 among the Short-horns and No. 12 among the scrubs, and none of them made good gains during that period. This is attributed to the fact that wheat was their exclusive grain feed up to January 19; we then had to add some corn meal to the wheat to improve their gains.

FEED AND COST OF GAIN.

The record shows the feed consumed by each lot weekly and the kind and cost of that feed, together with the cost of the gain. The original plan was to fatten them on wheat exclusively, with cut corn stalks for roughness; but although they made excellent gains on the wheat the first few weeks, by the end of December it became apparent that an exclusive wheat diet was not desirable. The plan was persisted in, however, until the 19th of January, when a little corn meal was added to the ration. The next week the corn meal was increased to one-fourth of the total grain ration, and this ratio was maintained until the 21st of March, when, for one week, the feed consisted of equal parts of wheat and corn meal. On March 28 the wheat was reduced to one-fourth of the entire feed and the remaining three-fourths were corn meal and cottonseed meal, the cottonseed meal amounting to one pound per head per day, and the last week of the period, from April 4 to 11, the wheat was entirely withdrawn and the feed consisted of corn meal and two pounds of cottonseed meal daily per head. The wheat was ground moderately fine, as was also the corn meal, and all the feed was fed dry. While the ratios of wheat, corn meal and cottonseed meal was maintained for both lots alike, the two lots of steers did not eat the same

amount. (The Short-horns consumed more than the scrubs.) Care was taken to give each lot what they would eat up clean and no more. The amount fed daily was thus gauged by their appetites.

The corn fodder was run through a cutter and cut in inch lengths, chiefly with a view to avoid waste. It was not a first-class article. It was withered by the drought before it produced any ears, and in this half-dry condition it was cut and shocked. The stalks, consequently, were not large and woody as when the corn is matured, but the steers, nevertheless, did not eat them up clean. They picked out the leaves and top portions of the stalks and left the bits of butt.

The cost given for these feeds is their cost laid down at the station. The corn fodder cost as much as a first-class quality of hay in ordinary seasons.

LOT I.—SHORT-HORNS.

Weekly account of cost of gain.

Date.	1894-95.	Cost per lb. of gain from Nov. 1, etc.	Av. daily gain per head from Nov. 1, etc.
November 1	7.95	1.81
November 8	5.42	2.72
November 15	4.19	3.65
November 22	3.50	4.44
November 29	3.56	4.49
December 6	3.73	4.40
December 13	3.39	4.97
December 20	2.91	5.90
December 27	2.97	5.79
January 3	2.63	6.44
January 10	2.01	8.27
January 17	2.11	7.80
January 24	2.15	7.63
January 31	1.90	8.56
February 7	2.13	7.64
February 14	2.14	7.61
February 21	2.04	7.98
February 28	2.15	7.62
March 7	1.97	8.36
March 14	1.99	8.32
March 21	2.01	8.26
March 28	1.93	8.65
April 4	2.01	8.30
April 11	2.01	8.30

Grain eaten, 15,172 pounds.
Total food eaten 27,267 pounds.
Average gain per head 325.16 pounds.
Average daily gain per head, 2,018 pounds.
Total cost of feed \$161,932.
Grain eaten per pound of gain 7.77 pounds.
Corn fodder eaten 12,095 pounds.
Total gain, 161 days, 1,674 pounds.
Average daily gain of lot 12.11 pounds.
Average cost per pound of gain, 8.30 cents.
Average cost of feed per head \$26.988.
Corn fodder eaten per pound of gain 6.20 pounds.
Total food eaten per pound of gain 13.97 pounds.

We see in the table an almost regular increase in the cost of the gain as the steer matures. In the case of the Short-horns the cost per pound of gain in the early part of the feeding period was remarkably low and the gain was very rapid. By the end of the third week this lot had gained 528 pounds, or a daily average of 4.19 pounds per head at the cost of 3.65 cents per pound. By the close of the seventh week the cost had risen to nearly 5 cents per pound of gain. By the end of the tenth week it was nearly 6½ cents per pound of gain, and from that time until the close of the feeding period the cost oscillates between 7 2-3 and 8 2-3 cents per pound of gain, and at the close, the 1,951 pounds gained by that lot had cost 8.3 cents per pound.

The scrubs present an equally interesting study in this respect. While their gain was not so great it was more steady and the cost of the gain is rather higher at the beginning and finishes up at the close of the period with a trifle higher cost per pound of gain than the Short-horns. The difference, however, is only .19 of a cent per pound. At the close of the sixth week the cost per pound of gain is nearly the same for both lots, that of the scrubs being a trifle higher, but from that time on until April 4 the scrubs made a cheaper gain per pound. The concluding week, however, placed the Short-horns again a little ahead, as already noted.

The data are of interest beyond the present case, inasmuch as they illustrate a principle in feeding which holds true under all circumstances and under all methods of handling cattle and with all kinds of feed, namely, that it takes more and more feed to produce a pound of gain as the steer matures and consequently the cost of the gain will continue to increase gradually, subject, however, to slight fluctuations, until the close of the feeding period. The summaries for each lot are self-explanatory. They give the whole subject of the feeding

and its results in a nut-shell and furnish interesting data for comparison between the two lots. It is to be noted that the scrubs ate 8.76 pounds of grain for each pound of gain, while the Short-horns made a pound of gain on 7.77 pounds grain. On the other hand, the Short-horns ate 6.20 pounds of fodder per pound of gain, against 3.93 pounds eaten by the scrubs.

LOT II.—SCRUBS.

Weekly account of cost of gain.

Date.	1894-95.	Cost per lb. of gain from Nov. 1, etc.	Av. daily gain per head from Nov. 1, etc.
November 1	3.40	3.67
November 8	3.71	4.83
November 15	3.34	4.08
November 22	3.42	3.98
November 29	3.01	4.58
December 6	3.87	4.90
December 13	4.11	4.48
December 20	4.46	5.78
December 27	4.68	5.34
January 3	4.44	5.91
January 10	3.35	6.11
January 17	3.32	6.21
January 24	3.23	6.51
January 31	2.13	6.82
February 7	2.13	6.81
February 14	2.04	7.13
February 21	2.09	6.99
February 28	2.10	6.99
March 7	1.97	7.45
March 14	1.94	7.55
March 21	1.82	8.05
March 28	1.84	7.97
April 4	1.73	8.49
April 11	1.73	8.49

Grain eaten 14,662 pounds.
Total food eaten 21,254 pounds.
Average gain per head 279 pounds.
Average daily gain per head 1.731 pounds.
Total cost of feed \$142,225.
Grain eaten per pound of gain 8.76 pounds.
Corn fodder eaten 6,592 pounds.
Total gain, 161 days, 1,674 pounds.
Average daily gain of lot 10.39 pounds.
Average cost per pound of gain 8.49 cents.
Average cost of feed per head \$23.704.
Corn fodder eaten per pound of gain 3.93 pounds.
Total food eaten per pound of gain 12.69 pounds.

TABLE V.

Showing the number of pounds grain and fodder eaten for each pound of gain at dates given.

Date.	Lot I.—Short-horns.		Lot II.—Scrubs.	
	Lbs. Grain eaten per lb. of gain.	Lbs. Fodder eaten per lb. of gain.	Lbs. Grain eaten per lb. of gain.	Lbs. Fodder eaten per lb. of gain.
November 8	1.22	2.79	2.85	4.53
November 15	1.93	3.86	3.89	5.54
November 22	2.72	4.86	3.41	4.14
November 29	3.47	5.45	3.52	3.61
December 6	3.59	5.25	4.19	3.75
December 13	3.62	4.86	4.20	3.37
December 20	4.17	5.21	4.68	3.43
December 27	5.07	5.84	5.60	3.79
January 3	5.10	5.36	5.25	3.26
January 10	5.75	5.69	5.88	3.40
January 17	7.49	7.00	6.14	3.36
January 24	7.16	6.35	6.29	3.26
January 31	7.01	6.00	6.62	3.33
February 7	8.00	6.50	6.96	3.43
February 14	7.16	5.66	6.97	3.35
February 21	7.18	5.53	7.31	3.44
February 28	7.56	5.73	7.18	3.34
March 7	7.22	5.48	7.13	3.36
March 14	7.91	6.06	7.65	3.56
March 21	7.86	6.06	7.77	3.57
March 28	7.78	6.05	8.30	3.75
April 4	8.13	6.33	8.23	3.66
April 11	7.77	6.20	8.76	3.93

Table V. has been worked out with a view to show the increase in the amount of feed required to make a pound of gain as the feeding progresses. It is an interesting and instructive table, especially when taken in connection with the cost of the gain shown in the last column of table IV. The table shows remarkable regularity in the case of lot II. There is an almost regular increase in the amount of grain required for each pound of gain from week to week through the entire period. The fodder, on the other hand, remains practically constant. They ate the most fodder per pound of gain at the start, but after the first three weeks the relation of fodder consumed to gain remained stationary. This is not the case with the Short-horns. They ate the least fodder at the outset and gradually increased the consumption until the close of the fattening period. With the exception of that period in January and the beginning of February, during which their progress was changed to retrogression, and they, therefore, show a greater consumption for the gain made, the increase of fodder eaten is fairly regular from the beginning. The same is true of their increase in the consumption of grain. The interruption in January, in like manner, shows a marked increase in the grain eaten per pound of gain. The disturbance to the even progress of this

lot in January can be traced to two possible causes, and probably both have a bearing on the case. In the first place, they began to scour violently, which was attributed to the continuous wheat diet. This affection caused them to get off their feed and resulted in severe losses in weight. In the second place some cold storms occurred in the latter part of January, from which they apparently suffered more than the scrubs, and which doubtless aided in preventing their rapid return to good appetite and normal gains. This is not necessarily proof that they were tenderer than the scrubs or more susceptible to the influence of climatic changes, and yet the evidence points in that direction. Taken in connection with the cost of the gain, the table emphasizes the fact that steers can readily be kept too long before they are turned off, thereby increasing the cost beyond profitable limits. Just when to market can not be shown by experiment. It is a matter to be gauged by the value of fat steers and the cost of feed, as well as the condition of the steers. These steers would have sold better had they been marketed four weeks earlier. The gains they made during the last month did not compensate for the cost of the feed during that time. This is especially true in the case of the scrubs, which gained more slowly than the Short-horns. Moreover, the market price ranged higher at that time, so it seems probable that they would have realized as much then as when they were finally sold, even though their condition was not quite as good, and the feed eaten during the last month might have been saved.

SALE OF THE STEERS.

The two lots were shipped to Kansas City stock yards on the evening of April 12 and sold to Swift & Co. the following day. The last weight recorded is the average of three weighings on three successive days. The steers did not realize all that we expected they would bring. The Short-horns not only averaged 245 pounds per head more than the scrubs, but owing to their better beef form they made a decidedly better appearance. At the last weighing at the station the Short-horns averaged 1,617 pounds per head and the scrubs averaged 1,272

pounds per head. In spite of these differences, the buyer was inclined to put the same price on all. As the result of his final judgment he picked the three heaviest Short-horns—Nos. 1, 3, and 5—and judged them to be worth \$5.65 per hundred. The remaining three Short-horns and all of the scrubs were sold at \$4.65 per hundred. In the judgment of the writer this price did not do justice to either lot. Two of the scrubs, —Nos. 12 and 13, were particularly good, and it will be seen from the block test which follows that No. 13 ranked with the best Short-horns in price of the cuts, but we had to accept his decision, however, as it was the best that could be done under the circumstances. The financial results of the sale will be given later on.

Don't Tobacco Spit or Smoke Your Life Away.

is the truthful, startling title of a book about No-To-Bac, the harmless, guaranteed tobacco habit cure that braces up nicotine nerves, eliminates the nicotine poison, makes weak men gain strength, vigor and manhood. You run no physical or financial risk, as No-To-Bac is sold by druggists everywhere, under a guarantee to cure or money refunded. Book free. Address Sterling Remedy Co., New York or Chicago.

Irrigation.

IRRIGATION MEETINGS.

Kansas State Irrigation Association, meets at Garden City, Kas., October 1-2.

Irrigation in Rice County.

EDITOR KANSAS FARMER:

I visited the irrigation plant of Mr. Mathews, southwest of Sterling, yesterday. He constructed a pond, say twenty feet square, about eight deep, boxed in, so as to keep out the sand, and set in four posts, on which he has framed a box elevator, such as is used in grain elevators. His buckets are fastened on two two-inch rubber belts, filling the bottom tight, lifting the water up spout, which discharges in a flume; then the cups pass over a shaft and pulley outside of box, down again in bottom of pond, over a shaft again, and up, etc. I believe he raised over 300 gallons per minute. This pond is about twenty-five rods from the Arkansas river, so he has a heavy underflow, but he can pump it dry in an hour, and it will fill up in about the same time. As his soil is nothing but the drift of the river in years gone by, his water runs along in the coarse, sandy ditches. I was surprised, when he showed me over his celery, peppers and cabbage. I concluded his soil is not fit for gardening. It lacks the body to it, and I suggested that he set his pump right into the river, which is always deep close to the bank, and as the river water is always very muddy, a sediment would give body to the sand, and improve it in time.

Irrigation is gaining favor again. During the rainy season I was ridiculed, but now it is all quiet. It is a question of time that all this great valley will be irrigated from the Arkansas river. It requires capital to do it, but the chances are very favorable. Lots of water is wasting into the ocean, while corn is burning up on the banks of the river. It is nothing but the prejudice against irrigation that keeps the people from applying it to their burning crops. The law is not in the way, and in the last two years there was lots of water in the season of growing crops. Water taken from rivers, flowing direct into ditches, is the cheapest. If all who could or would use the water, formed a company, and constructed a main ditch and laterals, charging so much per inch as to defray expenses for immediate construction of ditches and keeping them in repairs, hiring a man to attend to it, etc., the cost would be very little. There is more water in the river now than is needed to irrigate the southern half of Rice county at the rate of twenty-five to thirty sections per day.

Prof. A. A. Mills, of Utah Experiment Station, believes irrigation does pay here in central Kansas. No, my friend; not in a season like this, when prices for corn are likely to be 15 cents per bushel, if I do have five bushels more per acre than on unirrigated ground. For fifty or seventy-five cents I can not irrigate once. It will pay in a year of failure, and as we can not tell what the future will bring, we must irrigate as soon as needed. If it rains right away our expense is thrown away. If it never would rain here, I would consider myself very fortunate.

W. F. ROSE.

Sterling, Kas., September 13.

Action of Water in Soils.

Senator David Boyd, of Greeley, Colo., gives the following analysis of this action:

"Water spread out upon any land surface is solicited by two opposite forces—the heat of the sun and gravity. The first gives rise to evaporation combined with transpiration if vegetation covers the surface; the second, to vertical descent, which becomes more or less lateral, according to the character of the strata it meets in its downward course. What proportion goes up or down depends upon the relative power of the opposing forces and upon the more or less favorable position from which either force acts. The action of gravity is practically constant, while that of the sun is variable.

"Gravity acts upon the depth of the whole mass, while the sun's action is chiefly confined to the surface. Hence a light rainfall or irrigation is all evaporated, while a very heavy one principally runs off, or is absorbed by the surface. This gives rise to two kinds of run-off; that over the surface and that through the porous strata. The object of all irrigation is to afford the plant sufficient water for transpiration; all else applied to the soil is waste, but in securing this supply waste of water is necessary, as is that of heat energy in

producing mechanical results by steam. The waste, so far as the needs of the plant are concerned, are direct evaporation from the surface and percolation into the strata below the reach of the roots of the plants.

"Hence it will be seen that deep-rooting plants, like alfalfa, can avail themselves of a larger proportion of water in the soil than shallow-rooting ones. Rainfalls that do not go deep enough to reach the roots of plants are of no use except it be to cool the surface through absorption of heat by evaporation. A rain-fall of one-fourth of an inch will scarcely wet an inch deep, and in this climate all evaporated by the sunshine of one day. An inch of rainfall will wet a perfectly dry surface only four inches deep and will reach the roots of but few agricultural plants, and observation on my part confirms the view that it will practically all be evaporated in four days and will be of the roots of but few agricultural plants, except used in connection with irrigation.

"If the soil below is moist to the point reached by the rainfall, then it will indirectly aid irrigation by supplying water to be evaporated instead of that below, and thus continue the period during which the soil will hold sufficient moisture for the roots of the growing plants. Hence, both reasoning and observation have confirmed in me the opinion that frequent light irrigations is the most wasteful use we can make of water, for water evaporated from the surface is lost to the areas in the immediate vicinity where it has been used, floating off into remote and unknown atmospheric regions, borne along by the accidental air current with which its specific gravity mingles it. On the other hand, that part of a heavy irrigation which gets below the reach of the roots is not lost for use to a lengthened system of irrigation, since for the most part it returns to the bed of the parent stream and may be used again on lower areas."

Stirring Soil in the Orchard.

Most varieties of trees put out surface feeders and but one main tap-root. This shows that they are hunting for nourishment in the warm, dry surface soil, and need the heat and air to make them grow. If you neglect to stir this surface soil to keep it light and porous, admitting the air and heat, and simply turn on the water as often as the surface becomes dry and hard, you simply give the tree more moisture than is needed, and sour the sap, causing the fruit to be small and of poor flavor.

In California, where the oldest and most experienced growers have had the best success in raising the largest and most luscious fruit, they do it by thorough cultivation, only irrigating deciduous fruits two or three times a year. They keep the cultivator going almost continuously during the summer and plow shallow next to the trees and deeper in the center, after the heaviest of the winter rains are over, after which they start the cultivator and keep the ground stirred and weeds down, not allowing the soil to bake or become solid, but keep it light and spongy.

The soil that is kept stirred will be moist and spongy within two or three inches of the surface, while the irrigated soil not cultivated will pack and become soggy and will soon bake and dry out on top, so that, like the inebriate, the tree must have another drink soon or it begins to weaken and thirst for more, until, with continued sponges of drink and no cultivation, it begins to sour and gradually dies or becomes scrubby and of no use to mankind and only a curse to itself. To get the largest and most luscious fruits, cultivate well and deep, irrigate only as often as seems necessary to keep the ground moist within two or three inches of the surface and not soggy.

This is true with all varieties of deciduous fruits—peaches, plums, apples, pears, and the whole line, except that small berries need more water but as much cultivation as larger fruits. Now, as regards root pruning. The roots as well as the tops of a fruit tree need a certain amount of pruning to make the tree bear well. If allowed to go all to wood and root growth you cannot expect to get a large regular crop of good fruit. I do not believe in excessive pruning, but enough to keep all poor, ungainly branches cut away and roots stirred or loosened once a year.—C. B. Hewitt.

A practical irrigator says: "There is quite a knack in irrigating corn and doing it well. With one good irrigation and cultivated carefully, there will probably not be required any further irrigation until the stalks begin to tassel. If corn cannot have a good irrigation at

the time the silk appears, it is substantially wasting water by irrigating two weeks thereafter, as far as the development of the ear is concerned. If the cultivation has been done by what is known as the level system, then with a large single-shovel plow—a single lister will answer—run a furrow midway between the rows in which to run the water. When irrigating, the water must be confined to the furrows, so that it may not spread over the ground about the roots. If it does, injury will be done through baking, since it will be impossible to break up the baked crust about the roots of the growing plants without hand hoeing. The water soaking into the ground from the furrow spreads through the soil to the corn rows on each side of the furrow. As soon after watering as the soil is in proper condition a suitable implement should be used to gather the soil back into the furrow, at the same time disturbing the corn roots as little as possible. One more watering will be ample and should be done about the time the corn is in good roasting-ear, filling up the furrows as before."

Experience With Subsoiling.

EDITOR KANSAS FARMER:

You ask for results in subsoiling. I have had some experience in that line and am satisfied it is of great importance, as it commences at the right end of farming by putting the ground in proper shape to receive and retain all the rain that falls for use of the crop. I subsoiled thirty acres for corn last spring to a depth of five inches below the plow, which I ran six inches deep, making a total depth of eleven inches. We have had the wettest season, since June, I ever knew, but very dry up to that time. I find the subsoiling has let the water soak down from top, and we could cultivate the corn much sooner on land subsoiled than where it was not subsoiled. The corn did not scald and turn red as it did on ground not subsoiled.

I believe the farmers all know the necessity of subsoiling, but using the subsoilers that require an extra man and team to follow the other plow, makes it too expensive for the average farmer. I think I have twelve to fifteen bushels more corn on my subsoiled land than I have on land not subsoiled. Had it been a dry season the difference would have been much greater. I think all land is much benefited by subsoiling, but don't think best results are obtained by going too deep at first plowing, but go down gradually, and at second plowing throw a part of the loose soil to top of ground. It is also much easier and more cheaply done. My work was done on section 36, township 26, range 25, east, and adjoining section in Bourbon county, Kansas, in April, 1895. The subsoiler followed the other plow in each furrow. The land had been plowed several years—each year about six inches deep. No extra cost except the cost of subsoiler.

T. WOODARD.

Garland, Bourbon Co., Kas.

Some Subsoiling Experience.

EDITOR KANSAS FARMER:

In your issue of August 21, you ask for information about subsoiling.

I subsoiled last fall for potatoes, and this spring for garden and corn. I went eighteen to twenty-four inches deep, every fourteen inches. The land was plowed about four inches deep with common plow, followed with the sub-breaker.

In the potatoes, the good effects were noticeable in the early crop, except in one row that was in the dead furrow. This furrow never produces anything here, but by once going through with the "redeemer" a bigger crop will result than in any other row. In an ordinary forty acres of corn, eighty rods square, there will be eleven to twenty dead furrows. If forty yards apart, there will be eleven of them, and as nine rows of corn eighty rods long make an acre, and eleven dead furrows will take out one and two-ninths acres of corn in every forty acres, and if the dead furrows are only twenty yards apart, two and one-half acres of corn.

One hour's work with three horses and a Perine "redeemer" will put these waste furrows in shape to produce the biggest yield in the field, or a difference of fifty-five to one hundred and ten bushels on every forty acres, which, at 25 cents per bushel, makes \$13.75 to \$27.50, without any extra

Shoe- and

harness-leather wear long, do not crack, with Vacuum Leather Oil. Get a can at a harness- or shoe-store, 25c a half-pint to \$1.25 a gallon; book "How to Take Care of Leather," and swab, both free; use enough to find out; if you don't like it, take the can back and get the whole of your money.

Sold only in cans, to make sure of fair dealing everywhere—handy cans. Best oil for farm machinery also. If you can't find it, write to

VACUUM OIL COMPANY, Rochester, N. Y.

trouble, except to husk it. Is there anything else on the farm that will pay \$13 to \$30 for an hour's work? Isn't there a screw loose in those dead furrows? Is it possible that a man can afford such a loss?

My Early Ohio potatoes in the dead furrow were much the best crop. The late potatoes have not yet been dug, but the weeds and crab grass have made such an enormous growth as to give the soil the appearance of bottom land, and no doubt the subsoiling of the upland gives it the character of bottom land. In my garden stuff, subsoiling proved to be of immense value. In corn, the result is very gratifying. I had one field that has an acre of hard-pan in it that has never produced anything in twenty-four seasons, until this year, and the crop is as good there as anywhere else. Subsoiling and our slow rains has kept this ground from running together, and the corn will make fifty bushels per acre on this worthless land. One can hire land subsoiled for \$1 per acre.

Take some clean fall plowing, and in the spring run a two-horse cultivator over it, throwing it in ridges, then harrow these fine, lengthwise, then with two big horses, straddle them and run a "redeemer" about fourteen inches deep, and in the open crack put sweet potatoes, peanuts, tomatoes, cabbage, etc., and see the benefits of this plow. One does not have to chop up the earth with a mattock to get the sweet potatoes in these rows. I firmly believe one more crop of clover can be cut on subsoiled ground than on any other.

CLARENCE J. NORTON.

Morantown, Kas., September 1.

Making History.

The old land-marks of the Pilgrim fathers are fast disappearing to make way for modern ideas of architecture. There are very few of the old homesteads preserved in their quaintness and original furnishings. The straight-backed chairs have found their way into the hands of dealers in antique furniture and oddities or have been divided among relatives and scattered to the four corners of the compass.

Another century will find a different class of heirlooms. Most people will have a World's Fair souvenir just as we of to-day have our Revolution flint-locks, and straight-backed chairs.

The World's Fair Souvenir spoons are the daintiest, most compact and lasting reminder one can have of the great fair. There are six to the set, each one showing a different building. The small sum asked, 99 cents for the set of six, places them within the reach of any one. The Leonard Mfg. Co., 152-153 Michigan Ave., Chicago, is the only concern that has these spoons. See advertisement in this issue only.

Old Mexico.

Modern Mexico is a beautifully illustrated monthly journal, published in the English language, and devoted to the interests of Mexico. Send 10 cents for sample copy. Address Modern Mexico Publishing Co., Topeka, Kas. Mention KANSAS FARMER.

Excursions to South Missouri and Arkansas.

On September 10 and 24 the Kansas City, Fort Scott & Memphis Railroad Company will sell round-trip home-seekers' tickets to points in south Missouri and Arkansas at rate of one fare. Tickets limited to twenty days' for return. Good via main line or Clinton division and good to stop off at intermediate stations south of and including Harrisonville and Fort Scott. J. E. Lockwood, G. P. A., Kansas City, Mo.

DRAIN TILE

W. S. DICKEY CLAY MFG. CO.,
20th and Main Sts., Kansas City, Mo.

IRRIGATION.

WEBER GASOLINE ENGINE

For use in any place or for any purpose requiring power. Only a few minutes' attention required each day. Guaranteed cost of operation one cent per horsepower per hour. The simplest, most economical and best power. Send for circular. Address: Weber Gas & Gasoline Engine Co., 459 Southwest Boulevard, Kansas City, Mo.



Gossip About Stock.

The dispersion sale of Holstein-Friesian cattle, owned by M. S. Babcock, of Nortonville, Kas., should be borne in mind. The date is October 1. Get a catalogue and select what you want to bid on.

Any of our readers desiring information about dehorning cattle will receive the results of the experiment made by the different agricultural stations, also considerable other matter relating to the subject, by writing A. C. Brosius, Cochranville, Pa.

Kansas has produced a thousand-dollar hog. We have just received information that J. H. Sayles, of Norcatur, Kas., has sold his famous Poland-China sire, King Perfection. He goes to an Eastern breeder, whose name we have not yet learned. His dam is Tecumseh Lightfoot by Second Tecumseh. We hope to have further particulars regarding this notable Kansas sale by the time he reaches the home of his new owner.

Kirkpatrick & Son, of Connors, Kas., desire to announce that people are still making inquiry for Shropshire rams, although their advertisement has been discontinued for some time. We trust that readers who have stock of this kind for sale will send us their advertisements and get some benefits from the present demand. On October 29 there will be a public sale, the entire herd of Aberdeen-Angus cattle, consisting of fifty-five head, also a drove of Poland-Chinas, including Hoosier Boy 2d, one of the best breeders in the State. The sale will be from the herds of Kirkpatrick & Son, Connors, Kas.

D. P. Norton's latest sale from his Neosho Valley herd was the fine yearling bull, Royal Buccaneer, to Mr. J. A. Shelhammer, dairyman, of Osawatimie, Kas. This young bull is the get of Imp. Buc-

to Model King 37532. To Mr. Tavener, of Peabody, Kas., a fine yearling boar out of Romford Pride, and sired by Jno. B. Thompson's boar, Champion 29761 (imported.) To Mr. Butler, of Cottonwood Falls, Kas., one brood sow by Model King and out of Black Rose, she by Black Prince II 25716. To W. W. H. Sellers, Florence, Kas., yearling pig out of Romford Pride and by Champion. Mr. M. S. Kohl's two glits are registered as Lady Windall 37533 and Stubby Rumford 37534. He writes me that pigs are doing finely, and that they will be heard from later on. You may say that I am laying a foundation herd of Poland-Chinas, the best to be had, and that I will be in the procession next spring with choice pigs from both herds. I have quite a number of Model King pigs that will suit anyone, and will be sold cheap to make room for winter."

Walter Latimer, of Garnett, Kas., sold thirty-nine head of thoroughbred Poland-Chinas by dispersion sale on the 6th of this month. They were a draft of good animals, from his Hillhurst herd. Circumstances over which he had no control, kept many intending purchasers from being present. Rain began falling about 10 a. m., and with slight intermission it kept raining, more or less, the balance of the day. Notwithstanding the many hindrances, the sale went along at fair prices and gave general satisfaction. The meritable Tecumseh J. Corwin 10744 was retained to continue at the head of his herd. This excellent male is unmistakably a choice sire, and lucky are the persons who procure animals of his get. Following is a list of those ranging in price from \$25 and up, with the address of purchasers: Fanchon 4th 33384, to J. Hargrave, Richmond, for \$35; her litter of pigs, seven in number, brought \$84. Fanchon 9th 33383, to J. N. Morris, Garnett, for \$29; her four pigs brought \$60. Fanchon 16th 33391, to Joe Cary, Garnett, for

Kansas men will, no doubt, in the near future regret that they did not take more of the prizes than they did. The top of the registered cattle was taken by N. E. Mosher, of Salisbury, Mo., for which he paid \$182.50. The animal was Silema 24378, bred by T. Rogers, Dilwyn, Eng., calved January, 1894. The sires and dams of this cow were of the family that Lord Wilton sprang from, in fact the Lord Wilton blood is prominent in all the animals bred by T. Rogers, and Mr. Mosher may consider himself proud of his judgment in not allowing this animal to escape. Texas was well represented at the sale, and the Texas men took a majority of the prizes. Wm. Powell, of Chaning, Tex., secured the head of the herd, Alderdyce 41431. This bull is 5 years old and right in the prime of his life. In fact, the Wiser ranch is liberally dotted with his offspring and many good animals from Alderdyce will find homes in Kansas, Texas and Missouri. Mr. Powell also purchased twenty-four bull calves at \$30 a head, which was, all things considered, a good price for the cattle. P. Doyle, of Higgins, Tex., also purchased twenty-two bull calves at the same price, and three bull calves under 1 year old, out of Alderdyce, that he paid on an average of \$90 for. Mr. Doyle was commended for his judgment at the sale, and many a more timid man considered himself safe when he was the

by their mother's side for more money than was bid on the mother, thus showing, as Col. Woods very impressively remarked, "that the bullets from the molds were worth more than the molds themselves."

Of Unusual Interest.

Unusual interest attaches this season to the handling of the corn crop, because of the shortage of the hay crop, and because the corn crop is large. But the drought of former seasons has taught this country the most valuable agricultural lesson it has ever learned, and one that has already revolutionized matters in many places. That lesson is the value of corn fodder, when properly prepared and handled.

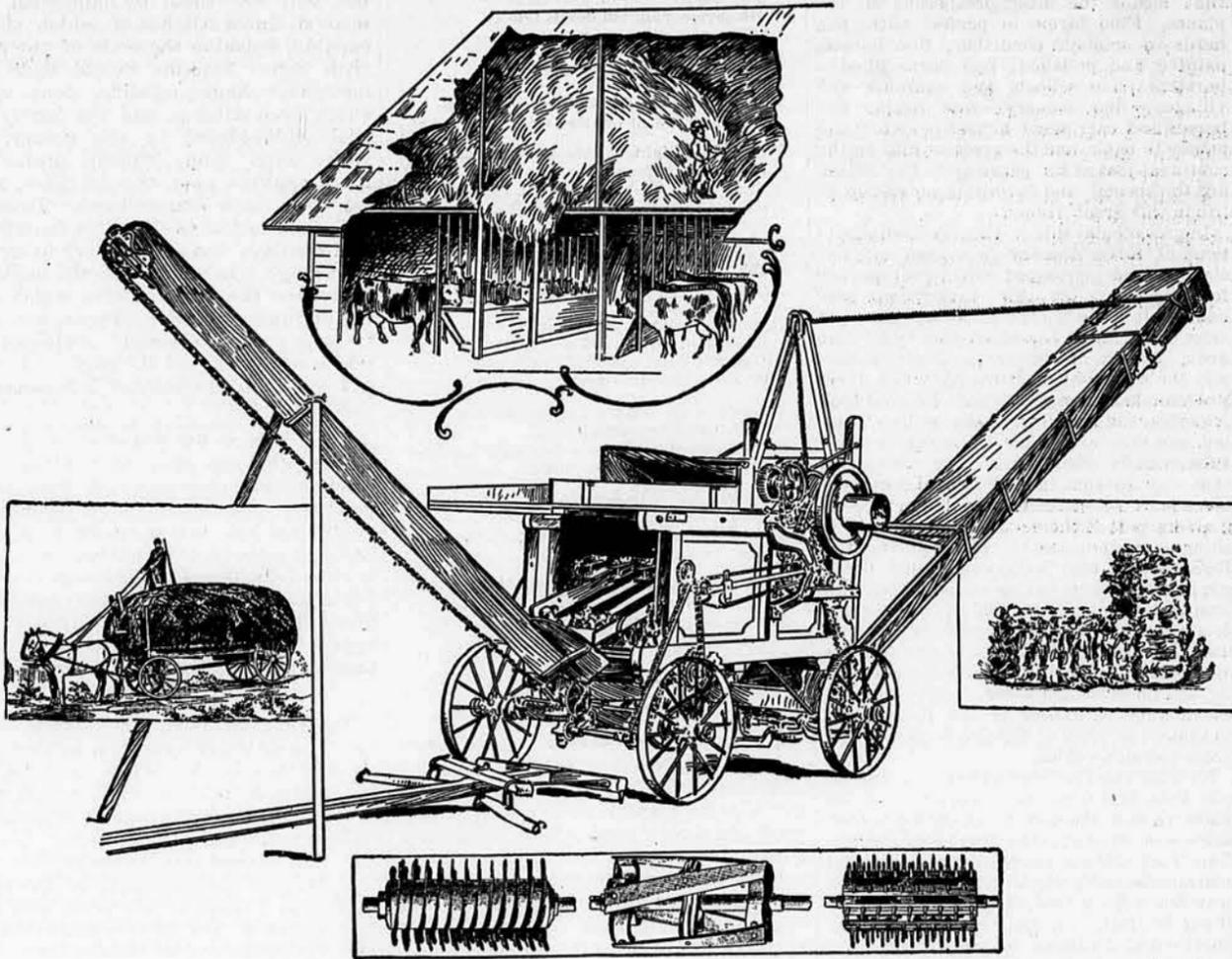
The era of the self-binding Corn Harvester and of the Corn Husker and Fodder Shredder has arrived. The hay is now grown on the same stalk with the ear of corn, and corn hay is a very proper name for the fodder as prepared by the "Keystone" Corn Husker and Fodder Shredder. This machine makes but one job of the whole thing after the corn is cured in the shock. Hauled directly from field to the machine at the barn, the stalks are fed to the machine which snaps off the ears and husks them and at the same time crushes the stalks and shreds them almost as fine as hay. The ears of corn are delivered to wagon or crib and the corn-hay into the barn mow or shed, or stack. This shredded fodder or corn-hay, has no sharp edges, can be handled with a pitchfork, like hay, and can be baled and shipped like hay. It occupies only one-half the space, or less, of whole fodder. All is in a place to be fed without trouble or discomfort in bad weather, which is much better than prying loose the frozen shocks, and hauling on cold or stormy days. The fields are cleared and ready for the plow for pleasant fall weather or early spring.

Experience proves that there is no difficulty in keeping the fodder perfectly, and for any length of time, when it is put up properly.

The shortage of the hay crop gives no inconvenience whatever where this machine has been used. Hundreds are in use, from Minnesota and North Dakota to Tennessee and North Carolina, and from eastern Massachusetts, to western Nebraska and Kansas.

We cannot give here a full description of this machine, which is fast relegating hand husking to the past and which has shown that properly shredded fodder far surpasses any cut fodder.

It will pay all interested to send for the very interesting catalogue called "The Great Leak on the Farm," which may be had free by addressing the manufacturers, The Keystone Mfg. Co., of Sterling, Ill.



"KEYSTONE" CORN HUSKER AND FODDER SHREDDER—MANUFACTURED BY KEYSTONE MANUFACTURING COMPANY, STERLING, ILLINOIS.

caner 106653, whose pedigree shows three crosses of the great Sir Arthur Ingram 32490, that won the 100-guinea cup three times in succession at the Royal show of England. Royal Buccaneer's dam was got by Vice Royal 78233, whose maternal grandsire was the renowned Lord Irwin 29123, that was also three times a winner of the same prize at the Royal. They were both pure Booth, and bred by the great Yorkshire breeder, the late Wm. Linton. The winning of this grand prize confers the high distinction of championship upon the winner.

The following bit of Short-horn news appeared in the Courant, of Howard, Elk county, last week: "Hanna & Co. received, this week, a young Short-horn bull—Royal Knight—which they recently purchased at a long price from Col. W. A. Harris, of Linwood, Kas. This bull is a son of the famous show cow, imported Princess Alice, claimed by breeders to be the greatest Short-horn cow in America. Princess Alice was sired by Field Marshal, the greatest bull of his day in England. She was the greatest prize-winning heifer of her day. Her son, Young Marshal, was the prize-winning two-year-old bull at the World's Fair, and all her calves have been prize-winners wherever shown. Royal Knight will be a valuable acquisition to the stock-breeding interests of Elk county."

George Topping, Cedar Point, Kas., writes: "My herd of Berkshires is in fine shape, and inquiries are coming in nearly every day. My list of sales of late has been, to M. S. Kohl, Furley, Sedgwick county, Kansas, two fine glits out of my grand show sow, Romford Pride 30859, and sired by the grand old breeder, Model King 37532. This boar is by Director 27539 and out of Stumpy Lady IV 25117, she by Model Duke, he by Longfellow 16335, inbred to Longfellow, and will weigh, in good fix, 800 pounds. To Mr. W. H. That, of Colfax, Kas., the brood sow, Betsy 2d, in pig

\$36; three of her pigs brought \$44. Fanchon 17th 33392, to Joe Cary, for \$41; two of her pigs sold for \$46. Salina 33380, to J. N. Morris, for \$40; five of her pigs brought \$57. Mildred 33377, to Enterprise Cattle Co., Garnett, for \$23; four of her pigs sold for \$53. Motto 33388, to J. W. Garrison, Garnett, for \$31. Counting pigs and all, the general average was \$17.84 per head, which does quite well; and, while Mr. Latimer got only about half what the hogs were really worth, he feels glad to know that his customers received a bargain in each and every purchase. Those who failed to get to the sale should bear in mind that Mr. Latimer reserved a goodly number and can furnish applicants with the very best.

A Great Sale of Herefords.

We are indebted to Mr. G. H. Beasley for the following report of the Wiser sale, recently held at Allen, Lyon county, Kansas, consisting of 600 head of pure-bred and grade Hereford cattle. The sale was remarkable for several reasons, prominent among which was the efficient manner in which the cattle were handled and supplied to the auctioneer. Being very wild, they were handled in an unexpectedly short time. The sale was also remarkable for the cleanliness, there being no by-bidding, and no complaints were heard from the bidders. Taking all in all, the whole sale reflects great credit upon both Messrs. Wiser and Col. Woods. It was undoubtedly handled in an expeditious manner by Col. Woods, and he considers it the best sale he ever made.

The cattle that brought the highest prices went out of Kansas, and the

competitor of the Texas men. Probably the best bunch of cattle sold was the herd of 2-year-old steers bought by G. W. Newman, of Emporia, Kas., at \$49.55 a head. And the steadfast manner in which this gentleman bid on these steers bred consternation to many more timid bidders who would have liked to secure that prize. E. V. Connelly, of W. R. Clemants & Co., Amarilla, Texas, laid in a supply of registered cows, and was probably the largest bidder of registered cows present.

There were sixty-five heifer calves that averaged from \$25 to \$30 a head; 250 grade cows that averaged \$40 to \$60 a head; fifty yearling steers that went for \$34.75 a head. The registered cows with calves at foot will average from \$150 to \$275 apiece. The yearling thoroughbred bulls will average \$96 a head. In fact, the prices received were a surprise to nearly every one present, and this sale may be considered as an object lesson to Kansas breeders that they should not soon forget. In fact, we heard the remark at the sale that many would have bought had the price not gone out of their reach, and we were very sorry to see the local farmers allow the best cattle to go out of the State, for we know, without question, that the time is not far distant when they will realize what they have lost.

The cows were all safe in calf to the best bulls on the farm, and in many cases men were bidding on three head instead of two. Many calves were sold

5/A HORSE BLANKETS
ARE THE STRONGEST.
Awarded highest prize at World's Fair.
Made in 250 styles.
Square Blankets for the road.
Sauringie Blankets for Stable.
All shapes, sizes and qualities.
The Best 5/A is the
5/A BAKER BLANKET.
Many Have Worn 16 Years.
Thousands of testimonials.
Sold by all dealers.
Write us for 5/A Book.
WM. AYRES & SONS, Philadelphia.

KENDALL'S SPAVIN CURE
THE MOST SUCCESSFUL REMEDY FOR MAN OR BEAST.
Certain in its effects and never blisters.
Read proofs below
KENDALL'S SPAVIN CURE
BLUPOINT, L. I., N. Y., Jan. 15, 1894.
Dr. B. J. KENDALL Co.—I bought a splendid bay horse some time ago with a Spavin. I got him for \$30. I used Kendall's Spavin Cure. The Spavin is gone now and I have been offered \$150 for the same horse. I only had him nine weeks, so I got \$120 for using \$2 worth of Kendall's Spavin Cure.
W. S. MARSDEN.
KENDALL'S SPAVIN CURE
SHELBY, Mich., Dec. 16, 1893.
Dr. B. J. KENDALL Co.—I have used your Kendall's Spavin Cure with good success for Curb on two horses and it is the best liniment I have ever used.
AUGUST FREDERICK.
Price \$1 per Bottle.
For sale by all Druggists, or address
DR. B. J. KENDALL COMPANY,
ENOSBURGH FALLS, VT.

MEN BE
We will send you the marvelous French Preparation **CALTHOS** free, and a legal guarantee that **CALTHOS** will restore your Health, Strength and Vigor.
Use it and pay if satisfied.
Address **VON MOHL CO.,**
Sole American Agents, Cincinnati, Ohio.

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.

A SEPTEMBER IDYL.

A brown maid crossed the hills, one day,
And carelessly sang as she passed:
"The summer has come and passed away,
The months were like weeks, the weeks as a day,
The buds and the blossoms are dust and decay,
What matter if love only last?"

A lad in the valley heard the sweet song,
And answered the words of the maid:
"No work could be heavy, no sorrows could throng,
No weeks could be weary, no days could be long,
And life would be pleasant, for naught could go wrong,
With you for my sweetheart," he said.

As the lad and the maiden journeyed that day,
Just as the sun went down,
They met, for their paths both led the same way,
And he said to her: "Tarry with me, I pray,"
And she answered him softly: "With you I will stay,"
And they nevermore journeyed alone.
—Miller Purvis, in Womankind.

A DAY-DREAM.

Between two rippled fields of grain—
Two broad fields lying in the sun—
There creeps a narrow country lane,
Where thrushes love to sing their strain
And robins call when day is done.

And down the lane is cool and sweet;
The sparrows sing adown the lane;
Above the arching branches meet,
And on the grass beneath your feet
Their shadows stir and weave again.

And through the warm and sleepy air
Come faint, half-fancied sounds, that tell
Of Summer, brooding everywhere;
The call of quail, and here and there
The distant clinking of a bell.

I say "they come," for since, with you,
I dreamed a happy dream one day,
And, waking, found the dream was true—
It seems to me as if I knew
That Summer lingered there always.

That bars of sunlight always lay
Across the pathway's checkered shade;
And if it lingered there to-day,
I still should hear the tall grain sway,
And hear the hissing noise it made.

And so I always see you stand—
With sunlight falling on your hair,
With sunlight over all the land
Because of you—see, hand in hand,
You and the Summer standing there.
—Charles B. Going.

GRANDMOTHER'S IDEA ON BLOOD.

Some men will tell you that our station in life depends upon the blood that circulates in our veins, while some women will have the presumption to tell you that blood is made pure by the food you eat and the manner in which it is cooked, the ventilation of your kitchen, etc. Others will tell you that it is the poisonous evaporation that arises from the filth that is found in our surroundings that destroys the element that purifies the blood. Each in his or her turn may write a most elegant article on blood, and yet not exhaust the subject.

But when Peter asked the Master about the matter, He wound him up with a very short sermon. "Peter," said He, "art thou ignorant of these things also? Dost thou not know that what goeth into the mouth defileth not the man, but that which cometh out of the mouth defileth the man?"

The contents of the heart the mouth will speak. Hence the heart is the great reservoir of our soul. It is the refining machine of our mortal bodies, and when our food is turned into blood and passes into that great reservoir, if it has been cleansed by blood of the Lamb—if that great refining machine of our mortal bodies is in perfect working order, then our blood will be purified and pass on its mission with life-giving power. But if it is contaminated with sin and disease, it is unable to do its mission as a purifier and the blood passes into our bodies in an impure state, taking all the life-giving power out of it, leaving it dull and stupid.

The only way to improve the blood and elevate the human race is to have our hearts cleansed by the almighty power of the Living God. Let us be careful how we let our light shine. We are told that as our hearts are so are we. We are also told that we shall see the fruits of our thoughts. As our hearts are, so are our thoughts; hence, if our hearts are cleansed our thoughts will be right and our blood pure.
MRS. G. W. LIGHT,
Liberal, Kas.

THE MOHAWK VALLEY.

"O, sweet is the vale where the Mohawk gently glides
On its clear winding way to the sea,
And dearer than all storied streams on earth beside
Is this bright rolling river to me."

Thus sang the poet Elliott, and his song of "Bonny Eloise, the Belle of the Mohawk Vale," has resounded through parlor and hall for generations, and its sweet strains will fill the hearts of the unborn. But the rhapsody of the valley is yet to be written. Some soul more great than chance or fate
Has builded yet for man
Shall lilt with ome with flute and drum
And all the pipes of Pan,
And pour a strain with sweet refrain
Caught up by tuneful throats,
Till o'er the plain, from main to main,
Mankind shall sing his notes,
And summer breeze and humming bees
Shall falter by the way,
And purring stream with glance and gleam
Shall loiter in its play,
While morning stars forget the bars
They sang in Galilee,
And beg of him with eyes adm
His music's matchless key,
Oh! glorious Mohawk vale!

This historic valley is called the "Farmer's Paradise," and not inaptly. As one rides through this rich, broad valley, skirted by hills and baby mountains on either side, with the Mohawk river sweeping down the center aisle, he is filled with the gladness of existence. Almost since the landing of the Pilgrims this valley has been the home of the most thrifty and prosperous pastoral people in America, and that means the most prosperous on the planet. Fine farms in perfect tith; fine herds in splendid condition; fine houses, painted and polished; fine barns filled to bursting; fine schools and churches and villages; fine scenery; fine roads; fine horses and carriages; houses paid for and money in bank, and the greatest city on the continent just at its gateway to feed, these are the special and favorable conditions of life in this great valley.

In pre-colonial times, the six Indian nations of Revolutionary fame and infamy, clashed and contended with one another for supremacy in this valley that was named after the Mohawks, at one time the most powerful of the aborigines in all that great stretch of country, and very naturally the bosses of that region, while their predominance lasted. When Holland took America, the Dutch took the Mohawk valley, and they and their descendants have substantially kept what they took from that day to this, and it would require a large park of cannons or a large pile of guilders to oust them. They know a good thing when they see it. Here, during the Revolution, Great Britain sought by struggle and stratagem to quarter and feed her armies, and in the same valley Washington found sustenance and recruits that contributed largely to the success of the colonies against the common foe. Within this valley and its tributaries were fought many of the dominating battles of the Revolution, so that it is truly a historic section of our great commonwealth.

No finer rural scenery greets the eye of man than that from the confluence of the Mohawk and Hudson rivers for a hundred miles westward over the great four-tracked New York Central railroad, and its almost continuous contiguity of towns and villages, crowded with sacred and heroic memories of our forefathers in their struggle for that liberty and freedom which we offer the world as the best example on the planet.

THE MOHAWK VALE.

Above the gleam of seaward stream
The ships of Cloudland sail,
While wealth untold by shining gold
Flows down the Mohawk vale.

There morning sun, with life at one
Thrills all the vale astr,
And clouds in love cling close above
The hills of Herkimer.

There moonbeams fall on tree and wall,
While creepers cloak and hide
The belting zones of storm-brown stones
That farm from farm divide.

There lifting pines fling back the lines
Of happy human song,
And warbling throats repeat the notes
And all their joys prolong.

There fields of wheat green meadows meet
By fields of waving corn,
Where meadow lark from dawn till dark
Flings back the notes of morn.

There mullen stalk that yearns to talk
Stands nodding in the breeze
To finch and jay that wing their way
Above green bannered trees.

There cowslips hold fair urns of gold
Above the meadows' green,
And lily burns, mid fringed ferns,
Through summer's shine and sheen.

For standing room to smile and bloom,
The daisies bend in prayer,
And alder bows to pay its vows
With weeping osier there.

There clust'ring shrub and cedar scrub,
With shumac all aflame,
And chestnut bur, with life astr,
Proclaim their Master's name.

White-shafted birch, where song birds perch
To woo the nesting mate,
And towering beech such sermons preach
As men might emulate.

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

Royal Baking Powder

ABSOLUTELY PURE

There linden pours its honeyed stores
To multitudes that strive,
Where industry makes destiny
Within the teeming hive.

While round each door and evermore
The clinging tendrils climb,
No wandering bees find sweeter trees
Than orchards in their prime.

There village green fronts village green
Where once the Segamore
Drank nature's wine and trained her vine
Above his wigwam door.

Men tell the tale that in this vale
That human foe, Bargoyne,
With tempting bribes brought many tribes
His hireling ranks to join.

There in the wood wild nations stood,
Six nation's all save one,
In ambush stood in covering wood
Till murder's work was done.

Great Britain laid that ambuscade,
The troops came in, and then,
With savage yell, red devils fell
On unsuspecting men.

And far and near the axe and spear
And deadly rifle ball
Found friend and foe and laid them low,
Nor chose 'twixt one and all.

The arrow's flight, the stroke of might,
The rushing tomahawk,
The powder's flash, the musket's crash,
Hearse-throated cannon's talk,

And wild despair filled all the air
Resounding o'er the plain,
While murder leapt from heap to heap
Of white and red men slain.

In that wild storm, one towering form
Pressed on with sword and spur,
Saltation's king! who else could fling
Its bolts like Herkimer?

Where fœmen met the swamp was wet
With water and with blood,
While down the vale swelled murder's gale
And death's vermilion flood.

Long years have past since that wild blast
Of flint and iron hail
And lightning's flash and thunder's crash
Went roaring down the vale.

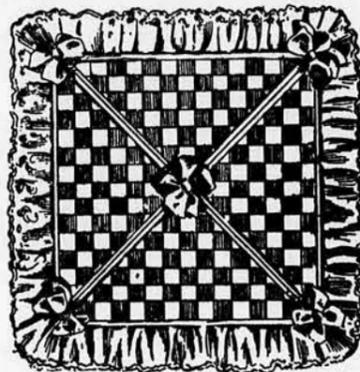
Now, peace to thee, thy sons are free,
Oh, glorious Mohawk vale!
True as fine gold thy sons of old
Stood till they could prevail.
HENRY W. ROBY, M. D.

SUMMER FANCY WORK.

A Novelty Which Produces a Good Effect with Little Labor.

A novelty in fancy work, which is quickly done and is not expensive, and produces a very good effect with very little labor.

This work can be used for pincushions, mats, handkerchief sachets, and even slippers, a little taste only being required in the blending of colors, and care being taken to choose a suitable material as a foundation for the ribbon. After cutting a lining of silk, or



any other material, the shape you desire, the next thing is to tack alternate rows of different colored satin ribbons as close together as possible, beginning at the top of the lining, and cutting the ribbon off into length as you finish each row. Then commence to darn the two-colored ribbons in and out, over the dark and under the light one way, and reversing the order in the next row, so that squares are formed. A pretty handkerchief sachet could be made of blue satin ribbon and silver braid of the same width. Slippers would look well in black satin ribbon and gold braid. A pretty pincushion could be made of rather wide satin ribbon, all one color, with trimmings of

lace and bows at the corners. A large bag would be effective with tartan and black ribbon for the bottom part, and push to match one of the colors in the plaid at the top, finishing off with cord and tassels or wide satin strings.

The sachet in the sketch is made of blue satin ribbon and silver braid. Four corners form the front, and the back could be plain, or to match the front, according to taste. Each corner should be bound with ribbon, and a hook and loop should be placed under the bow. A frill of lace goes all round and bows trim the corners.—St. Louis Republic.

Dainty Linen for Dainty Women.

No dainty woman will ever make her tablecloths and napkins by machine, but will sew them by hand with the neatest, finest stitches of which she is capable, finishing the ends of the hem with care. Napkins should have the narrowest hems possible, done with short, even stitches, and the family initial embroidered in the corner, in white only. Some women prefer to mark napkins near the selvedge, half way from each hemmed end. This enables one to fold the napkins fancifully and displays the embroidery to great advantage. In addition to the napkins there are the little doilies which are under finger bowls. These are extremely pretty if simply scalloped in white cotton around the edges. A simple letter in the center is sometimes used.

How to Get Rid of Flies.

The following plan of ridding the kitchen and dining-room of flies is a good one: Take a small stove shovel, heat it red-hot, and pour on it a few drops of carbolic acid, having previously closed the doors and windows. In a few minutes open the room and the flies will be found to have entirely disappeared. Only a faint odor of the fumes of carbolic acid will remain.

To Restore Bleached Hair.

Hair that has been bleached by the use of peroxide of hydrogen will return to its natural color when the use of the peroxide is discontinued, but the change will be very gradual. Frequent washes will hasten the process.

To prevent the hardening of the subcutaneous tissues of the scalp and the obliteration of the hair follicles, which cause baldness, use Hall's Hair Renewer.

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A CHANCE TO MAKE MONEY.

I have berries, grapes and peaches a year old, fresh as when picked; I use the California cold process; do not heat or seal the fruit; just put it up cold; keeps perfectly fresh, and costs almost nothing; can put up a bushel in ten minutes; last week I sold directions to over 100 families; any one will pay \$1 for directions when they see the beautiful samples of fruits. As there are many poor people like myself, I consider it my duty to give my experience to such, and feel confident that any one can make \$100 or \$200 around home in a few days. I will mail sample of fruit in nice case and complete directions to any of your readers for eighteen 2-cent stamps, which is only the actual cost of the samples, postage, etc., to me.
MRS. A. M. CURTIS,
606 Chestnut St., Englewood, Ill.

The Young Folks.

Written for Kansas Farmer.
TIME'S RIVER.

Oh, the stream of time, with its ceaseless flow,
Comes down from the days of long ago,
Where ages back upon ages go
Into the boundless sea;
Where Nature hides from the view of man,
Where Earth and Tide and Time began
To work their parts in the wondrous plan
That shall end in eternity.

Man's puny nations rise and fall
But Time sweeps on and buries them all
Beneath its flood; beyond recall
They sink to rise no more.
Human passions and human pride
All sink from sight in the murky tide,
And undisturbed does the current glide
On to the farther shore.

Heroic deeds and lives sublime,
Pictures of beauty and gems of rhyme,
Come floating down on stream of time
From ages past and gone;
There are relics of war and emblems of peace,
Ruins of Tyre and statues of Greece,
Philosopher's stone and golden fleece,
And wreck of the Parthenon.

There are flashing swords and a broken spear,
Weapons of stone and banners queer,
Mystic symbols and signs appear,
Brought down from ages dead;
There are mounds of earth and temples of stone,
Buried image and fossil bone—
All swept down from the great unknown,
Where the river has its head.

Oh, our hearts grow old, our heads turn gray,
For we ourselves are drifting away
Into the Night that follows the Day,
And out on the silent sea,
Where the hand that guided Noah's ark
Must take the helm of our fragile bark,
And guide its course o'er the waters dark,
Into Eternity.

Ellsworth, Kas. G. A. TANTON.

THIEVING BLUE JAYS.

A Family of Three Bring Sorrow to the Heart of a Soapmaker.

Samuels, the Massachusetts ornithologist, in one of his books tells a story of a blue jay and a bit of soap. It was the last piece of soap that a collecting party in the Adirondack wilds possessed, and when the theft was committed by the bird the action was noted carefully for more than scientific reasons. Bird students know that the jay will take almost anything in sight and eat nine-tenths of what he takes, but they thought he drew the line at soap. It has been left to a family of Highland Park (Ill.) jays to bear out Samuels' story and to break the soap-eating record.

On the west side of the track in that Chicago suburb lives a German who thought that he would try the experiment of making soap for sale. He collected the proper ingredients, put them together, stirred them to the constituency of paste, and then just at evening he patted a cake and put it on a board in his yard to see if it would harden over night. He slept a little late and when he finally went to look at his soap cake, behold! it had all vanished save a thin edge. That was beautifully hard, though, and not stopping to conjecture what had become of the rest of the cake he stirred up the rest of his mixture and patted cakes until he had twenty-four, each weighing one-quarter of a pound. The sun had passed behind the heavy oaks in the yard, so the German went to the edge of the road, placed his board so that its ends rested on two barrels, and put thereon his soap cakes that they might harden.

A cement sidewalk was in process of construction across the road and a "boat" full of Portland cement mixed to mush with water and "torpedo" sand, was adjacent and parallel to the board and its load of cakes. The sidewalk contractor was across the road and the soapmaker went over to talk with him. His back was turned on his sticky product, taking advantage of which fact, for this bird is sharp—a family of seven blue jays, five full fledged young and the two parents, descended on the board and attacked the soap. The contractor saw them and watched in amazement. They devoured the mixture of lye and grease as a donkey devours thistles. Then the sidewalk man gasped out: "Hans, they are eating your soap."

The German turned, saw the last bit of one cake disappear, and then grabbed a big, round, smooth stone, such as the lake casts up, and threw it at a man

"puts" a shot, straight at the robbers. The birds rose, calling "thief, thief!" vociferously, for the bluejay is given to calling himself names. The stone landed on the edge of the board and turned the entire soap product into the sticky mass of Portland cement. Soap and cement were ruined.

The jays did not stop to decide which was the madder of the men, but made their way toward the Ravine drive, loudly calling "Thief!" as they went. —Chicago Tribune.

STRANGE FRIENDSHIPS.

A Pet Cat and a Canary Bird Become Inseparable Chums.

Cats learn all sorts of antics and sometimes form contradictory attachments, young, birds mice and puppies being the peculiar objects of affection. A story is told from authentic sources about a lady who had a pet canary and an equally well-beloved cat. When alone she allowed the former to fly about the room. Chance discovered that pussy was as fond of the canary as herself; for, to her surprise, one morning she entered the room to find that the bird had escaped and was perched on the body of the cat, who was apparently delighted. The bird seemed to have no fear, and after that the two pets were devoted companions. Their mistress had, however, another fright. One day the cat gave a terrible growl, and, seizing the bird in her mouth, leaped on the bed for protection. Her tail was swelled to twice its natural size, her hair stood on end and her eyes were as big as four ordinary cats' eyes. The bird was given up for lost. The secret was this: A strange cat had entered the room, and it was for the preservation of the bird that the cat had seized him, and as soon as the intruder was driven away she set the prisoner at liberty.

Another author tells the story of a cat and dog friendship. These two antipathetic creatures by nature grew so unnaturally fond of each other that they were never willingly asunder. Whenever the one had a choice morsel of food he was sure to divide it with the other. They ate out of the same plate, slept in the same bed, and took walks together. Wishing to put the friendship to the proof, the master took the cat by herself in one room, and gave her a sumptuous meal during which she enjoyed the bones of the quail and seemed to forget the dog. The other half of the quail, uneaten, was put in a cupboard, the door of which was unlocked. The cat left the room, went to the dog, and mewed loudly in different tones, being answered with short barks. Presently the dog followed his friend, and, going to the cupboard, the cat pushed off the plate covering the quail and laid it before the dog, who devoured it quickly.

A curious circumstance took place in New Orleans in the year 1833, when a bear was lowered into the



LEADING THE BLIND.

cage of an old African lion, supposing it would be torn to pieces. As many people were assembled to see the barbarous exhibition the bear placed himself in a fighting posture and flew at the lion, but to the amazement of every one the lion placed his paw upon the bear's head as if to express his pity, and tried to make friends with him. Taking the bear under his protection he suffered no one to approach the cage, and did not sleep until he was exhausted, so closely did

he watch over his new friend. He allowed the bear to eat, but refused food for himself, and guarded the bear with the jealous affection of a human being.

A clergyman tells the story of once walking through a meadow late one evening and seeing a great number of rats migrating from one place to another. He stood perfectly still, and the entire procession passed by him. Great was his astonishment to see an old blind rat holding a piece of stick at one end of his mouth, while another rat had hold of the other end, and thus conducted his helpless and afflicted companion. —Esther Singleton, in Chicago Inter Ocean.

AN AMUSING TOY.

How Any Boy or Girl Can Make a Japanese Shuttle-Cook.

Draw the outline of a yataghan blade—a yataghan is a Turkish sword—similar to that shown in the illustration, using strong paper. Let the base be circular. Cut out the drawing, and, using it for a model, cut as many more as may be required. Decorate them with a design painted in water-color, or drawn with colored crayon. Stick



JAPANESE SHUTTLE-COOK.

wax seals or little rounds of bread on the circular portions for ballast. Now throw them up in the air and you will see them come down slowly, turning round as they fall, and presenting a graceful and pretty appearance with their bright colors and beautiful motion.—Once a Week.

Try to Say These Rapidly.

The popularity of Peter Piper's celebrated peck of pickled peppers will probably never wane as a snare to catch the tongue that would fain be agile, but the test has formidable rivals. The following short sentences, as their authors maintain, do wonders in baffling the ordinary powers of speech: "Gaze on the gay brigade." "The sea ceaseth and it sufficeth us." "Say, should such a shapely sash shabby stitches show?" "Strange strategic statistics." "Give Grimes Jim's gilt gig whip." "Sarah in a shawl shoveled soft snow softly." "A cup of coffee in a copper coffee cup."

Before going on a sea voyage or into the country, be sure and put a box of Ayer's Pills in your valise. You may have occasion to thank us for this hint. To relieve constipation, biliousness, and nausea, Ayer's Pills are the best in the world. They are also easy to take.



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The FARMER'S REMEDY for the various diseases of domestic animals. It is easy to apply, relieves at once pain and inflammation, and cures quickly. Full directions with each bottle. For sale everywhere. Price, 25c., 50c. and \$1.00 per bottle.

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Display advertising, 15 cents per line, agate, (fourteen lines to the inch). Special reading notices, 25 cents per line. Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.

Annual cards in the Breeders' Directory, consisting of four lines or less, for \$15.00 per year, including a copy of KANSAS FARMER free.

Electros must have metal base. Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.

To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.

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

Every advertiser will receive a copy of the paper free during the publication of the advertisement.

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

The fall term of Washburn college (Topeka) opened last week. The attendance, especially of young men, is large.

The "hot spell" under which people are weltering at this writing, is said by Sergeant Jennings to be the longest and worst ever experienced in September since the records in Kansas began.

An exchange published in the corn belt advises its readers to hold their corn for 25 cents a bushel, even if they have to borrow money on it to enable them to hold. In no case, says this editor, should corn be sold at less than 20 cents.

The Mulvanes, of Topeka, have acquired several of the great salt plants at Hutchinson. The Mulvanes are undoubtedly the wealthiest men in Kansas, and with their wealth they possess tremendous energy. Their interest in the salt business means development and no lagging.

The managers of grain and stock exchanges find it necessary to interest country customers in the speculative markets in order to sell futures to advantage. For this purpose they are sending out circulars predicting sure and rapid rises in prices. Such rises may come but the predictions of these managers are the poorest kind of evidence.

Abraham Lincoln's sentimental perplexities are to be shown in an article of singular interest which John Gilmer Speed has written from unpublished letters of Lincoln to Joshua Speed, for the next issue of the Ladies' Home Journal. The article will show that the great President was not steady in his affairs of the heart, that he floundered in his love, and finally induced his friend Speed to marry and tell him (Lincoln) whether marriage was a failure or not.

A good deal of complaint has been made in times past because farmers who desired to ship their own grain were not able to procure cars. The Kansas Farmer asks that all such cases in the future be reported to this office and we will see what can be done about it. There are reliable commission houses to which farmers can ship, and there should be no reason why the farmer may not be his own shipper and receive all there is in his products.

Ribbon cane is a variety of tropical sugar cane. It is grown from canes of the previous season's crop and is not in practical culture grown from seeds. It requires a long season to mature and in the latitude of Kansas the roots would surely be killed by the cold of winter. To import "seed" canes and produce a crop for sirup in Kansas would make it an expensive luxury. The above is written to prevent misapprehension on account of a paragraph in the letter of W. E. Hutchinson, on the Horticultural page.

Sale Postponed.

Winterscheidt Bros., of Horton, Kas., write us as follows: "Owing to hog cholera all around us, we postpone our thoroughbred Poland-China swine sale until some day in November. Our hogs are all right yet, and doing finely."

THE QUESTION OF WATER RIGHTS.

The following news paragraph appeared in two daily papers last Friday:

The case of Peter Hansen against the Ward Irrigation Company was this evening ended by the jury bringing in a verdict for \$1 in favor of Hansen. The case involves the constitutionality of the new irrigation law. Hansen sued for \$3,000 damages for the diversion of the water from his mill by the Ward Company, of Logan. The case was really a test case and was backed by the Millers' Association of northwest Kansas. The right of about twenty-five mills was involved, the value of which amounted to about \$150,000. The case was on trial for a week and attracted much attention throughout all northwestern Kansas. The Ward Irrigation Company will doubtless take the case to the Supreme court. The Hansen mill is located on the North Solomon river at Logan.

The question of the right of the individual to use water has received the attention of law-makers and of courts for ages. In Kansas, however, the issues are almost new, from the fact that our running streams have not constituted a prominent part of our natural gifts, and from the further fact that, until recently, the attempts to use these streams have been made almost exclusively by millers, whose rights and liabilities are well defined by the "common law." But when interest was developed in irrigation, the Kansas Legislature assumed that it had the right, and that it was its duty to define by law the right to use water for this purpose and to authorize its appropriation to private use for irrigation purposes. The written constitution of Kansas makes no provision for the use of the waters of the State, so that the Legislature had neither guide nor limitation in that instrument.

The question has sometimes been asked, whether beyond the constitution, Kansas is under the Common Law of England or under the Code Napoleon. The territory was originally a part of the Louisiana purchase from France. While subject to France, the territory was under the "code." Did it cease to be under the "code" and come under the common law by transfer to the United States? This question, heretofore unimportant, may assume great importance in the litigation which is likely to arise as to water rights, from the fact that the common law, which is the result of the attempts of the courts of England and America to do justice and equity on questions of dispute, has had very little to do with the use of water for irrigation. The rights and interests of irrigators may be said to have been "not in court" when the common law adjudication of water rights were made. The "code," on the other hand, while likewise the result of attempts to do justice, grew out of a much more complete consideration of the interests of irrigators.

But whether Kansas is nominally, historically and legally under the common law or under the "code", certain it is that her courts have derived their opinions of justice, equity and constitutional right much more from the teachings of the common law than from those of the "code." Most of our jurists have come from common law States; their books are common law books and their education is in the tenets of the common law.

The experience from which the common law was evolved embraced every possible use to which the water of a stream could be applied, in the driving of machinery, the watering of stock and domestic purposes. The only one of these, which uses water in quantities at all comparable to those required for irrigation is the driving of machinery. In this use it is possible to return to the stream its volume unimpaired and unpolluted. This use the common law permits and this return it requires. But in irrigation, the case is different. Water used for irrigation is not returned directly to the parent stream, either in whole or in part. It is estimated that about half of the water applied to the land does eventually find its way back to the stream if used within the drainage area of the stream. In no case can users of water below an irrigation diversion leave the volume of the stream unimpaired. Under the common law, as so far evolved, no way is apparent by which individuals can be authorized to divert water from a stream for irrigation.

But whether our courts hold that Kansas is under the common law or under the "code," certain it is that they are very soon to be called upon to do justice between parties contending for the right to use water. Not unlikely the extent of this use, the manner and source of its procurement, and the mode of its application, may bring into court interests and conditions new to both the common law and to the "code."

As to the contention between persons

desiring to use the waters of a stream for diverse purposes of agriculture and milling, there is precedent for reasoning like the following:

Agriculture is the oldest, the primary industry, and has first right to such gifts of nature as are necessary to its success. If the farmer may not produce his crop, the miller will have nothing to grind. If the farmer and the miller both need the water of the stream the farmer must be first served, even if the miller has to find some other power with which to drive his machinery. The farmer cannot do without the water; his crops will fall and want will prevail except he use it. The miller may apply the wind or he can generate steam. The necessities of society require, first of all, that agriculture shall succeed. When reasoning similar to this, agriculture was placed above mining in a notable decision in California, some years ago. It is well that the matter is likely to go to the Supreme court in this State, and it is desirable that all aspects of the case be so fully presented that we may have an interpretation of rights with all interests in court.

The further questions which are likely to arise as to the use of the underflow and various contention between irrigators, will form another branch of the subject requiring much more attention than has yet been bestowed by either legislators or courts.

RECOVERY.

The great depression in this country told with crushing effect upon the value of many corporation shares. A large percentage of the railroads went into the hands of receivers and stocks which, a few years ago, were thought to be better than government bonds, went down to almost nothing. There has been some recovery during the last six months. Indeed, the early days of last March seem to have marked the lowest point, so far as prices of corporate stocks are concerned.

The following table shows prices six months ago and now, as recorded on the New York stock exchange:

	March 6, 1901	Sept. 11, 1901
Atchison, Topeka & S. F.	37 1/2	21
Canadian Pacific	40 1/2	57
Canada Southern	48 1/2	55 1/2
Cent. New Jersey	85 1/2	111 1/2
Mil. & St. Paul	54 1/2	76 1/2
Chicago & Northwestern	88 1/2	104
Rock Island	61 1/2	80 1/2
Del. & Lack.	157 1/2	163 1/2
Illinois Central	84 1/2	104 1/2
Louisville & Nashville	48 1/2	64
Mo., Kan. & Texas	13 1/2	18 1/2
Mo., Kan. & Tex. pfd.	21	39 1/2
Missouri Pacific	19 1/2	39
N. Y. C. & H. R.	95 1/2	108
Texas & Pacific	8 1/2	12 1/2
Wabash pfd.	12 1/2	24 1/2
Sugar Ref.	91 1/2	111 1/2
American Tobacco	91 1/2	96 1/2
Western Union Tel.	86 1/2	93 1/2

It is safe to say that no such advance in earnings has been made as would correspond to the advance in prices of stocks. But some of the properties represented were in March involved in litigation which threatened to extinguish the stockholders' interests. Various adjustments have since been made whereby both stockholders and bondholders hope to protect their interests. Aside from these adjustments there is actually more business for these corporations now than six months ago, and while the recovery of the country from the depression has not equalled that shown in these stocks, there is no question but that some recovery has been made.

EMERY AT ALBUQUERQUE.

Judge J. S. Emery, of Lawrence, Kas., in his address, as National Lecturer, before the Albuquerque Irrigation Congress, last Monday, showed an appreciation of the situation and needs in the great arid portion of the United States. His demand for government surveys for the discovery of the water necessary for irrigation is particularly applicable to the situation on the plains. That these plains have or can retain sufficient water for the greatest irrigation development the world has ever seen, has been proven in a general way. But the determination of the distribution of this water in the natural reservoirs, and of the sites for artificial storage reservoirs, should great ones be determined upon, or of systems of reservoirs under private auspices, are matters to be ascertained by survey. Judge Emery's plan is to have this survey made by the general government. This will meet with no opposition in Kansas, providing it can be accomplished soon enough. The survey now in progress under State auspices is of immense value and is supplementing work previously done by the government. It is probable that this State work will be crowded in the future, and, while we shall always be able to avail ourselves of all informa-

tion furnished by the more general work of the government, Kansas is not likely to let her irrigation development wait.

It is gratifying to note that the Kansas delegation at Albuquerque is turning the attention of the congress to the needs of the plains and making it manifest that this greater irrigator region, as well as the small fertile strips among the mountains, must have consideration.

THE MOUNTAINS AND THE PLAINS.

The National Irrigation Congress is in session at Albuquerque, N. M., this week. It is a notable gathering in which Kansas is well represented. This congress has, at former sessions, inclined to give more attention to questions of law and social organization as related to and likely to result from the irrigation development, than to the practical questions of obtaining and applying water. The interests of colonization schemes and of great ditch and reservoir companies have also been somewhat manifest. Some of the leading men of the congress have had a weather eye out upon the prospects of bond deals and financial schemes in connection with vast co-operative as well as corporate plans for irrigation development. A cruel blow to the latter was administered by a recent decision, in a Federal court, by which the Wright law in California, under which some millions in bonds had been issued and sold, was declared unconstitutional.

These issues are less interesting in Kansas than in the mountain States, for two reasons: First, Kansas is easily reached by the individual settler, so that colonization, neither as a convenience nor as a necessity, can be effectively urged. The chief interest Kansas has in great canal schemes is to prevent them from absorbing the attention and appropriating the water which should be devoted to private and individual enterprises. The situation in Kansas, and in most of the great region east of the Rocky mountains and west of the humid belt, is such as to invite small plants, and to have its best development under individual enterprise. These suggest little or no change in the social order now prevailing. They call for no communal establishments; no change in land holdings; no substitution of corporate for individual effort. The vast domain in which the supplies of water are placed within easy access of the individual farmer contains more tillable land than all of the remainder of the arid region, and is destined to very soon show a development of intensive agriculture under irrigation on a scale to surprise the world. Whether this development, already well initiated, shall receive recognition from the eminent body now in session at Albuquerque, or whether its interests shall center in more local organizations, depends much upon the disposition of those who are managing the national meetings. For the schemes of the schemers the plains are unattractive. They furnish no openings for big jobs, big speculations or big financial operations. But they do furnish attractive opportunities for individual enterprise and individual ownership of unparalleled agricultural and horticultural opportunities.

The State Fair.

The State fair to be held at Wichita, October 1 to 5, inclusive, promises to excel all former efforts at fair management, for lo, these many years. New buildings are under process of construction and the grounds are being made as attractive as it is possible for landscape artists to make them; and, in fact, no step is being left untaken that will in any wise add to the appearance, convenience and comfort of those who may attend, either as a visitor or an exhibitor. Remember the dates, and also remember that Hon. Wm. H. Harvey will address the multitude of people, at the fair grounds, on the afternoon of October 2, and that one fare for the round trip prevails in Kansas, Oklahoma and Indian Territory. Thousands of people will be there on that great day. You come, too. See advertisement in this paper.

A Good Feed Grinder.

One of the most practical and effective machines ever built for use on the farm, is the Star Feed Grinder. Simply constructed, yet strong and powerful, and with new and great improvements added, it now has a capacity of twelve to twenty-five bushels of ear corn per hour. It grinds dry or damp corn, as well as all small grains, as fine or as coarse as may be desired. It is sold on trial, so confident are the manufacturers that it will do all they claim for it. It is manufactured by the Star Manufacturing Company, 83 to 89 Main street, New Lexington, Ohio, who will mail full particulars to any one on application.

WEEKLY WEATHER-CROP BULLETIN.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending September 16, 1895—T. B. Jennings, Observer Weather Bureau, Director :

CONDITIONS.

The week has been excessively warm, (the warmest week in September on our records), with no rain in the western division, light rains in Barton, Stafford, Reno, Rice, Mitchell, Cloud and Dickinson, and heavier rains in Clay, Harvey and north and east parts of Butler; while in the eastern division, light rains fell north of the river, and in Johnson, Miami, Linn and Chautauqua, but the event of the week was the great rainfall in the middle counties of the eastern division, along the Neosho Valley, being upwards of six inches over Lyon, Coffey, Woodson and Neosho counties, and culminating in a fall of ten inches at Gridley, in a southwest part of Coffey, this great rain falling inside of seventeen hours.

RESULTS.

EASTERN DIVISION.

The dry, hot week, since the storm, has matured corn rapidly and permitted haying to be about completed, except in the overflowed lands. In the belt of the storm, which moved from northwest southeastward across Lyon, Coffey and Woodson, large amounts of corn, wheat, hay, melons, pumpkins, etc., were washed into the Neosho, the storm spreading as it advanced, extending the destruction into Wilson, Montgomery, Cherokee, Neosho and Allen. Outside of the storm area much plowing has been done.

Allen county.—Hottest week of the season; corn-cutting, haying and broom-corn seeding all over; fall plowing begun; Neosho river twenty-six feet

corn ripening fast and all right; oats injured some, those being threshed being damp and musty; apples plenty. Montgomery.—Verdigris river two inches higher at Independence and from eighteen to twenty-four inches higher at north line of the county than ever before known, and has done great damage to corn, wheat and hay in bottoms.

Osage.—Rapid progress in haying and corn-cutting has been made this week. Pottawatomie.—Farmers took advantage of the splendid haying week; corn maturing fast, will be fit to crib next month.

Wabunsee.—Hot winds; corn fast drying up; haying about done.

Wilson.—Apple crop badly damaged by storm; the Verdigris river reached from bluff to bluff; thousands of acres of corn badly damaged or washed away.

Woodson.—Corn crop made and much of it on the river carried off by high water; great damage done to all crops on river and creek bottoms.

MIDDLE DIVISION.

The hot, drying week has helped haying, which is being pushed all over the division. Corn ripening rapidly, though some reports of damage by hot winds and bugs. Much plowing is being done, but rain is needed, not only for late crops but also to put the ground in better condition.

Barber.—It has been excessively hot.

Barton.—Hot winds are pushing the corn ahead pretty lively; good week for haying, but wheat-sowing is being checked by the grasshoppers.

Butler.—Corn-cutting has begun; haying is in full progress, quality fine; considerable fruit has been blown down.

Clay.—Haying is in full blast, a large crop of best quality has been put up; corn is injured by hot winds and bugs more than was expected; wheat-sowing has commenced.

hay being put on the market, also the fourth cutting of alfalfa.

Smith.—Haying and corn-cutting is in progress; it is dry and hot.

Stafford.—All crops about matured; the week has been windy, hot and dry; broom-corn the best that has been raised for years; chinch bugs thick and doing much damage to new wheat; late corn will make a fair crop.

Summer.—Pastures are drying up rapidly; corn-cutting is done; no wheat has yet been planted, it being too dry; bugs are thick.

WESTERN DIVISION.

Hot and dry, a hard week on corn but fine for haying, fodder-cutting, threshing and securing the third crop of alfalfa.

Decatur.—It has been a hard week on corn; late corn, which is clean, would be good if we should get a rain soon.

Finney.—Sorghum crop is being harvested for fodder; weather is favorable for alfalfa.

Ford.—Weather has been hot and dry; peaches in abundance; third crop of alfalfa first-class.

Gray.—Corn and Kaffir corn about all in shock, which will make us plenty of feed and to spare.

Hamilton.—Everything completely dried up; hay is fine and is being put up rapidly, the crop is about double the usual.

Meade.—Weather is very dry and hot.

Morton.—Corn is drying up fast; Kaffir and rice corn will make a heavy crop, both of seed and fodder; the hot winds have not yet hurt them.

Norton.—Fall work is progressing well; crop of hay very large; corn is ripening rapidly; but little fall plowing is done.

Seward.—Haying is in progress; un-ripened fruit suffering for want of rain.

Sheridan.—Weather is very hot and dry; the farmers are cutting hay and cane; broom-corn-cutting nearly over; it is too dry to plow.

Thomas.—The week has been characterized by hot winds.

Trego.—Late corn and cane are drying up; Kaffir corn looks well; threshing and making hay form the principal work.

Wallace.—Most of the corn is cut up; potatoes are partly dug and will make a good crop; it is too dry to plow; weather is excessively hot.

CONCRETE FEEDING FLOORS.

EDITOR KANSAS FARMER:

I noticed, in a recent issue of your paper, mention of some farmer reporting that he had constructed a cement or concrete feeding place for his hogs, that he might place their corn before them in palatable shape in all weather. Will said brother farmer, or some one else of your readers, who has experience in the matter, advise us through the columns of your valuable paper, in regard to the proper materials and correct proportions of each kind required to construct such a place, that more of us may do as he did? Wichita, Kas. N. SWANSON.

Prepare the place for the feeding-floor by removing all trash and packing the earth hard and smooth. It is well to thoroughly wet the soil to a depth of several inches and while wet tramp it with horses until perfectly hard. If only a small floor is to be constructed it may be more convenient to settle the earth with a pestle than to tramp it with horses. If the surface is removed to a depth of four or five inches and the place filled with cinders well packed, an ideal foundation for the concrete floor is obtained. When surfaced ready for the concrete, the foundation, whether of earth or of cinders, should have the same slope as is desired for the floor. One inch to ten feet will probably be sufficient, but two or three times as much will not be found too much for a wide floor. A sloping floor keeps clean much better than a level one.

Having properly prepared the foundation, begin at one corner, and with 2x4 scantling placed n edge inclose a small space—say one square yard—to be filled with concrete. This is conveniently arranged by laying on edge a 2x4 of suitable length from a corner across or partly across the end, and another from the same corner along one side. Then inside the floor space lay another 2x4 parallel with that across the end and three feet from it. With a 2x4 three feet long, cut off a square yard. Fasten the scantlings all in place by stakes. By moving the short scantling after the space has been filled another space may be inclosed, and by moving as will readily suggest itself, the entire floor may be successively inclosed.

If a floor of less thickness than four inches is to be made use narrower scantlings.

Take one part hydraulic cement, one part sand, and one part gravel or broken limestone; mix dry. Separate a portion of this mixture—about three

busheles—and add to it enough water to moisten it, but not enough to make it sloppy. Mix well and quickly. Then shovel the moistened mixture into the inclosed square yard between the scantlings and beat it down with a pestle. If too much water has been used, it will splash when struck hard with the pestle, and if too little the materials will not stick together well. The surface of the concrete may be left slightly below the top of the 2x4's. This space may be filled with concrete mortar without very coarse gravel or broken stone. It should be put on with a trowel and smoothed down very hard. This mortar may be of the consistency of ordinary plastering mortar, but should not be mixed in large quantities, for it must be used soon after it is wet, otherwise the quality is impaired. The application of this top coat may be made as the work proceeds, square by square, or it may be deferred until the foundation work is all completed and put on afterwards. It is probably safest, however, to finish as you go, for then there is less danger of the top coat peeling off. If the foundation be all laid first, it must be cleaned and moistened before the top coat goes on, otherwise, the top coat is liable to separate and come off.

Such a floor should be wet thoroughly after finishing, and covered over with sand or straw to prevent too rapid drying. If allowed several days in which to season under cover it will be very durable.

The best cement is the Portland, but it is expensive, and very satisfactory floors may be made with Louisville cement, which is much cheaper.

A Noxious Weed.

EDITOR KANSAS FARMER:

I would like to have you tell us about a plant called "Chinese lettuce," which grows in clover fields. Heads look like timothy, quite a good deal. The knowing ones say it will in a very short time ruin a meadow when once started. Most people do not know what it is. CHAS. E. ELLIOTT.

Oskaloosa, Kas.

The plant referred to by Mr. Chas. E. Elliott, of Oskaloosa, a specimen of which he has sent me, is English plantain or English rib-grass, (Plantago lanceolata). It is perennial, having many long, slender leaves, strongly ribbed with five to seven ribs, all rising from the ground, some species of which are very common in our door-yards and wagon drives near the houses. It has scapes or seed-stalks nine inches to two feet high, rising from the ground, and having at their summit short spikes half an inch to two inches long, well filled with seeds.

The plant, although it may be troublesome for a season, can be readily gotten rid of by plowing and cultivation; that, of course, is impracticable in clover fields; hence it flourishes there. Mowing does not injure it, but, on the contrary, rather seems to increase its seed-producing prosperity. It will bear a reasonable amount of tramping, and flourishes in pasture fields when it once gets a foothold there.

The plant is a native of England, and has been introduced into this country through clover and other seeds brought from there. It will not do well in a dry climate; hence it will make little progress in Kansas, especially in western Kansas; but the past season has been so wet that it seems to be growing vigorously wherever it is found this year in eastern Kansas.

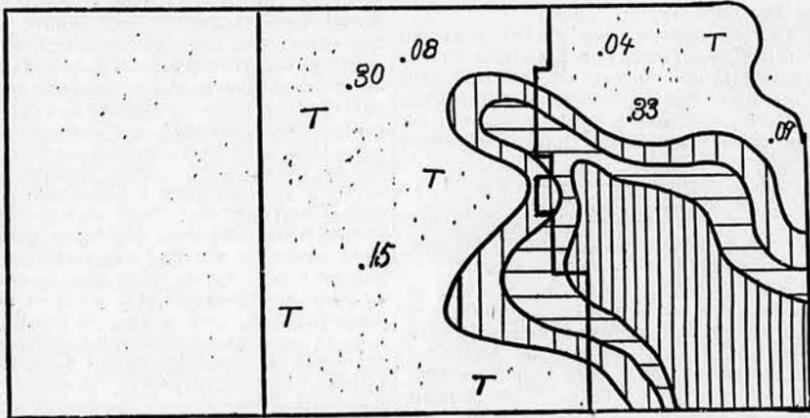
It is not an especially harmful weed, as it is easily gotten rid of by plowing; and while, like the ox-eye daisy, it may be troublesome enough now and then, it will undoubtedly run out or be amenable to ordinary treatment.

B. B. SMYTH.

Kansas Academy of Science, Topeka, September 9.

A Chance for Women to Make Money.

I see so many men giving their experience in the Dish-Washer business that one would almost think the men had "taken to washing the dishes," but ladies can do just as well as men. I have been devoting my time for over a year to selling Perfection Dish-Washers. My husband has aided mornings and evenings, and we have cleared \$5,000 in a year. The trouble with people is they will not try new things, so let the golden opportunities pass. Every family wants a Dish-Washer, and any one can sell them if they try. I do not canvass at all; people come or send after washers. I have examined all the Dish-Washers made, but the Perfection has no equal. You can get complete instructions by addressing the Perfection Manufacturing Co., Drawer a-3, Englewood, Ill. I want ladies everywhere to try this business and let us hear how they succeed. A READER.



Scale of shades less than 1/4, 1/2 to 1, 1 to 2, over 2, T Trace. ACTUAL RAINFALL FOR WEEK ENDING SEPTEMBER 14.

above normal, and immense amount of damage done on the bottoms.

Brown.—Dry, hot week, favorable for haying and repening late corn, which is generally better than the early; threshing nearly completed; much fall plowing done; ground in good condition for wheat-sowing; apples falling badly.

Cherokee.—Unusually hot for the season of the year; ground too wet to work.

Coffey.—The destruction of crops by the storm will never be fully told; hay and wheat stacks were blown down and carried off by the high water, corn in shock washed away, fruit beaten to pieces by the hail, what remains on trees now rotting where hammered by hailstones.

Crawford.—Furious rain storm, with some high wind, doing great damage to all growing crops and fruits; one forty-acre orchard has not twenty bushels of sound apples out of 2,000.

Douglas.—Corn is drying very fast; potatoes doing well; a very fair second crop of hay will be cut in places.

Franklin.—Warm and dry since the 9th; corn ripening fast; peaches and apples rotting on the trees; all other crops doing well.

Greenwood.—A heavy wind, accompanied the rain; considerable damage done to corn and fodder crops.

Jackson.—Hot, dry week; corn maturing fast; haying about over, the late cutting giving much larger crops than the first.

Labette.—Too wet, threshing machines all swamped; Neosho river six miles wide here and is causing great destruction on the bottoms to corn, wheat and hay; apples falling badly.

Leavenworth.—Corn-cutting about all done; very hot; winter apples about ready to pick.

Lyon.—Much corn blown down during the storm and all low lands flooded.

Marshall.—Hot and dry all the week; all crops maturing in good condition.

Miami.—Weather favorable for crops;

Cloud.—Late corn maturing rapidly; soil becoming too dry for fall planting.

Cowley.—Plowing for wheat well along; corn and Kaffir safe; rain needed.

Dickinson.—All kinds of vegetation completely dried up; meadow and pasture grass is dead; ground too dry and hard for plowing.

Harper.—Weather is hot, dry and windy; grasshoppers are bad; rain needed.

Harvey.—Hot winds have dried things up quickly; some corn ready to crib.

Kingman.—Hot winds are blowing; very dry but plowing still continues; vegetation is withering.

Mitchell.—Late planting of corn injured by hot winds and bugs; grasshoppers are numerous and have injured buckwheat and turnips; wheat-sowing is delayed by dry weather; forage crops abundant; apples poor in quality but peaches are good.

Osborne.—The week has been dry and hot; pastures are drying up; haying nearly over.

Ottawa.—A hard week on both animals and vegetation; wheat-sowing delayed on account of grasshoppers.

Phillips.—Corn drying up badly, in fact everything is being cooked; farmers about through haying, crop is heavy.

Reno.—Weather extremely dry and hot; everything is drying up in the western part of the county.

Rush.—Week hot and windy; ground too hard for plowing; late corn burnt up, other crops too well matured to be damaged much; pasturage is good; sorghum immense; threshing is nearly over; hay crop heavy and being stacked in fine condition.

Russell.—Hot winds are damaging late corn badly; bad prospects for fall plowing and wheat-sowing.

Saline.—This has been a hot, dry week; most corn now too dry to cut up; haying most done; pasturage getting poor.

Sedgwick.—Very warm and dry; good

Horticulture.

SOUTHERN VEGETABLES AND FRUITS IN KANSAS.

EDITOR KANSAS FARMER:

Four years ago I determined to try to cultivate some Southern vegetables on my Kansas farm.

Mexican beans (frizoles), were planted the latter part of April. They grew thriftily all of a rather dry summer and barely bloomed before frost killed them. They won't do.

Black Eye and Lady Finger peas, of the Carolina variety. They were a success from the start. I have raised them for four years. I drill them with the corn-planter and only use the cultivator to work them. Planted about the 10th of May, they gradually spread their vine from row to row by July. They bear a new crop after each shower in drier seasons. In wetter ones they bloom and bear prolifically till frost. The fruit is fine food for the table, for poultry and for hogs. The vines cut with peas on them afford excellent forage for cattle and sheep. Different varieties of this pea may be sown broadcast and cut as forage. Turned under with the plow, it is a superior fertilizer, and will be used extensively as such in the future for fertilizing our uplands. Edward Atkinson considers it the greatest of all Southern vegetables.

Okra, not much known to people in the border Southern or Northern States, is a delicious vegetable. It is used in making the famous "gumbo" soup of Louisiana. It is very palatable boiled in water or milk in whole pods. It is boiled quite tender, being seasoned with butter, salt and pepper to suit. I plant the seed in drills—corn row width—in May; cultivate as for corn or potatoes, with same tools. It grows prolifically. The pods are ready to eat when two inches long, and tender enough whilst the finger-nail will cut into them across the fiber. I have never seen it grow better in the South than it does here.

Of course, I have a large pond, and just below the dam I have my garden. Subsoiled, fertilized and pulverized, the sub-irrigation has taken care of it in droughts that killed other gardens. And if this were not the case, I could syphon water over the dam and through a hose. The pond is supplied by a nominally dry ravine, with a watershed of not to exceed eighty acres. California, Florida nor Louisiana do not sell me any vegetables, nor does Utah or Colorado sell me any Irish potatoes. That pond and a ten-dollar subsoil plow saves me from sending those States near one hundred dollars per year, or I would do without good things to eat.

I believe that the fig tree will grow and bear one crop per year in the great Arkansas valley. It grows unsheltered in Virginia, east of Wellington, and produces fair fruit. The fig is a hardy tree; it can stand considerable cold and bears best fruit in a moderately dry climate. I should advise that cuttings be brought from the cooler and drier parts of California and from Louisiana or Texas, in April, and stuck into a sandy soil in old ground. The cuttings will undoubtedly grow for that season. They should be kept mulched, not allowed to freeze, and in the following fall additionally covered to carry them through the winter. By care in two or three years the tree would grow and cuttings from it put out would produce a more acclimated tree. The fig does not bloom. The young fruit bursts like a bud through the bark of the twig. It is easily grown from cuttings.

The pomegranate is equally as hardy as the fig, I think, both growing well in Texas.

The famous ribbon cane, so plentifully grown in Texas, ought to grow in southern Kansas. This cane makes as fine sirup as the West India sugar cane. It grows as far north as Red river. I am more familiar with the delicious sirup than with the cane; although I have seen it growing in passing. I think it is grown like sorghum, from the seed. The tropical cane is planted in rows, four and a half feet apart, the canes being laid in the furrow so as to break joints, the dirt is thrown over them with a plow, and each joint furnishes a dozen suckers or more. These grow outward and upward, until in August the intervals between rows are nearly closed. A crop so planted is good for several years without replanting. The ribbon cane is next to it in sugar material, I believe.

W. E. HUTCHINSON,
Wichita, Kas.

Raising Raspberries.

EDITOR KANSAS FARMER:

"Why do many fall with raspberries?" is a common question. Largely because they do not secure the right soil at first, and second, because they do not maintain their richness. After the roots are planted the canes that shoot up this year will produce fruit next season. They should then be pruned out to give the other new canes a chance to bear. If the new canes appear in great quantity it will be necessary to pinch off the ends in order to induce a growth of laterals. In this way we get canes large enough to support themselves. This can be done successfully that no stakes or other supports are required. The work of fastening the young canes to the stakes is quite a serious undertaking, especially in a large field, and the cost of the many supports for raspberry canes is quite an item, more so than in grape culture, for the new canes must be tied to the supports every spring. Various systems of supports for raspberries are adopted. Some drive two stakes into the ground around each root, and inclose the clump of canes in an ordinary barrel-hoop, the hoops being nailed to the stakes about a foot or two from the ground. Some drive posts into the ground along the line of the rows and fasten a strand or two of strong wire over them. The supports will keep the vines in position and prevent them from falling down after a severe storm, or from running all over the ground. The canes should be pruned every fall. The canes that have fruited the first time should be pruned back either in the fall or spring, by shortening and heading back the leading shoots. The laterals should be shortened to about one-third their original length. This makes the canes stocky and the berries larger and of superior flavor. Pruning requires considerable time and labor, but unless done the berries will get smaller each year, and at first it will appear that the land is not rich enough, but a little intelligent pruning and cutting of the canes will do the most good. The right soil should be obtained before field culture of raspberries is undertaken. A moist and well-drained soil must be supplied. It must be prepared by plowing, subsoiling and harrowing and mixing it thoroughly with stable manure. Soil thus prepared will produce raspberries in abundance. The fertility must be maintained year by year by a good top dressing. In this work either the well-decomposed stable manure or some complete fertilizer should be used. If the latter is used it is well to apply stable manure at least every second year. JEROME.

Remedy for Anthracnose on the Red Raspberry.

We recently received a call from a prominent fruit-grower of Marlborough, on the Hudson river. He stated that red raspberry growing had been almost entirely given up in the Hudson river district owing to the anthracnose attacking the cane and destroying the plantation. We knew that there was more or less of this trouble in various parts of the country, but we were not aware of the fact that it was so serious in any locality. This gentleman, who had made a journey from Marlborough to Rochester to see the Loudon in fruit, remarked that he knew of no remedy for anthracnose.

To-day I have received a call from one of the firm of McCullom Brothers, of Lockport, New York. This firm have over one hundred acres devoted entirely to various kinds of large and small fruits and are well known throughout this part of the State. They made an exhibition of apples at our Western New York Horticultural meeting last winter which was one of the most remarkable I have seen of late years. The fruit was of the largest size and without blemish, indicating that they had mastered the situation as regards spraying for fungus and insects, etc. This gentleman also came to see the Loudon raspberry fruit, and naturally our conversation turned to anthracnose, from which the Loudon thus far is remarkably free. Mr. McCullom stated that large plantations of red raspberries had been destroyed in his locality by anthracnose, but that he had been entirely successful in preventing its doing injury to his plantation by spraying with ammoniacal solution. He said he had sprayed his plantations of red raspberries four times before the fruit began to ripen and once after, paying no attention to the condition of fruit as to whether he sprayed or not, since the solution did not affect the fruit. His first spray was applied soon after foliage appeared. Mr. McCullom said he could tell by the appearance of the foliage whether anthracnose was present in the plantation.

ARMSTRONG & McKEELY

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barytes if you want White Lead. Pure White Lead is the best paint—barytes is the poorest, is worthless. Barytes is often sold under the brand of White Lead, Pure White Lead, &c. Be careful about the brand (see list of genuine brands). Don't take what is said to be "just as good."

Any shade of color is readily obtained by using the National Lead Co.'s Pure White Lead tinting colors. One pound of color tints a 25-pound keg of Pure White Lead. Send for color-card and pamphlet—free.

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The moment the leaves begin to curl inward, showing the under side of the leaf, you may be sure they are attacked by anthracnose. The disease attacks the leaves first, descending from thence to the lower parts by gradual stages. The expense of applying this spray is trifling and should never be omitted where signs of the disease are discovered. Fruit-growers should watch carefully for the curling of the leaf in the red raspberry and the moment the leaves begin to curl, apply the ammoniacal spray. As this information is new to the writer I assume it will be, likewise, to very many of our readers, and if so this article alone ought to be worth several thousand dollars to the fruit-growers of the country.

Mr. McCullom also stated that he could detect fungus on his strawberries by a similar curling of the leaf and that he could immediately straighten out the leaf into a healthy growth by this spraying before named.—Green's Fruit Grower.

About Borers.

Writing about borers, J. W. Nelson, of Marshfield, Mo., says:

"The insect that deposits the egg in the tree is not a miller, or moth. It is a black and white striped bug with very long horns—about the shape of our old-fashioned potato bug, only considerably larger. These bugs deposit the egg, I think, any time from the 15th of May to the 15th of September, and perhaps later. After the egg is hatched the borer starts to girdle the tree in a downward direction until it is perhaps half grown, when it enters the wood and starts up, going four or six inches above the ground, when it again comes to the bark and lies until fully developed. When it comes out the female finds its mate and goes to laying eggs for the next crop. I took a dozen or more of these bugs out of my trees this season.

"Again, I know by experience that the borers will attack a healthy, well-shaded tree as quickly as an unhealthy one. I have taken at one time as many as twenty-two eggs out of my healthiest trees—trees which were six to eight inches in diameter. But I have lost no trees since I commenced fighting borers in earnest.

"I also think I have struck a good preventive for borers in pure kerosene oil. I never used it until this season. I washed part of my trees last May, using a common paint brush, and as far as I went have very few borers this season. I washed the trees again the first of August, taking out what few borers there were except one tree that had four or five eggs deposited in it. I left these in and applied the oil. I have gone back at different times, but the borers are either dead or so sick that they have never made any dust

since. I think the oil will destroy any young borer that is not under the bark too far. Next season I shall use nothing but the coal oil. It leaves the bark in a nice healthy condition and I am satisfied that it is a good remedy for the borers. For small trees it should not be applied too heavily, as it may soften the wood and the tree will not be able to support itself."

Raise Apples for Exportation.

Claude Meeker, American Consul at Bradford, England, reports to Secretary of Agriculture Morton: "Fruits are imported from nearly all fruit-growing countries. The amount produced here is exceedingly small. At the same time the demand for fruit is continually growing, many physicians recommending the American custom of eating fruit for breakfast as exceedingly wholesome and the general consumption of fruit in season as healthful in every way. The climate and seasons in this part of England not being suitable for fruit culture, the people have not, as a rule, any particular desire for it. The American apple, however, is in special high favor, particularly the Newton Pippin. Immense quantities of these apples are shipped here every autumn. The Bradford fruiters get the American fruit from both London and Liverpool. Despite the great quantity received, the supply practically falls about the middle of February in each winter. At the present time the choice Newton Pippins and other winter apples command at retail about 5 or 6 cents each. If the high railroad rates which discriminate against fruits could be broken down, the consumption in almost all the interior cities would be quadrupled, and a great market would thus be opened."

One advantage of taking Ayer's Sarsaparilla to purify the blood is that you need not infringe upon your hours of labor nor deny yourself any food that agrees with you. In a word, you are not compelled to starve or loaf, while taking it. These are recommendations worth considering.

Catarrh Cannot Be Cured

with LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best tonics known, combined with the best blood purifiers, acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing catarrh. Send for testimonials, free.

F. J. CHENEY & CO., Props., Toledo, O.
Sold by druggists, price 75 cents.

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— FORT SCOTT, KANSAS. —

W. F. SCHELL, Secretary and Manager.

A. B. COMBS, Assistant Secretary.

Five hundred and sixty acres in nursery and 240 acres in bearing orchard. Extensive growers for the wholesale and retail trade. All kinds of nursery stock for sale. Write and obtain our prices before placing your order elsewhere. Unequaled railroad facilities. No transfer or exposure of stock. We take up, pack and ship from the same grounds. SPECIAL PRICES on large orders and carload lots. We solicit correspondence and invite inspection of our stock.

RELIABLE AGENTS WANTED.

In the Dairy.

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

JERSEYS FOR THE DAIRY.

(Prize Essay, by Katharine S. Handke.)

With the continual decline in the prices of all cereals, more farmers are gradually awaking to the fact that some other field of industry must be opened if they would lift the mortgage from their homes, or enjoy any of the comforts and luxuries which wealth alone can buy.

Many of these overburdened farmers have, along with their grain-raising, dabbled in dairying; but, from lack of care and an understanding of the laws of inbreeding, their stock has degenerated until the profits, if profits they may be called, when the cost of keeping is considered, amount to the few necessities of the table.

The fact that good butter always commands a steady price, as shown by the market reports of any paper, has led many to inquire more closely into the nature and possibilities of this particular branch of dairying. That there must first be a change in the grade of their stock most farmers are convinced, and to those beginners who cannot afford the time or means to prove which breed of cattle is best adapted to their needs, the experience of open-eyed, truthful men is invaluable. Among the many breeds whose merits have been discussed and advocated by leading dairymen are the Jerseys. These cattle, natives of the Channel island of that name, have been introduced into our country by the progressive American, who saw in them the possibilities of a grander sphere of usefulness than that of mere ornamentation. That they are particularly well fitted for dairy purposes is shown by the quality of their milk and the readiness with which they convert their food into butter fat. It has long been conceded by experienced dairymen—and this is indeed the Jersey's strong point—that they produce more butter from a given amount of proper food than any other breed; and since economy is one of the roads to wealth, the man who feeds a dollar's worth of food to a Jersey cow and receives in return two dollars for his labor is nearer his goal than the possessor of inferior stock, who oftentimes is not repaid for the food they eat, to say nothing of his labor. Then to change these unprofitable animals, which yield three or four pounds of butter a week, for those requiring no more food or care, and which produce eight or nine pounds a week, is a question which ought to command his immediate attention.

The widespread distribution of Jersey cattle throughout the United States proves that they are not restricted to any particular climate, and their rapid increase proves that they are not more susceptible to disease than any other breed.

Consumers of milk in cities are more quick to appreciate the difference in quality between Jersey and ordinary milk than we would suppose, and they would willingly pay a better price if they could be guaranteed the better article. That the owner of Jersey products could readily create a demand for his articles is unquestionable. Why then, should he not? Now that the patrons of many cheese factories are being paid according to the amount of fat found in their milk, there is an added reason why he should not hesitate to improve his stock. Many people will tell you that the high records made by some Jersey cows are exceptions; but it is not to these special cases, which you, from lack of means, perhaps cannot afford to imitate, but to the record of the general Jersey we would have you turn for convincing proof that she might be your home's salvation. It is a mistake among amateur dairymen that they seek to combine the qualities of a beef and butter-producer. This invariably results in a beef-producer; but if he persists in his object, let him not tamper with the Jersey, whose mission is strictly that of butter-making.

There is much for the beginner to

learn concerning the proper food and care of the Jersey, and there is no better means than through the columns of some good dairy paper, rich with the experience and counsel of men who have made these cattle a grand success.

Their beauty, their gentleness, and, above all, the superior quality of their milk, justify them in their claims to the title of "dairy queens," and make them a desirable object in the eyes of the contemplative buyer. To possess a Jersey is to be inspired to nobleness, and to care for one is to be educated to gentleness and an appreciation of beauty.

Dairy Notes.

The Pennsylvania Experiment Station has found creameries in that State where the loss of butter fat amounted to \$10 a day.

It is very questionable if it is advisable to keep a cow after she has passed her ninth year. The principal reason is that, although she may give fully as good a flow of milk, yet the increased cost of her keep will materially lessen the opportunity for profit.

Do not let the milk stand fifteen or thirty minutes after milking, without straining. The foam dries, cream accumulates on the sides of the vessel, and experiments show that a quarter of a pound of butter fat is lost out of 100 pounds of milk by this means.

A correspondent in an exchange gives the following method of relieving choked cattle: Take of fine-cut chewing tobacco enough to make a ball the size of a hen's egg. Dampen with molasses so it adheres closely. Elevate

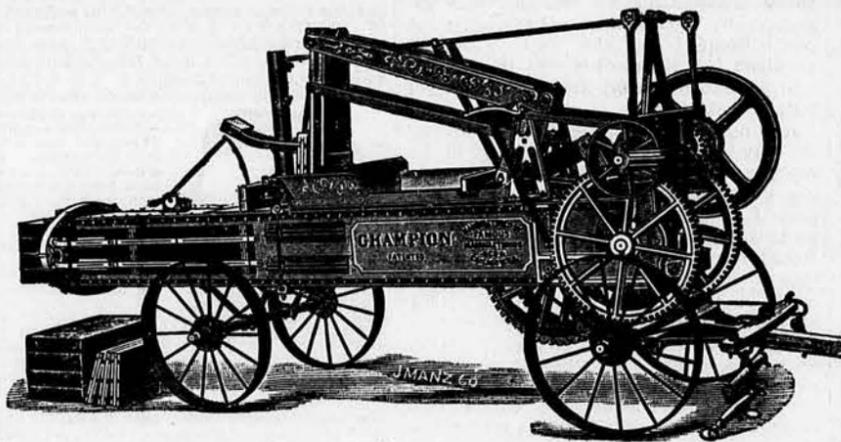
float off in the fluid than to remain in the butter, for their presence there will decrease its price in the market, and it is a sign that the butter itself is deficient in desirable qualities.

Nervousness and viciousness are engendered in the ill-treated cow, and transmitted to her offspring. The more docile the cow the more are her energies likely to be devoted to the dairyman's interests. We cannot be too watchful over irresponsible help, who hesitate not to beat, hurry or frighten the cows.

It seems to be a small matter, but when every item is considered it is one that should not be overlooked, and that is when a heifer is trained to be milked, teach her to allow any one to milk her without worrying or exciting her. If this is not done and it becomes necessary to change milkers, there will be a shrinkage in the amount of milk secured.

One of the most common mistakes in making butter on the farm, in particular during the winter, is in keeping the milk too long. A low temperature of the cream prevents, or, rather, retards fermentation or souring, and it is often the case that the cream is kept until it is bitter in order to secure a proper acidity, and it is impossible to make a good quality of butter from bitter cream.

Two thousand farmers furnish the milk from 12,000 cows in Dickinson county to fourteen creameries. The amount taken in daily at the various plants is 150,000 pounds, for which the patrons receive an average of \$5,500 per week. Much of the butter is sent



THE CHAMPION ALL-STEEL POWER BALING PRESS.
Manufactured by FAMOUS MFG. CO., Chicago, Ill.

the animal's head, pull out the tongue and crowd the ball as far down the throat as possible. In fifteen minutes it will cause sickness and vomiting, relieving the muscles, so that whatever object may be in the throat will be thrown up.

The largest creamery in the world is the one at St. Albans, Vermont. It is owned by the Franklin Creamery Association, and has an output of 20,000 pounds of butter per day. It gathers cream from sixty-seven skimming stations and runs the cream in its own cars.

The Dairy Commissioner of Canada says a thimbleful of milk of average quality contains over 10,000,000 globules of butter fat. They are lighter than the liquid or serum of the milk in which they float, and when it is left to rest the butter fat globules rise to the top.

Rich food will make more milk, but not richer milk. Increase of fat in the cow's ration increases the per cent. of fat in her milk for a short time, but that milk will soon return to its normal condition. The composition of the milk is due to the individuality of the cow.

To milk a cow "clean" has always been the ambition of the milker, and when that end was attained he was perfectly satisfied. But to milk a cow in a cleanly way, although of equal importance, does not in a large percentage of cases come within the scope of our consideration.

The little specks of white in the butter are nothing more than particles of sour milk; better, perhaps, to say flakes of pretty nearly pure curd, found most numerous in butter milk from a churning of sour—quite sour—cream, the souring having coagulated the casein, and these specks are about pure curd. It is a great deal better to have them

to Chicago and New York. This is the banner county in Kansas in the production of milk and in the number of factories.

"Dairying for Profit, or the Poor Man's Cow," by Mrs. E. M. Jones, is a most valuable book for every farmer's wife, that has had a large sale at 25 cents per copy. We have a number on hand which we will close out at a very low price to our readers, viz., 10 cents, or five 2-cent stamps. First come, first served. Order quick.

The Champion Baling Press.

Herewith we present an illustration of the Champion All-Steel Power Baling Press, made by the Famous Manufacturing Co., of Chicago. This baler is of the right stuff, will do the business satisfactorily from every point of view, and will prove this year a veritable bank for the owner. All the bearings are in heavy metal frames, bound firmly together. It is impossible for the shafting or gearing to get out of order. It has the combination toggle and crank power, safety break-pin, also friction clutches and stop lever. In short, it is a baler for business, that does the work required at all times.

Hay will be the most profitable selling product of the farm this year, hence there must be an increased demand for reliable and durable balers. Our readers may find it to their advantage to mention this paper, and write to the Famous Manufacturing Co., Chicago, Ill., for full particulars regarding their power baling press.

FARM CREAM SEPARATORS.
Power and Hand. Send for Catalogue.
P. M. Sharples, West Chester, Pa., Elgin, Ill.

Harvest and Home-Seekers' Excursions.

The Missouri, Kansas & Texas Railway Company will sell tickets at greatly reduced rates on September 10 and 24, to points in Missouri, Kansas and Texas. For further particulars address G. A. McNutt, D. P. A., 1044 Union avenue, Kansas City, Mo.



If you have FIVE or more Cows a Cream Separator will save its cost each year of use. Beware of imitating and infringing machines.

Send for new 1895 Catalogue.

The DeLaval Separator Co.

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ELGIN, ILL. 74 CORTLANDT ST., NEW YORK.

I used Ely's Cream Balm for catarrh and have received great benefit. I believe it a safe and certain cure. Very pleasant to take.—Wm. Fraser, Rochester, N. Y.



CATARRH

ELY'S CREAM BALM opens and cleanses the Nasal Passages, Allays Pain and Inflammation. Heals the Sores, Protects the Membrane from colds, Restores the Senses of Taste and Smell. The Balm is quickly absorbed and gives relief at once.

A particle is applied into each nostril and is agreeable. Price 50 cents at Druggists or by mail. ELY BROTHERS, 56 Warren Street, New York.

UR invited to send for my latest price list of small fruits. Half million strawberry plants, 300,000 Progress, Kansas and Queen of West raspberry plants. B. F. Smith, Box 6, Lawrence, Kas. Mention this paper.

A. H. GRIESA, Prop'r Kansas Home Nurseries, Lawrence, Kas., grows trees for commercial and family orchards—the Kansas Raspberry, Blackberries, standard and new Strawberries—also shade and evergreen trees adapted to the West.

ESTABLISHED IN 1873.

WILLIS NURSERIES.

Offers for fall of 1895 large stock, best assortment. Prices low. Stock and packing the best. We should be glad to employ a few reliable salesmen. Address A. WILLIS, Ottawa, Kansas.

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FRUITEVAPORATOR
THE ZIMMERMAN
The Standard Machine
Different sizes and prices. Illustrated Catalogue free. THE BLYMERE IRON WORKS CO., Cincinnati, O.

WHITMAN'S PATENT AMERICUS

The Best Cider and Wine Mill made. Will make 20 per cent. more cider than any other. Geared outside. Perfectly Adjustable. Prices as low as any first-class mill. Mfrs. of Hay Presses, Horse Powers, Corn Shellers, Feed Cutters, Feed Mills, etc. Send for circulars. WHITMAN AGR'L CO., St. Louis, Mo.



PROFITABLE DAIRY WORK

Can only be accomplished with the very best of tools and appliances. Cream Separator on the sure of more butter, while milk is a valuable Farmers will take to get a illustrated malled FREE Agents wanted DAVIS & RANKIN BLDG. & MFG. CO. Cor. Randolph & Dearborn Sts., Chicago.



RETAINS RUPTURE WHEN ALL OTHERS FAIL.



The Dr. Harvey Human Hand Truss.

JUST LIKE USING YOUR FINGERS—YOU KNOW HOW THAT IS!

For Descriptive Circulars Address R. I. PEARSON & CO., 301 1/2 Main St., Bldg. Building, KANSAS CITY, MO.

MARKET REPORTS.

Kansas City Live Stock.

KANSAS CITY, Sept. 16.—Cattle—Receipts since Saturday 9,794. The market was 10 to 20 cents lower. The following are representative sales:

Table with columns: No., Ave. Price, No., Ave. Price. Rows include SHIPPING AND DRESSED BEEF STEERS, TEXAS AND INDIAN STEERS, WYOMING STEERS.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include TEXAS AND INDIAN COWS, COWS AND HEIFERS.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include STOCKERS AND FEEDERS.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include Sheep—Receipts since Saturday, 4,247; Hogs—Receipts since Saturday, 210.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include Chicago Live Stock.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include Chicago Grain and Provisions.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include St. Louis Grain.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include Kansas City Grain.

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Table with columns: No., Ave. Price, No., Ave. Price. Rows include Kansas City Produce.

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mixed, nominally 23@24c; No. 2 white, 2 cars 27 1/2c, 2 cars 27c; No. 3 white, 2 car 26 1/2c. Oats met with good demand and sold at Saturday's prices. There were few cars of mixed oats on sale. Sales by sample on track, Kansas City: No. 2 mixed, nominally, 17 1/2c; No. 3, 1 car 16 1/2c, 1 car 16c; No. 4, nominally, 13@14c; no grade, nominally 10@12c; No. 2 white, 6 cars choice 19c, 6 cars 18 1/2c, 2 cars 18 1/4c; No. 3 white, 1 car 17 1/2c, 1 car 15c. Hay—Receipts, 133 cars; market easier; timothy, choice, \$10.50@11.00; No. 1, \$9.50@10.00; No. 2, \$8.00@8.50; fancy prairie, \$5.00@6.50; choice, \$5.50@6.00; No. 1, \$4.50@5.00; No. 2, \$3.50@4.00; packing hay, \$3.00@3.50.

Kansas City Produce. KANSAS CITY, Sept. 16.—Butter—Creamery butter advanced 1/2c to-day and is firm; extra fancy separator, 18c; fair, 15 1/4@16c; dairy, fancy, firm, 14@15c; store packed, fresh, 9@11c; off grade, 7@8c. Eggs—Market firm; supply light; candled stock, 12c per doz. Poultry—The supply of spring chickens was even smaller to-day than on Saturday, but outside of a few orders there was no demand. Moderate receipts to-morrow will cause a decline, as the local market is 1 to 1 1/2 higher than Chicago or New York. Hens, 6 1/2c; springs, 9c; roosters, 15c. Turkeys, 7 1/4@8c; springs, over 8 lbs., 8c; under 8 lbs., not wanted in this market. Ducks, 5 1/2c; springs, 8@8 1/2c. Geese, not wanted, 3 1/2@4c; springs, 7c. Pigeons, 7c@8.00 per doz. Fruits—Apples, good supply on sale and trade slow; 15@30c per bu., according to quality, 7 1/2c@11.00 per bbl.; home grown stock sells a little higher in a small way; shipping stock, 20@25c per bu., \$1.00@1.25 per bbl.; crabapples, 50@65c per bu.; 35c per 1/2 bu. box; common grades, prices uneven; fancy packed stand apples, 25@30c per bu. box. Peaches, good to choice stock scarce; freestones, 40@50c per peck; common, 30c; choice, \$1.00 per 1/2 bu., \$2.00@2.25 per bu., 75@90c per 4-basket crate, \$1.25@1.50 per 6-basket crate. Damson plums, 40@50c per peck, \$1.75@2.00 per bu. Pears, home grown, 30@50c per peck, 55@90c per 1/2 bu., \$1.50 per bu.; shipped, 40@60c per 1/2 bu. box, \$1.00@1.25 per bu.; small sugar pears, \$1.00 per bu., 40c per 1/2 bu.; 40@50c per half bu. basket; Seckel, choice, 40c per peck, 60@70c per 1/2 bu. basket; common, 35@40c per peck; \$1.00@1.25 per bu.

CALIFORNIA COLONY. Desirable families only; small capital necessary; five to forty acres in each farm; one acre keeps a cow and calf the entire year; poultry profitable; all kinds of fruit; vegetables planted and harvested 365 days in the year; perfect irrigation; no malaria; 150 miles from San Francisco; schools, etc.; over 500 people now settled there; fastest growing colony in California. B. MARKS, Box 175, Omaha, Neb.

RANCH FOR SALE. TEXAS RANCH, near San Antonio, with cattle and horses. Ten thousand acres on Blanco river, Blanco and Kendall counties. Abundance of water, timber and grass; mostly fenced. Good house and ranch buildings. Everything in perfect order, with 250 horses, 100 cattle, including several fine Jersey and Polled Angus cattle. Land \$3 per acre, cattle and horses at market value. Would take some trade if unincumbered. Other ranches as low as \$1 per acre. JAY E. ADAMS, Owner, San Antonio, Texas.

FLORIDA - Oct. 2. EXCURSION. SPECIAL TRAIN. Cars start from Chicago, St. Paul, Omaha, Kansas City, Cleveland, New York, Indianapolis, St. Louis and Cincinnati, picking up passengers en route. HOME-SEEKERS who contemplate moving..... will do well to confer with us. By joining a FARM, FIELD AND FIRESIDE colony you secure the advantages of good society, schools, churches, such as you are accustomed to, and many helpful conveniences not to be obtained in any other way, and what is equally good, Land at About Half the Usual Prices. Send for particulars of our colony plan and the excursion. CALIFORNIA EXCURSION, with special train, November 14. Address Farm, Field and Fireside, Chicago, Ill.

We Can Save You Money. THRESHER BELTS, TANK PUMPS, SUCTION HOSE, VALVES, LUBRICATORS and PACKINGS. If you need anything in this line it will be to your advantage to get our prices before placing your order. A full line of Engines, Boilers and Pumps in stock. If in the market send us your specifications and get our figures. JOHNSTON-LEWIS SUPPLY CO., 1228 Union Ave., KANSAS CITY, MO.

\$12.50 FOR A MACHINE to weave your fence at 25 Cts. per Rod. 10 No. 10 Gal. wires, Cross Wires No. 12. We will sell wire for a 100 rod fence for \$20. Agents Wanted. Catalogue Free. WIRE FENCE MACH. CO. Box 11, Sterling, O.

Results prove conclusively that by the use of fertilizers rich in potash the crops of Wheat and Rye and all winter crops are largely increased and the soil is positively enriched. We will cheerfully mail our pamphlets on Potash, its Use and Abuse on the Farm, free of cost. They will cost you nothing to read, and will save you dollars. GERMAN KALI WORKS, 93 Nassau Street, New York.

Catalogues of Cherry Orchard Poland-Chinas. Now ready for distribution. One hundred tops out of my spring crop of 140 pigs, will be sold at PUBLIC SALE, SEPTEMBER 11, 1895. They were sired by my herd boars, Wren's Medium 12887 and Corwin's White Face 9924. The pigs are in fine health and making good growth on alfalfa and light feed of slop. FOR PRIVATE SALE, fall boars and sows bred. Correspondence and inspection invited. Address W. H. WREN, Marion, Marion Co., Kansas.

Ship Your Produce Direct TO MARKET. It is the only way to get the true value of what you have to sell. It is no longer an experiment. Our shippers testify to it every day. We receive and sell: Butter, Eggs, Poultry, Veal, Game, Hay, Grain, Beans, Seeds, Potatoes, Broom Corn, Hides, Wool, Green and Dried Fruit, Vegetables, or any thing you may have to ship. We make prompt sales at the Highest Market Price and send quick returns. Write us for Prices, Shipping Tags, or any information you may want. SUMMERS, MORRISON & CO., Commission Merchants, 174 South Water Street, CHICAGO, ILL. References: Metropolitan National Bank, Chicago, and this paper.

THE CORN MAKER OUR NEW CORN-CRIB. Is a great success—stores 1,500 bushels at a cost of less than 1 cent per bushel. The Warner Lister Cultivator, One, two or three row. You cannot afford to be without this. Saves one-third of your time and makes money for you. Portable Farm, Field, Garden and Yard Fence. Ask your dealer for these goods. If he does not carry them, write to us. Western Manufacturing Co., Seventh and Wyandotte Sts., Kansas City, Mo.

THE UNION STOCK YARDS, CHICAGO. (Consolidated in 1865.) The largest live stock market in the world. The center of the business system from which the food products and manufactures of every department of the live stock industry is distributed. Accommodating capacity: 50,000 cattle, 200,000 hogs, 30,000 sheep, 5,000 horses. The entire railway system of Middle and Western America center here, rendering the Union Stock Yards the most accessible point in the country. The capacity of the yards, the facilities for unloading, feeding and reshipping are unlimited. Packing houses located here, together with a large bank capital and some one hundred different commission firms, who have had years of experience in the business also an army of Eastern buyers, insures this to be the best market in the whole country. This is strictly a cash market. Each shipper or owner is furnished with a separate yard or pen for the safe keeping, feeding and watering of his stock, with but one charge of yardage during the entire time his stock remains on the market. Buyers from all parts of the country are continually in this market for the purchase of stock cattle, stock hogs and sheep. Shipper should ask commission firms for direct information concerning Chicago markets. The Greatest Horse Market in America, the Dexter Park Horse Exchange. N. THAYER, JOHN B. SHEERMAN, J. C. DENISON, President, Vice President and Gen. Manager, Secretary and Treasurer. WALTER DOUGHTY, JAS. H. ASHBY, D. G. GRAY, Ass't Secretary and Ass't Treasurer, General Superintendent, Ass't Superintendent.

The Kansas City Stock Yards are the most complete and commodious in the West, and second largest in the world! The entire railroad system of the West and Southwest centering at Kansas City has direct rail connection with these yards, with ample facilities for receiving and reshipping stock. Official Receipts, 1894..... 1,772,545 Cattle and calves, 2,547,077 Hogs, 589,555 Sheep, 44,937 Horses and mules, 107,494 Cows. Slaughtered in Kansas City..... 859,646 2,060,784 69,570 69,816 Sold to feeders..... 308,181 11,496 48,616 45,780 Sold to shippers..... 499,965 468,616 503,116 28,903 Total sold in Kansas City, 1894..... 1,677,792 2,530,896 503,116 28,903 CHARGES: YARDAGE, Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head. HAY, \$1 per 100 lbs.; BRAN, \$1 per 100 lbs.; CORN, \$1 per bushel. NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED. C. F. MORSE, E. E. RICHARDSON, H. P. CHILD, EUGENE RUST, General Manager, Secretary and Treasurer, Assistant Gen. Manager, Gen. Superintendent.

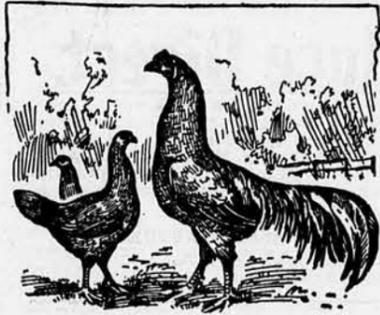
SEE HERE. You never heard of an offer like this before, a \$10.00 Case for \$2.00. The same conditions don't happen but once in a lifetime. This is that one chance and you'll never get another. You would not refuse to buy a new sulky or cultivator at half-price if you were in need of one. You won't refuse this offer even if you don't actually need the set. You can put it away if you want to and keep it for a wedding present, or you can wait until you do need it and it will be as good as new. The set consists of Six Double-plated Teaspoons, Six Double-plated Table Spoons, Six Double-plated Butter Dishes, One Plated Butter Knife, One Double-plated Sugar Spoon, making a total of Twenty (20) Pieces \$2.00 ALL FOR Cash with the order. Don't try to persuade yourself that you can't spare the money. Let something else go—depend upon something to make it up AND BUY THIS SET. You'll never regret it. It is the greatest silverware bargain ever heard of. 20 pieces of all bright, new silverware put up in an elegant push case for ONLY \$2.00. This is our plan of advertising. It pays because you will show the set to all your friends and thus increase our business. No more than three sets to one person at this sample price. No goods sent C. O. D., nor personal checks accepted. Make remittances by P. O. or Express Money Order and write at once as this offer will not last long. Address LEONARD MFG. CO., 152-153 Michigan Ave., G-Q Chicago. Please mention "Kansas Farmer" when writing to our advertisers!

The Poultry Yard.

BLACK SUMATRA FOWLS.

Their Beauty So Great That It Over-shadows Their Utility.

One of the rare and most beautiful fowls in this country is the Black Sumatra. Rare breeds run the risk of becoming more rare each year of their existence, because continued close inbreeding is likely to be followed even to the verge of extinction, if happily it does not go beyond the verge and lead to destruction. The more breeders the better the opportunities of obtaining fresh blood, and the better the chances of maintaining the vigor of the breed. It is well, however, to remember that even closely related fowls, if bred in widely separated and very dissimilar places, surrounded by a very



BLACK SUMATRA FOWLS.

different environment, when brought together have something of the effect of a union of unrelated fowls. Environment seems to have a modifying power upon their blood, and to obviate some of the ills of inbreeding. The Black Sumatra is suffering somewhat from the effects that are common to rare breeds. Its size is hardly what its admirers could wish it to be, and hardly, it seems to me, what it was ten years ago. It is now a small fowl, and yet within ten years I have seen birds of this breed that were of a good size, and, owing to their plumage, looked really large. It is also possible that its constitution would not be injured by an outcross with a large, vigorous, short-legged Black Game, breeding out, of course, the antagonistic characteristics which such a cross might introduce. The beauty of the fowl warrants a determined effort on the part of its admirers to make it all that it is capable of becoming. The plumage is a solid black, as lustrous as any color can be, shining and shimmering in the sunlight. The tail of the cock is long, full and carried rather low, the beautiful sickles and abundant coverts almost sweeping the ground. The comb is triple, not as perfect as the pea comb, and might be improved by careful selection. The legs are rather short and, as they ought to be, black in color. The outlines of the fowl are graceful in the extreme. One peculiarity of this breed, which is possessed by some pheasants, but which I do not recollect as being possessed by other fowls, is the number of spurs the cock has. In nearly all of our domestic fowls a single spur upon each shank serves the cock as a weapon of offense and defense, but nature has provided more liberally for the Sumatra, the cock frequently having two spurs upon each leg, and sometimes three. Some have but one on each leg, and the extra number is of no practical or ornamental value for a domesticated fowl. Many have argued from this fact and from the peculiarly long and some what horizontally carried tail that the Sumatra is descended from the pheasant, but while pheasants and domestic fowls do sometimes produce hybrid offspring, I believe there is no recorded instance where such offspring has been fertile. Every one has proved to be sterile, incapable of breeding with either parent race, and of course would be incapable of breeding with another hybrid of like parentage. Hybrids are sometimes fertile when bred with either parent, but when bred *inter se* are almost invariably sterile. So there is no good reason for supposing that the Sumatra is of pheasant origin. The Sumatra is a plump fowl, and though small must make a toothsome bit of poultry. It has the reputation of being an excellent layer of fair-sized white eggs. But it is not kept so much for its practical as for its ornamental qualities. It illustrates very

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well the difficulty of accurately classifying fowls into practical and ornamental, for all practical fowls are more or less ornamental, and all ornamental fowls are more or less practical. There is no breed or variety of domestic fowls that has not both utility and beauty, and classification upon such a principle can be made only as utility or beauty seems to be the paramount quality, and sometimes these elements seem so evenly balanced that one is in doubt to which class to assign the fowl. In the case of the Black Sumatra, however, the beauty of the fowl is so great that it fairly overshadows its utility, and one does not hesitate in classifying it as an ornamental fowl.—H. S. Babcock, in Orange Judd Farmer.

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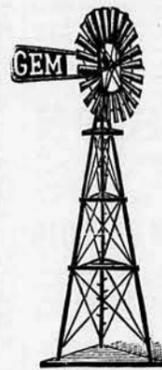
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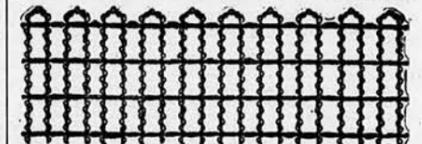
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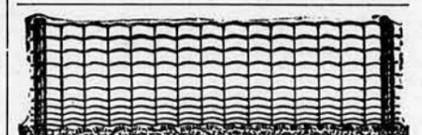
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Bayfield Herd Pedigreed Poland-Chinas Ninety spring pigs, twenty-four brood sows. Boars in service, Souvenir 9421 S., Magnet 18587 S. and Duke of Bayfield 14327 S. Write for particulars, or better, come and make selections. J. S. MACHIR, Liuwood, Leavenworth Co., Kas.

THE SECOND ANNUAL Kansas State Fair

Wichita, October 1, 2, 3, 4, 5, 1895.

Reduced rates on all railroads. All premiums paid in cash. Remember the dates. Big attractions each day. Speed Program and Premium List free to everybody. Send your name and address on postal card to

W. R. HEWEY, Secretary, Wichita, Kas.

GRAND PUBLIC SALE POLAND-CHINAS!

C. G. SPARKS, Mt Leonard, Mo. GEO. L. DAVIS, Elmwood, Mo. WILL SELL AT— MARSHALL, MO., TUESDAY, OCTOBER 1, 1895.

ONE HUNDRED HEAD, mostly February, March and April pigs; a few extra good fall sows. Have reserved every good pig raised for this sale, and will say this is the best lot of pigs we have offered. They are sired by twelve extra good boars, such as Standard Black U. S. 13271, Chief I Am 14055, Ashland Wilkes 2799 A., Latest Fashion 3618 (Hater brother to Hadley), Chief Tecumseh 24 915, Pontiac, Square Quality, Roy Wilkes, High Quality, Keystone, etc., and out of a choice lot of mature sows that are sired by such noted boars as J. H. Sanders, Hain's Black U. S., Roy Wilkes, Col. Wilkes, Exactly, Deviation, Hoosier Boy, Admiral Chip, Lall's Victor, Tecumseh 12th's Pontiac, Short Stop, Best Look, Stem's Chip Jr. and others. New blood from leading herds has been added since our last sale. For catalogue address as above. COL. JAS. W. SPARKS, Auctioneer, Marshall, Mo.

FIRST ANNUAL SALE! Poland-China Swine!

I will disperse at public auction, on my place, two miles east of Richmond, Franklin County, Kansas, Thursday, October 10, 1895,

at 1 o'clock p. m., sixty-six head of POLAND-CHINA SWINE, consisting of autumn and spring litters, their sire being the noted Upright Wilkes 13246, whose line of breeding and individual merit is second to none. All stock registered or eligible to record. Send for catalogue. They are free. Terms of Sale:—Cash, or six months time at 6 per cent. interest on approved notes. RICHMOND is on the Atchison, Topeka & Santa Fe railroad, south of Ottawa, Kas. Free conveyance from and to all trains. Address

COL. S. A. SAWYER, Auctioneer. J. R. KILLOUGH & SONS, Richmond, Kas.

GRAND DISPERSION SALE.

Holstein-Friesian Cattle and Poland-China Swine.

At Nortonville, Kas., Tuesday, October 1, 1895, at 10 a. m.

The entire herds of the above-named breeds of cattle and swine, owned by M. S. BABCOCK, Nortonville, Kas., consisting of about 60 head of thoroughbred and 15 grade cattle, and about 60 head of swine, all ages, will be offered for sale to the highest bidder without reserve at the Davis & Babcock farm, adjoining the city of Nortonville. Catalogue on application.

M. S. BABCOCK.

COL. S. A. SAWYER, Auctioneer, Manhattan, Kas.

150—GRAND TWO DAYS' SALE!—150

POLAND-CHINA CHESTER WHITE SWINE.

Property of GEO. W. NULL and C. L. GIBSON, of Odessa, Mo. Sale to be held at our respective farms, three and a half miles northwest of

Odessa, Mo., October 9 and 10, 1895.

There will be as good blood go in this sale as will be found anywhere, combining good size and quality. Our POLANDS are sired by such noted boars as the great harem king, Lall's Victor 4298, John L. 9517, Null's King 13517, Holden Leader 12289, Corwin King 13994, Onward 13055, Gov. Wilkes 13637, and out of as grand a lot of sows as can be found anywhere. In this sale will go the produce of the 1,000-pound sow, Miss Lord Corwin (28498) and one of her daughters; also of the great brood sow, Elwood Maid 42 281 (full sister to the \$300 Free Trade), and the produce of her two daughters, Elwood Beauty (28821) and Lady Elwood (31510); also of Lady A. (23047), and too many other good ones to mention in this space, embracing all the most fashionable strains. Our CHESTERS are a grandly-bred lot, sired by such noted boars as Chester Pride 6396, King Eclipse (a son of the World's Fair winner) and Pedro 2d, and out of such noted sows as Sunset, Quail & Girl, Mail's Beauty and Edna Bunche and others. Also one richly-bred HOLSTEIN-FRIESIAN bull calf—May Overton's Sir Henry Mechtild 2d. Write for catalogue. COL. JAS. W. SPARKS, Auctioneer, Marshall, Mo.