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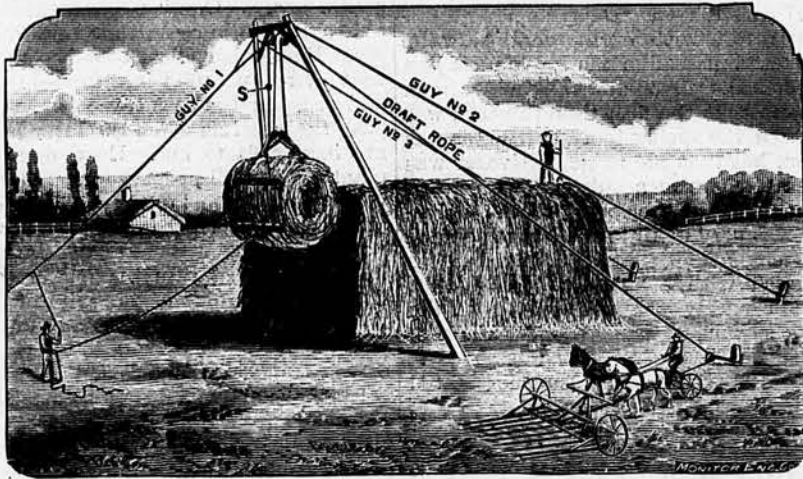
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HILLSDALE HERD

Short-horn cattle and Poland-China hogs, bred by C. C. KEYT, VERDON, NEB. Prince Byron 109613 heads the herd. Stock for sale at all times. Visitors welcome. A fine lot of young male pigs for sale. Farm two miles north of Verdon, Nebraska.

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CIRCLE U HERD

POLAND-CHINA SWINE. W. H. Underwood, Hutchinson, - Kansas. Graceful's Index 9239 S. 27089 O., sire Seldom Seen 2d 23045 O., dam Graceful L. 23708 O. He was the sire of the Kansas World's Fair winners that won first, third and fourth prizes.

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Thos. D. Hubbard, twenty years a wholesale merchant in New York city and Columbus, Ohio, having come to Kansas for his health, will supply at wholesale prices, Barbed Fence Wire, Wire Nails, Galvanized Chicken Fence Netting, Glazed Windows of all sizes for poultry houses, barns and other buildings, and all other requisites for breeders and farmers, free on board cars at St. Louis or at your own depot. For fuller information, address with stamp, **THOS. D. HUBBARD,** Kimball, Kansas. In writing advertisers please mention FARMER.

Agricultural Matters.

EXPERIMENTS WITH CORN.

Bulletin No. 45 of Kansas Experiment Station, gives the results of the experiments of corn in 1893. In the following resume only so much of the tabular work is reproduced as is necessary to an understanding of the work. Every farmer should read this report carefully, for he will surely be able to profit by the information it contains. It says: **PLANTING CORN AT DIFFERENT DISTANCES FOR GRAIN AND FODDER.**

A somewhat elaborate experiment, which required the use of seventy plats, was undertaken, in order to ascertain, if possible, at what distances between the rows and stalks the best yields would be obtained. Each plat contained four rows, the plats being separated from each other by a guard row. The variety used for this experiment was "Hartman's Early White," a large-eared white corn, which had done well on the farm in 1891 and 1892. The seed was planted by hand and exactly at the points the stalks were desired to grow. Two kernels were dropped in a place, and, after the first cultivation, all hills were thinned to one plant in a place.

DISTANCES AT WHICH THE HIGHEST AVERAGE YIELDS PER ACRE HAVE BEEN OBTAINED.

| DISTANCES. | Highest average yield of good corn in bushels. | Highest average yield of fodder in tons. |
|----------------------------------|--|--|
| Rows 2 ft., stalks 4 in.... | 28.81 | 2.75 |
| Rows 2 1/2 ft., stalks 4 in.... | 32.11 | 2.61 |
| Rows 2 1/2 ft., stalks 12 in.... | 27.42 | 6.18 |
| Rows 3 ft., stalks 4 in.... | 27.42 | 2.06 |
| Rows 3 ft., stalks 12 in.... | 25.98 | 1.95 |
| Rows 3 1/2 ft., stalks 4 in.... | 25.98 | 5.46 |
| Rows 3 1/2 ft., stalks 12 in.... | 29.94 | 1.85 |
| Rows 4 ft., stalks 4 in.... | 29.94 | 9.74 |
| LISTED. | | |
| Rows 3 1/2 ft., stalks 4 in.... | 28.06 | 10.17 |
| Rows 4 ft., stalks 4 in.... | 29.28 | 2.37 |
| Rows 4 ft., stalks 12 in.... | 29.28 | 12.29 |
| Rows 4 ft., stalks 16 in.... | | |

It will be seen that the rows were not closer than two feet, and that this distance was increased to four feet by six-inch additions. The stalks varied from four to twenty inches apart in the row, the distance being increased by four inches at each step. Distances three and one-half and four feet between the rows were tested both with surface-planted and listed corn, but rows closer than three and one-half feet were all surface planted.

In 1891 a similar experiment was carried out, the results of which show that, as a rule, the best yields of good corn were obtained when the rows were three and one-half feet apart and the stalks sixteen inches in the row. This year the surface-planted corn gave the best yield of marketable ears when the rows were four feet and the stalks sixteen inches apart; the same being true, also, for the listed rows. It is evident, however, that the fertility of the soil and the size of the variety of corn must determine the distances between rows and stalks, respectively.

BUTT, MIDDLE AND TIP KERNELS OF CORN FOR SEED.

Five plats were planted with each of these grades of seed corn. The rows were three and one-half feet apart, and the stalks sixteen inches apart in the row. The variety used was "Dole's ninety-day corn;" was surface planted, with rows located by rather deep drill marks. The seeds from butts and tips were carefully selected and only the deformed seeds from the very ends used, whereas the seeds from the middle of the ear were of normal size and shape. It was planted May 6, and was ripe and cut on September 16; and on October 24 all plats were husked and weighed, the ears being then perfectly dry. The corn was of poor quality. No difference could, in this respect, be detected between the different plats. The results are shown in *Table V, where it will be seen that the tip kernels gave,

in this instance, the best yield. This is the reverse of previous results. The averages of three years' trials are slightly in favor of the butt kernels, as shown in the table.

TABLE V.—AVERAGE RATE OF YIELD PER ACRE OF EAR CORN.

| NATURE OF SEED. | Bushels good ears per acre. | Bushels small ears per acre. | Total bushels per acre. |
|-------------------|-----------------------------|------------------------------|-------------------------|
| Butt kernels..... | 19.63 | 11.28 | 30.96 |
| Middle "..... | 16.54 | 11.65 | 28.19 |
| Tip "..... | 23.88 | 10.85 | 34.73 |

AVERAGES OF THREE YEARS' TRIALS (EAR CORN).

| NATURE OF SEED. | Bushels good ears per acre. | Bushels nub-hins per acre. | Total bushels per acre. |
|-------------------|-----------------------------|----------------------------|-------------------------|
| Butt kernels..... | 28.04 | 13.44 | 41.48 |
| Middle "..... | 26.36 | 12.31 | 38.67 |
| Tip "..... | 27.19 | 13.04 | 40.23 |

LISTED AND SURFACE-PLANTED CORN.

This experiment was tried on thirty plats, disposed as shown in *Table VI. It involves two series of trials: First, listed vs. surface planted, and, second, deep, shallow and surface culture, for each of the two methods of planting. The rows were, as usual, three and one half feet apart and the stalks sixteen inches apart in the row, two kernels having been planted in a place and the plants thinned to this stand. The variety used was the corn known as "Farmer's Favorite." The methods of culture may be defined as follows: Deep culture means the use of the old-fashioned, two-horse cultivator, with four shovels. It was put deeply into the ground. Shallow culture means, in this case, that a "Daisy" spring-tooth cultivator, with eight small shovels, was used instead of the implement just described. "Deep and shallow" culture means that the first time the corn was plowed the spring-tooth cultivator was used, but that the large cultivator was used the two succeeding plowings, and the last time the spring-tooth cultivator was used again; and, lastly, surface culture means that the surface was scraped with a "Tower's" cultivator, which merely scrapes the weeds off the very surface of the ground. Each of these methods of culture was given to both the listed and surface-planted corn.

| TREATMENT OF PLANT. | TABLE VI.—AVERAGE RATE OF YIELD PER ACRE OF EAR CORN. | |
|--|---|------------------|
| | Total yield per acre, bushels.. | Bushels per acre |
| Listed, deep culture..... | 30.33 | 26.78 |
| Listed, shallow culture..... | 26.13 | 26.63 |
| Surface planted, deep culture..... | 26.25 | 27.18 |
| Surface planted, shallow culture..... | 8.65 | 26.61 |
| Surface planted, deep and shallow culture..... | 9.42 | 28.78 |
| Surface planted, surface culture..... | 8.80 | 28.90 |
| AVERAGES OF TWO YEARS' TRIALS. | | |
| Listed, deep culture..... | 20.48 | 26.78 |
| Listed, shallow culture..... | 16.88 | 26.63 |
| Surface planted, deep culture..... | 17.00 | 27.18 |
| Surface planted, shallow culture..... | 20.54 | 26.61 |
| Surface planted, deep and shallow culture..... | 19.45 | 28.78 |
| Surface planted, surface culture..... | 18.10 | 28.90 |

* Part of table omitted. Last year listed and deep culture gave the best results, followed by surface planted and shallow culture, and the latter method of planting and culture gives the best results during the two years' trials.

VARIETIES TESTED IN 1893. A short list of only forty-eight varieties was tested the past season, with the results as set forth in Table VII. The yields are all unusually small, owing to the unfavorable season, as has already been mentioned.

[In these excerpts from the report we give only the results of those varieties which yielded thirty bushels or more per acre. The full table gives results

of nineteen varieties of white, twenty-one of yellow and two of mixed colors.]

| VARIETIES. | TABLE VII.—VARIETIES OF CORN, 1893. | |
|---------------------------|--|---|
| | Total yield, in bushels, per acre..... | Height of ear from ground, in feet..... |
| Blount's Prolific..... | 32.26 | 3.8 |
| Brazilian Flour..... | 41.42 | 3.7 |
| Busby's Snowflake..... | 30.26 | 3.6 |
| Champion White Pearl..... | 32.13 | 3.5 |
| Osage White Prolific..... | 32.59 | 3.3 |
| Early Missouri..... | 32.26 | 3.8 |
| Yellow..... | 30.26 | 3.9 |
| Early Prairie King..... | 30.26 | 3.9 |
| Hogue's..... | 38.14 | 3.5 |
| North Star..... | 30.56 | 4.2 |
| Orange Pride..... | 38.42 | 3.4 |
| Stewart's Improved..... | | |
| When ripe..... | | |
| Sept. 9..... | 9 | |
| Sept. 13..... | 13 | |
| Sept. 17..... | 17 | |
| Sept. 21..... | 21 | |
| Sept. 25..... | 25 | |
| Sept. 29..... | 29 | |
| Sept. 3..... | 3 | |
| Sept. 7..... | 7 | |
| Sept. 11..... | 11 | |
| Sept. 15..... | 15 | |
| Sept. 19..... | 19 | |
| Sept. 23..... | 23 | |
| Sept. 27..... | 27 | |
| Sept. 31..... | 31 | |
| When tasseled. | | |
| July 24..... | 24 | |
| July 31..... | 31 | |
| Aug. 7..... | 7 | |
| Aug. 14..... | 14 | |
| Aug. 21..... | 21 | |
| Aug. 28..... | 28 | |
| Sept. 4..... | 4 | |
| Sept. 11..... | 11 | |
| Sept. 18..... | 18 | |
| Sept. 25..... | 25 | |
| Sept. 31..... | 31 | |

Broomcorn Culture--No. 7.

In conclusion, I wish to say to the beginner: Don't put out more broomcorn than you can harvest and house in good shape. Have one object in view all the time, and that is, a bright pea-green color, remembering, however, that thick planting makes a short, stubby brush, and thin planting a long, coarse brush. One is about as undesirable as the other—neither very valuable. Remember, also, that broomcorn that comes up uneven, heads uneven, and necessarily the advance heads are past their prime when the later heads are barely fit to cut. Even depth of planting, in well prepared ground, is of very great importance, you will see. When broomcorn begins to ripen it quickly passes out of that state in which it is most valuable for brooms. Brush passing out of the milk or into the dough state in good drying weather is almost certain to be yellow or red tinged when cured. If broomcorn comes up even it can be cut when the heads are well out. Then, if spread evenly two inches deep, on six-inch (in depth) shelves, you will have a choice article of brush. The color (pea-green) will be O. K. The brush, though otherwise inferior, will pass readily onto the market at its worth, and you—well, the crop will be slightly increased next season, and your other farming operations will be cut to where you can take care of the increased acreage of broomcorn.

There is nothing (I will not make a single exception) that ever went from the farm to the market that will pass from the producer to the manufacturer with as much satisfaction to all parties concerned as a beautiful, bright green, sixteen to eighteen-inch-straw broomcorn brush, compactly baled and neatly trimmed. Parties that never saw broomcorn, save in brooms, at the sight of such a bale will be all aglow with admiration and wonder, and in their simplicity will ask how such things are made. This is not overdrawn; it has happened with me, and it will happen with you if you will only but give the business proper attention at the right time.

Broomcorn passing into the dough state is out of its prime, and every succeeding day brings less value to the brush, and only a few days will have elapsed until value ceases over and above expense of harvesting. Here is where the heaviest leak is likely to occur in broomcorn-raising. You may start in the first of the week, harvesting prime corn, and by the last of the week the same brush will have lost a large per cent. of its market value. A week's time often changes a crop from a paying to a losing basis, and for that reason I repeat to the beginner, go very slow.

For every three acres of upland, or two of bottom, allow shed room ten feet



M. Hammerly, a well-known business man of Hillsboro, Va., sends this testimony to the merits of Ayer's Sarsaparilla: "Several years ago, I hurt my leg, the injury leaving a sore which led to erysipelas. My sufferings were extreme, my leg, from the knee to the ankle, being a solid sore, which began to extend to other parts of the body. After trying various remedies, I began taking Ayer's Sarsaparilla, and, before I had finished the first bottle, I experienced great relief; the second bottle effected a complete cure."

Ayer's Sarsaparilla

Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.
Cures others, will cure you

long, ten feet high and ten feet wide, which will hold from 1,800 to 2,000 pounds of dry brush. One good cutter will cut about 600 or 700 pounds of brush per day of ten hours; a green man will cut about half as much.

Fresh cut brush is more easily seeded than brush cured with the seed on; besides, brush cured with the seed on is more liable to be musty on the shelf, as the extra weight of the seed retards the curing process, and, too, it is one of the dustiest jobs on earth to clean such brush. Besides, I never thought the brush such a nice, bright green as that seeded first and then cured.

Let the seed stand until thoroughly dry. Don't attempt to save the brush, for if the seed is properly saved, the brush is worthless. Keep the seed perfectly dry or you will be disappointed in your stand next season. Barring chinch bugs, broomcorn is one of the most reliable crops produced in eastern Kansas. I have seen broomcorn planted on the 8th of July make good brush. Land that will produce thirty bushels of corn will, in an ordinary year, produce 600 or 700 pounds of good brush. In fact, I prefer good upland to bottom. The fibre is generally more uniform, and runs finer. As far as my observation and experience goes, broomcorn is not hard on land. An acquaintance of mine once told me he knew of a field in Wyandotte county that had produced seventeen consecutive crops, and the last, if anything, was better than any previous crop. I do know that where the broomcorn stalks are cut in fall or winter and allowed to lie on the ground until planting time, especially the late plantings, you will have as fine a seed bed as ever seed was put into. It will be moist when land without the stalks is too dry to plow. A common stalk cutter (if there was a good stand of broomcorn) will not cut the stalks. A horse corn cutter does very well and must be used in the fall while stalks are green, or in winter when ground is frozen, for in the spring the stalks will pull out.

The early cut broomcorn will shoot out thousands of little heads that will ripen before frost, which makes the very choicest feed. It can be pastured on the ground for all kinds of stock.

Now, Mr. Editor, if my experience in broomcorn as published in the FARMER will help a single grower, you have my thanks for your patience in shaping it up. And, further, I wish to say to the beginner, and in all seriousness, too, never ship if you can sell at home, and be sure that the inside of the bale is the same as the outside. A. H. COX.
Quincy, Kas.

If you want a reliable dye that will color an even brown or black, and will please and satisfy you every time, use Buckingham's Dye for the Whiskers.

Flax in Kansas.

John Mueller & Co., of Chicago, have been investigating Kansas as a field for the development of the flax industry. After the return of their representative the firm wrote as follows to Secretary Coburn, of the Kansas Department of Agriculture:

"We are of the opinion, and that has been confirmed by our investigations, that there is no visible reason whatever why the soil and climate of a larger portion of Kansas land should not produce a fiber adapted to compete with the Russian product in the European market. * * * We have sent quantities of choice seed to a number of connections for the purpose of having small patches raised according to our instructions in order to have the product sent to us next summer, which we will then forward to European mills to be tested and priced. * * * Although it is premature to make such a statement, we will only hint at the possibility that if this fiber shows all the advantages of a first-class material, a linen industry may be developed in this country in the future. You will appreciate the importance of this experiment to the farmers when you consider that the harvest of fibre in European countries is three or four times as valuable as the returns from the seed, and further, that farmers who have made \$9 or \$10 per acre in seed alone will, conservatively speaking, probably increase their returns per acre by 100 per cent. as compared with flaxseed, corn or wheat harvests."

Potato Scab.

Inquiries have been received by the botanical department concerning methods for the prevention of this disease.

The treatment recommended by Prof. Bolley, of the North Dakota Experiment Station, and which has been proved to be entirely satisfactory, is as follows: "Dissolve corrosive sublimate (bichloride of mercury) in water at the rate of two and one-fourth ounces of the chemical to fifteen gallons of water. Immerse all potatoes to be used for seed purposes in this solution one and one-half hours, after which they may be cut and planted as usual." The chemical should be obtained from the druggist in a finely powdered condition, and ought not to cost more than 20 cents per ounce. It must be remembered that corrosive sublimate is a poison, and care should be used in handling the powder; but in the prepared solution, one part in one thousand, no injurious effect will be produced upon the skin. The solution would, however, be injurious if taken into the stomach, and hence the treated potatoes should all be planted. A wooden vessel should be used to contain the solution, since metal is quickly corroded by its action. The powder should be entirely dissolved before using. This may be hastened by pouring on at first about two gallons of hot water. It may be found convenient to enclose the potatoes in a sack for the dipping. If the tubers are dirty, they should be cleaned before treatment. It is needless to say that the potatoes used should be free from the scab, as the treatment is intended to destroy the germs that adhere to the surface. It is also unsafe to use ground that has produced a scabby crop.—Prof. A. S. Hitchcock, in *Industrialist*.

Condition of Winter Grain.

The condition of winter wheat on the 1st day of April, as reported by the Statistician of the Department of Agriculture, averages 86.7 per cent. for the entire country. Last year the average was 77.4; in 1892 it was 81.2, and 96.9 for the year 1891. The corresponding average for rye is 94.4 per cent.

The averages of wheat for the principal States are as follows: Kentucky, 83; Ohio, 90; Michigan, 83; Indiana, 90; Illinois, 87; Missouri, 88; Kansas, 72; Nebraska, 85; California, 87.

The average date of seeding in the Ohio and Mississippi valleys was late, owing to dry weather. In general, however, the conditions of soil were not unfavorable to planting and germination. Very little damage is reported from the Hessian fly, and that only in sections of Ohio, Michigan, Illinois, Missouri and Kansas.

The weather from seeding time until

the recent cold wave swept over the country, except in cases hereafter noted, was very favorable to the growth of the plant. In the Eastern, Northern, and Northwestern States, snow covering afforded additional protection.

The returns in regard to the effects upon wheat resulting from the recent cold spell are not so satisfactory nor so conclusive as is desirable. The injury to the crop is undoubtedly considerable, if not great, but the comments of correspondents accompanying the reports would seem to indicate that the full extent of the damage was not determinable at date of transmission. In the Eastern and Northern States the damage was comparatively slight. In the South Atlantic and Southern States the injury is marked and decided, with perhaps the exception of Texas. While in the States of Ohio, Indiana, Michigan, Illinois and Kentucky the injury from frosting is considerable, its extent is contingent upon future weather conditions.

The returns indicate that freezing to the ground was quite prevalent, especially on low and rich moist lands, but with roots left untouched or at least alive there are good prospects of recuperation on the recurrence of favorable weather. In the States of Kansas, Nebraska and California the impaired condition of the crops has not resulted so much from the frost as from cold, dry weather. High winds are also noted by our Kansas correspondents as one of the causes of unfavorable condition. Rain is much needed in these as well as other important wheat-producing States. [In Kansas conditions have changed greatly since the reports on which these estimates were founded were written. The rains of April have done much for the wheat belt.—EDITOR KANSAS FARMER.]

The Stock Interest.

THOROUGHbred STOCK SALES.

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

OCTOBER 4—C. C. Keyt, Short-horn cattle and Poland-Chinas, Verdon, Neb.

PROSPECTS FOR BEEF BREEDS OF CATTLE.

That confidence in the near future of beef cattle breeding is steadily broadening does not seem to admit of a doubt. It is now fully ten years since the crest of the last wave was reached, and the financial panic of 1893, in the opinion of conservative men, marked beyond all peradventure the bottom of the abyss into which cattle-growers were plunged as a result of the collapse of the inflated values ruling on the range and on the breeding farms of the older States in 1883. During this terrific "slump" in cattle other varieties of farm stock have been in high favor at different periods. Horses, sheep and hogs have claimed the attention of many who formerly had a warm side for cattle. But with characteristic enthusiasm our farmers have followed each of these prosperous lines up to the very verge of overproduction, while abandoned herds, plowed-up blue grass and empty feed lots have told the story of a general determination to quit the cattle business until the times were more propitious. The result is an unparalleled deterioration in the quality of the beeves seen in leading markets. Neglect in the matter of using beef-bred bulls has rendered it practically impossible for feeders throughout the corn belt to get good "store stock." Lean and half-fat steers have filled the pens at leading yards. Cattle of this class, which in the days of good prices rarely came to market until they were "finished," have been bought by those whose arrangements were such that they could not well give up feeding cattle altogether, even in the face of disheartening conditions, and shipped back hundreds of miles into the interior to be grained for a later market, simply because the feeder could not get steers in his own vicinity. Cattle thus counted in last year's receipts came back to the yards again only to be "counted in" once more as so many new (?) cattle this year, and thus a false total as to the comparative number of cattle really in the country is obtained. By

this movement also a double toll is paid to the commission merchant, the stock yards companies and to the railways; all of which is a state of affairs disastrous alike to the breeder and the feeder.

Breeders of registered cattle of the beef breeds are practically unanimous in saying that there was more inquiry for females last fall than for many years previous. Several leading breeders express the emphatic opinion that but for the artificial, and, we trust, temporary disturbance of the money market, the anticipated rally in cattle would have set in six months ago. Not for ten years have all the natural conditions been so favorable for this class of farm property. The legitimate or "statistical position" of cattle is undeniably strong, but the cloud that has been of late overhanging all our productive industries has thus far sufficed to deter investment in what is unquestionably one of the most promising classes of property now awaiting the attention of owners of good corn and grass lands in the United States, viz., good pedigreed cattle of the beef breeds.

There are to-day thousands of thrifty farmers in the central West—men who own high-class lands, well watered, fertile, and in every way admirably adapted to the maintenance of first-class stock of the beef breeds—who do not own a cow fit to breed an export bullock from. These men could this spring buy a good bull or registered cows of choice quality at about the price they would have paid ten years ago for ordinary grades or mongrels. Such cows as they have are being bred to nondescript sires and the calves sold for veal or roughed along until yearlings, and picked up and dumped at Chicago as "stockers." Why not replace the "scrubs" now by good useful cattle? The change can be made for but little money, and you are then in line for the rising tide when it begins to flow. But when will the tide begin to rise? At present prices that question need worry no new buyer of fine cattle. You can afford to bide your time. The inevitable laws of action and reaction may safely be trusted when you are getting such valuable property at a price that is little short of absurd. There was a sale of registered beef cattle at Des Moines recently. Values did not soar, but a top price of over \$500 and an average of over \$140 on everything indicates that some people are preparing for the future. Other splendid opportunities for laying good foundations at 1894 prices will be numerous during the next few weeks.—*Breeder's Gazette*.

Breed-Test—Thoroughbreds vs. Natives.

The Utah Agricultural College Experiment Station last year made a breed test with cattle, sheep and hogs. Prof. Sanborn, the Director in charge, in his annual report, in referring to it makes the following statements and summary of results:

"I do not desire to show that scrub stock is better or worse than pure-bred cattle, but desire to ascertain the exact facts. Some have strongly objected to finding such facts. Yet a truth can never be harmful, and must have ultimate value. If it should be shown that appetite, digestion and assimilation are as great in native cattle, or the promiscuously bred cattle of the country, as in those that are pedigreed, then breeders will take into consideration these facts and breed to a new standard. The writer has long insisted that breeders of pedigreed stock have sought form and have retained pedigreed animals with their eyes upon a single purpose or two, form being prominent. Doubtless appetite, digestion and assimilation are qualities that can be fixed by selection, but if no breeder of the world has bred with direct reference to these qualities, he is utterly without the right to claim that he has secured them, unless he can demonstrate by the scales that such is the fact.

"If it is true, then, scrub stock, so called, can eat as much and digest and assimilate as much as pure-bred stock, then our breeders must select with reference to appetite, digestion and assimilation.

"That I be not misunderstood on a

Growing too Fast

means that children do not get proper nourishment from food. They are therefore thin, narrow-chested and weak.

Scott's Emulsion

the cream of Cod-liver Oil and hypophosphites, supplies material for growth. It makes sound bones, solid flesh and healthy, robust children. *Physicians*, the world over, endorse it.

Don't be deceived by Substitutes!

Prepared by Scott & Bowne, N. Y. All Druggists.

question so important, one that involves millions of dollars to the nation, I desire to say that, beyond question, pedigreed stock of meat types have a form superior to the ordinary native stock, and that this form enables feeders to sell at sums that amount in the aggregate to millions of dollars annually more than scrubs command, and that though pedigreed stock could eat, digest and assimilate only as well as scrubstock, still they would be superior to the scrub stock.

"My plea is that breeders now should seek to make them superior to scrub stock in digestion, assimilation, and in power to consume, a superiority that I believe they have not yet achieved, and believing it, as an investigator, I feel impelled to so state, and if correct, the fact should be known, however unpalatable it may be."

The feeding experiment was intelligently conducted and typical pure-breds were pitted against common natives, and the conclusion of the test is given in his general summary as follows:

1. The gains of the pure-bred cattle were inferior to those of the scrub, but upon a less consumption of food, the general result favoring the scrubs.
2. The gain and food consumed by the pure-bred shoats was in their favor as against native shoats, although the difference was small.
3. The trial with sheep was a draw between the pure-bred and native sheep.
4. The trial as a whole fails to show any advantage in cost per pound of gain in favor of pure-bred stock as against scrubs or natives.
5. Previous trials made by the writer or by other experimenters in this country, have failed to show that pure-bred stock is superior to native stock.
6. From the above data it must not be understood that pure-bred meat-producing animals are not superior to ordinary stock. If of superior form, as they usually are, they are superior, if not, they are not, probably not as good, as they are most likely to be inferior in hardiness.

Prospects for Cattle.

There is no doubt but what the visible supply of cattle is large if all kinds are taken into consideration, but it is evident that there are no more of the strictly well finished steers than is needed to fill the current demand. The effect of the recent sharp advance on the country has been closely watched this week, for it will be a pretty fair indication of the attitude of farmers and shippers, and will have a strong bearing on future prices. The season is at hand when farmers can be a little more independent. They can depend on pastures to help them out, and there will be no necessity for a mad rush to market unless there is a general feeling that prices will recede. The improved demand for fresh meats has restored a good deal of confidence among cattle-raisers, and many believe that more conservatism will be exercised in shipping from now on. The demand now is good from shippers, exporters and dressed beef men, and so long as receipts are within the bounds of moderation there seems to be no good reason for much depreciation in values.—*Drover's Journal*.

Irrigation.

Potatoes by Irrigation.

This valuable letter was written by Judge J. W. Gregory, of Garden City, to L. Baldwin, of Great Bend: "The ground, if to be irrigated, should be a smooth piece, and having sufficient slope to make the water run freely between the rows. It should be plowed eight inches deep, or more, and then harrowed and dragged or rolled until the soil is firm throughout and thoroughly pulverized on the surface. Now lay off your ground in rows some three and one-half feet apart, with a corn-marker or a small shovel which will make a shallow furrow, the rows running the same way the ground slopes, if it is not too steep. A slope of seven to ten feet per mile gives good results. Drop the cut potatoes, one piece at a time, one foot apart (or two pieces twenty inches to two feet apart), in the mark or furrow, and cover by throwing up from each side a good slice with a two-horse stirring plow. This will cover the potatoes to a good depth and leave the potatoes in ridges for irrigation. The water can now be run between the rows and must not be allowed to rise up over the ridges nor to wet the vines. It should be applied as sparingly as possible, only so the plants are kept growing evenly, and the last and most abundant irrigation should be applied when the plants are in bloom. The whole secret of potato-growing is to keep the plants going at an even pace—not by fits and starts—giving them water enough to accomplish this, yet not so much as to make them "scabby," which too much water will do. The ground must be kept clear of weeds and it must be stirred soon enough after each irrigation to keep the whole surface of the ground—between the rows as well as on top—mellow and fine.

"The foregoing directions as to the method of laying off the ground presuppose a dry spring and dry ground which will have to be irrigated from the first. If, however, the ground is moist and in good condition to begin with, or there is water enough on hand to flood the ground the first thing, and especially if there is to be a large tract planted, so that the matter of cultivation cuts much of a figure, it is well to have the ground well wet before plowing, taking care to keep it harrowed down fine as fast as plowed, so as to avoid drying out or forming clods; then have the furrows to plant in deep enough so that when the potatoes are covered the ground may be dragged smooth, or nearly so. This will make the surface so fine that the potatoes will need no more water until they have come up and been harrowed at least once and then ridged up. In this way no irrigation would probably be needed until the potatoes were in bloom. At any rate, they should not be irrigated so long as they get along well. If rains should come and set them to growing at a thrifty rate, then the grower should watch and keep up that rate of growth, so that the potatoes may be smooth; not allow the growth to be checked, and then, by putting on water, start out new growth, which will make the potatoes knobby.

"It is a hard subject to handle with any clearness in a letter, when it ought to require at least a small book to do the subject justice, but I hope these hints may be of service to your friends."

Probabilities and Possibilities of the Future Irrigation of the State of Kansas.

EDITOR KANSAS FARMER:—There is no State in the Union that nature has done so much for to make irrigation easy and successful as the State of Kansas. It seems she has done her level best, in moulding the lay of the land and in the distribution and arrangements of her rivers and small streams, to make it easy and profitable for man to take advantage of the situation and make a grand success of it. The rivers seem to be laid out with a precision and skill that is wonderful. Running parallel with and nearly equi-distant one from the other, heading in high altitudes and running on easy grades the whole length of the State in such a

manner as to make it possible to use the water over and over again before it leaves the State, with only a small loss by evaporation. Her river beds are mainly high, with no deep gorges, or, in other words, the banks are low and uniform, so the water can be taken out by simply building a bulkhead and cutting a ditch to lead the water to storage basins for future use. And then, again, there are plenty of places where the banks are high enough and where good rock foundations may be found on which to build dams that will serve the double purpose of turning the surplus water into ditches to be run into reservoirs and stored, and at the same time create a good water power for manufacturing purposes. Water enough flows out of the State in the months of January, February, March and April to irrigate every foot of land in it, if it was only stored and held until such times as it is needed.

But few people know how little water it takes to save a crop, if applied at the right time and in the proper manner. There has been money enough lost in the last ten years by the failure of crops from drought to put one-half of the State under a good system of irrigation. But instead of setting ourselves about it to remedy the evil, we silently mourn our loss.

The first question that will be asked when you talk about irrigation is: "How can we do it?" How do they do it in California and other States? They go at it and use every means at their disposal to accomplish the desired end.

"Well, we can't do anything until the government makes the surveys."

That is all bosh; the government never made a survey that was worth to the people one-half what it cost. I would rather have a survey made by a good practical man, if he had nothing more than a square and plumb, than any government survey made by the jobber of any political party. My plan is this: Have the Legislature pass a law making every county in the State an irrigating district. Make every main ditch a public highway, located and controlled the same as the highways—title obtained in the same way. All surveys are to be made under the direction of the County Commissioners and County Surveyor, and made part and parcel of the highway system. Raise a tax each year to be expended on main ditches, and in that way you will soon have a system started, and each farmer along the main ditches can commence at once after the main ditch is established to build his private ditches to where he wants to lead the water.

Then, again, the body of sub-water is very large and very near the surface in most all parts of the State. With the proper storage basins to catch the spring rains and one good windmill pump running from January to June one can get water enough to irrigate forty acres, and a forty with water is worth more than 160 without.

JOHN S. SHERMAN.

Brighter Prospects for Western Kansas.

EDITOR KANSAS FARMER:—Though the people of central and western Kansas have been passing through a period of great anxiety owing to the prospects for another crop failure, the gentle April showers that are now being distributed throughout a large portion of that section of the State have revived their hopes. While present prospects may yet be blighted by a surplus of wind and a lack of sufficient rainfall, we have others that are not subject to the same conditions; in fact, the stability and blessings of the latter brighten as the former take their flight. The fertile soil, the bright sunshine and the health-giving atmosphere, have tempted many of us to stay in Kansas, hoping for changes that to a great extent may be brought about through our own efforts if wisely directed. The turning over of the buffalo sod, the extensive planting of trees, hedges and growing crops, together with the skillful application of the water which nature has provided, will so transform these fertile, yet fickle, plains that our fondest hopes and expectations for Kansas may be realized.

Nearly all of our valleys can be irrigated successfully, and perhaps from 5 to 10 per cent. of the upland. Those

HORSE SENSE

IN A
FEW
WORDS.

Stubblefield
April 8/94

"Ordinary" Mowers & Gentlemen
You have got the
hardest pulling mower I
ever backed up against.
I stacked one of them two
years ago and stuck to it
till it knocked me out.
The draft is the heaviest I
ever saw - Why don't you
patent after the McCormick
No. 4 Steel Mower? Its draft
is extremely light making it
very easy on horse flesh.
Yours truly
Ct. Horse



THE WORLD'S FAIR

Committee, who tested the McCormick No. 4 Steel Mower in the only regular exposition field trials, in a heavy growth of timothy and clover, said, in their official report: "The efficiency of the machine is thus, under fair conditions, nearly 70 per cent. Ordinary figures for ordinary mowers are at least twenty pounds higher in total draft, with an efficiency of not above 60 per cent., which latter figure good machines should be expected to exceed." The McCormick is the lightest draft, and most effective grass cutter yet produced. [Highest Medal awarded.]

McCormick Binders, Reapers and Mowers are built by the McCORMICK HARVESTING MACHINE CO., CHICAGO, and are for sale wherever grain or grass is grown.

who lack the water to irrigate their gardens and orchards will then be able to procure the product of each at a much more reasonable price, and very likely pay for them in work; for irrigation means more work, as well as products, and a less number of acres.

I have often been told that the present prices for farm produce would not justify the extra outlay. This may be true of some crops, but not of others, and if we do not succeed in raising a crop, and have it to buy, we will think prices already too high. I believe in pulling every string in sight, both for better crops and better prices. Hundreds of thousands of dollars now paid for fruit and vegetables from other States may be kept at home. If Kansas as a State should provide a State engineer to assist the people by advising them as to the most scientific plans for irrigating, and in other ways showing willingness to help along the good work, it would surely aid in securing from the national government the geological survey we are so anxious for, and each citizen who proceeds to utilize the water now available will also be a help. The entire State would share in the benefits derived from the survey, both directly and indirectly. Eastern Kansas will, within a few years, be practicing irrigation quite extensively. Though I have traveled through the irrigation districts of California and Colorado with a desire to learn, yet a Riley county, Kansas, man first informed me of the wonderful results obtained from irrigating his crops from a small reservoir constructed with sod and dirt, and filled by wind power. Many of the people in eastern Kansas are not yet sufficiently informed as to the benefits to be derived from irrigation. On this account, and also on account of the manifest desire to withhold appropriations from anything of special benefit to western Kansas, the delegates at the Ellsworth Forestry and Irrigation convention voted unanimously to insist that each of the political parties at their State conventions should pledge themselves to support just and adequate appropriations to encourage the planting of trees and the development and encouragement of irrigation. No unreasonable requests will be made, and no party can afford to ignore them. That these demands will be made is now an assured fact. Wherever I have been for the last four months the people have been strongly in favor of this line of procedure. Let Kansas people aid and encourage our own heroic settlers to demonstrate the possibilities of our State. Is it not expedient? Is it not just?

E. D. WHEELER.

The following is the *Industrialists* report of the recent action of the regents of the Agricultural college as to the experiments in irrigation to be tried by the college: "Reports of Regents Kelley and Street upon the selection of sites for irrigation experiments in Finney and Decatur counties were received, and the station council was authorized to purchase a pump and other apparatus for the work at Garden City, and to proceed with the construction of a well and a reservoir in Decatur county as soon as the land is leased. One thousand dollars was allowed for expense of oversight and labor at Garden City."

Weekly Weather-Crop Bulletin.

Issued by the United States Department of Agriculture, in co-operation with the Kansas State Board of Agriculture, for the week ending April 23, 1894, T. B. Jennings, observer:

An excess of precipitation has occurred in Ottawa, the northern portion of Sedgwick, western portion of Elk, in Woodson, Coffey, Anderson, Linn and Bourbon; over the rest of the State it is deficient. The precipitation was almost entirely confined to the eastern half of the State. Severe hail storms occurred in Marion, Coffey and Woodson. General frosts occurred on the 21st and 22d, but no damage has been reported.

The first part of the week was unusually warm, which has been offset in a measure by the cool weather of the last few days. The average daily temperature, however, is about 3° above the normal.

The wheat has made a marked improvement this week, though in the central and western counties many fields are still spotted, and some have been plowed up and planted in corn.

The early sown oats, barley and flax are not in as good condition as that sown later. Corn planting is general in the central and northern counties, and is nearly completed in the southern, where the early planted is generally up. Pastures have made good headway and stock are improving on them.

Apple, pear and cherry trees were out in full bloom this week.

The week has not been beneficial to gardens.

NOTE.—To inquirers about the rain charts, the Director will say that it is his expectation to obtain a supply of base charts ere long, when the rain charts will be resumed.

"After years of dyspeptic misery, I can at last eat a good square meal without its distressing me," gratefully exclaimed one whose appetite had been restored by the use of Ayer's Sarsaparilla. This remedy wonderfully sharpens the appetite and improves digestion.

THE SPRING PIG CROP OF 1894.

In order that our readers, especially those engaged in swine-breeding, could the better gain some special information pertaining to the offerings for the coming season's trade and have a general idea of the blood lines in the several Western herds, we herewith submit the reports received last week. More will follow in next week's issue of the FARMER.

E. A. Staley, Ottawa, Kas., writes: "Both my herds came through the winter first-rate and the spring pig crop is an unusually good one. The Poland-Chinas are the best I could get originally and show up the characteristics of the breed in No. 1 style. The Chester Whites, as usual, are a-coming and stand up in the front row. A few days ago one of the young Chester sows farrowed fourteen pigs; all got through nicely and they are a grand lot of little dandies. The fact is, my herds and spring pig crop suits me to a 'T.'"

Robert Rounds, of Salem, Cowley county, Kas., breeder of Poland-Chinas, writes: "My spring pig crop is just fairly setting in, and so far I have had good luck in saving all of them and they are as fine as silk. About fifteen sows are to farrow yet, and if my good luck continues I expect to have among the best that comes along in Poland-China history. I have found out a good deal by actual experience, and that it surely pays to breed always to the best. I will have to renew my card in the near future in the KANSAS FARMER to pay for past favors, if not for the future. May our future success be of good fortune in common with all our brother swine-breeders in Kansas."

M. F. Tatman, Rossville, Kas., breeder of Poland-Chinas, writes: "Everything in the way of males ready for service is sold from my Kaw Valley herd. The last pig about ready for service went to the well-known veteran breeder, Wm. S. Plummer, of Osage City. Mr. P. writes me that he is so well pleased with him that he intends to show him next fall during the fairs. I have made a good many very choice additions during the past year to my herd, and from the many fine litters I now have on hand I think I will raise the finest lot I have ever had. They were sired by five good boars, and I will be able to supply my customers with new blood. I have a few extra choice gilts bred to farrow in June that I could spare if anybody wants them."

W. S. Attebury, the Rossville Chester White breeder of Shawnee county, says: "As is usual with all swine-breeders that come through the winter O. K. and feel good over the successful arrival of a promising spring pig crop, will say that my array is about all here and nice ones they are, too. A major portion of the late arrivals were sired by two prize-winning boars, one of which was shown by C. J. Huggins, of Wamego, Kas., at the Kansas State fair of 1893, where he won first premium. I am now breeding some young sows to a grand young boar that I recently purchased of the American-famed Chester White breeder, L. B. Silver, of Cleveland, O., and I will expect something extra nice. My sales have been very good so far this spring, and I propose to continue to please all my old customers, and if merit counts for anything, gain some new ones."

D. Trott, the Poland-China and Duroc Jersey breeder of Abilene, Kas., writes: "My spring crop is and has been coming since the first of March. The first half of the month was warm and about all the farrowings were saved, but not so with the latter part of the month. It was cold and windy, so much so that it was almost impossible to keep the youngsters warm in the best of a hog house. Yet I have no particular reason to complain, for eighty-four youngsters of both breeds are now out on the alfalfa fields and wondering why it does not grow faster, and are coming on in grand style. I tell you that alfalfa is the thing for hog pasturage. I expect to have, if I have ordinary good luck, about 150 head for next season's trade, and propose that nothing shall be left undone to develop them if a ration of bone and muscle constituents and the best forage plant known to man, alfalfa, will do the work."

Messrs. Dietrich & Gentry, of Ottawa, Kas., Poland-China breeders, write: "Our herd came through the winter all right and is in fine condition for 1894, and is now headed by Loyal Duke 29823 O., who is a very toppy individual, bred by Danforth Bros., of Deer Creek, Ill. He was sired by Tecumseh Chip 56918, by Combination 11017, and he by Tom Corwin 2d 2037. In his general confirmation he has good length, low to the ground, broad back and extra heavy hams, and if type and blood can be relied on he will get the ideal of the progressive swine-breeder. We already have among our spring pig crop a litter sired by Ideal Black U. S., the \$500 boar of W. Z. Swallow, and another litter of ten pigs sired by a son of Guy Wilkes 2d, and still another very toppy litter of seven by Pet's Osgood. The get by Loyal Duke are due

to arrive in a few days. We have had, so far, good luck in saving the little fellows at farrowing time. In conclusion, will say that our last season's crop has all been sold and could have sold more. The KANSAS FARMER brought us our best returns and we intend staying by it, believing, as we do, in reciprocity."

C. C. Keyt, of Verdon, Neb., our sister State on the north, writes that his herds of Poland-Chinas and Short-horns are getting to the front this spring, equalling his utmost and highest expectations. The spring pig crop is being very successfully delivered, sixty-eight having come, and he is looking for forty or fifty or more. The pigs sired by Lambing U. S. 11592 are hard to beat. He has a very promising litter out of Davis' Choice that was sired by a son of Colonel (8286), the World's Fair winner, and his sons and daughters are going to be hard to beat this fall in the show rings. The cattle wintered exceptionally well. Some of our readers may remember the grand yearling show heifer of last year. She has dropped him a fine bull calf that is well worth any one's time to look at. He has the best lot of low down, blocky and broad-backed calves that it has been his fortune to ever have. In conclusion, will state that he has a few good pigs of September and October farrow that he can spare.

H. B. Cowles, the Topeka Berkshire breeder, tells our live stock man that since he put up his new barn he is thoroughly and surely independent of the weather, and is ready for young pigs any month in the year. Between September 15 and March 30 eight sows, young and aged, have brought him eighty-one pigs, and that he now has on hand representatives of September, October, November, January and March litters. He thinks that his Clover Blossom strain is remarkable for its fecundity. Among others farrowing large, full and strong litters is the very excellent individual, Clover Blossom X., that at 14 months brought forth fourteen little fellows as a starter. "Any one wanting, say, three extra fine brood sows at a fair price, I shall be pleased to accommodate him." He further said: "My experience has been that the demand for pigs, except for stock purposes, has been somewhat light while pork was declining, but with porkers at 5 cents and upward the call for tops and pedigrees is at once renewed."

Dr. P. A. Pearson, of Kinsley, Kas., says: "My herd of Poland-Chinas are doing finely and I have had a splendid trade since my return home from the World's Fair, where my great show hog, Dandy Jim, Jr., 8498 S., attracted so much attention. He is now in the pink of breeding condition, weighing 775 pounds—100 pounds less than when at the world's great show. My spring pig crop consists of over fifty head, with eight sows yet to hear from. The youngsters that were farrowed since January 1 are as fine a lot of sturdy fellows as I ever saw. The winter pigs got through in splendid shape and I am half inclined to do a more extensive winter business. All cleaned up and gone except one boar under 1 year and a six-months sow, both fine specimens, that I could let go now at a reasonable price to some one that wants something good. All the stock that I have or will have for this season's trade are by Dandy Jim, Jr., or Royalty Medium. I have four eight-months gilts by Dandy Jim, Jr., and bred to Royalty Medium, that would make some one looking for foundation stock just the thing to begin with."

Among others in the list of our new advertisers in this week's issue comes Mr. J. F. Thomas, of Maple City, Cowley county, Kas., breeder of Poland-China swine and thoroughbred poultry. Our field man paid Mr. Thomas a visit last week and reports a tip top little herd of Tom Corwin and Tecumseh blood. The original foundation stock was bred by the well-known Kansas veteran Poland-China breeder, Isaac Wood, of Oxford, Kas., and has since been fortified by the use of a grand young boar out of a dam and by a sire bred by G. W. Stover, of Holdridge, Neb. Among the young fellows of 1894 is a litter of four—two boars and two sows—that will rustle all Kansas to beat, and whose sire was Prince Tecumseh; by Tecumseh, and he by Tecumseh 5243; dam's grandmother, Black Bess 4207. Mr. Thomas has certainly started right and the results already attained in his swine department strongly and forcibly demonstrate that it pays to buy the best and ever afterward strive to reach the top round in Poland-China history. The visitor will find, if he chances to call on Mr. Thomas, a very excellent collection of Light Brahma and Silver-Laced Wyandotte fowls. Adjoining the poultry house, in a run of over an acre inclosed with poultry wire, about seventy selected Light Brahma hens were found that does one's heart good to look at. The original foundation were autocrat strains, since strongly re-inforced by recruits from Jones, of Wichita, and Skinner, of Columbus. They score up to 93. In the well-shaded runs near by were the Wyandottes, whose progenitors came from Myers, of Quincy, and Munger, of DeKalb. These birds are sure prize-winners, scoring up to

93, and won at the Inter-State poultry show, made up of exhibitors from southern Kansas and Oklahoma and held at Arkansas City, February 21 and 22 last, first on cockerel and second on breeding pen. It is possible that a no more excellent lot of Brahmas can be found in all Kansas. In order to be within reach of persons wishing eggs for breeding purposes, Mr. Thomas will sell eggs of either or both breeds at \$1 per setting. See his advertisement elsewhere in this issue.

H. S. Day, of Dwight, Morris county, Kas., a breeder of Chester Whites, says: "My herd of Ohio Improved Chester Whites consists of four boars and twenty brood sows, all pure-bred and registered. They all began the year of 1894 in a healthy and vigorous condition, and have already brought forth several litters of little rustling mortgage lifters, and others are due to arrive during the next sixty days. In all my years of swine-breeding I find that the Chester mothers seldom overlay or lose any of their offspring at farrowing time. Among others I now have one litter of seven October pigs, now 6 months old, that weigh 1,425 pounds. That, I think, is good enough for anybody raising winter pigs. Four of these are gilts and will be added to the breeding division for the spring of 1895 pig crop. I had a good trade during 1893, yet I could spare three servicable boars, however, yet. That the readers of the old reliable KANSAS FARMER may have a pointer on the Chesters, I offer this clipping from the *Live Stock Indicator*, of December 20, in its report of the Kansas City stock yards market for that week: "The supply for Wednesday was large and quality good. One fancy bunch of Chester White pigs, averaging 163 pigs, brought \$5.25, but outside of this the top was \$5.17½. The bulk of sales were \$5 and \$5.10. This carload of pigs, while every hair was white, were but half-bloods and raised from black sows and sired by a pig raised by H. S. Day, out of one of his famous Ohio Improved Chesters, and purchased by one of Ohio township hog raisers, whose last spring crop of pigs from the one sire was about 150, and when all are sold the premium received over the top of the market will more than pay for the sire."

G. W. Berry, of Berryton, Shawnee county, Kas., the well-known Berkshire breeder, informs us that he is now better prepared to furnish something toppy in the Berkshire line of any age, from young litters up, than at any time in his career as a breeder of thoroughbred swine. He is, in common with those familiar with his herd as it now stands, of the opinion that it is composed of the best of individuals, choicely bred, of compact form, low down and of the easy-keeping and early-maturing kind. The spring pig crop is the strongest ever brought forth by the herd and confirms one in the belief that the boars in service are among the best on American soil. Among them are Longfellow's Model 27058, that weighed at 10 months 446 pounds and at maturity 800, an own brother to Mr. Gentry's noted King Lee. He won first in class and sweepstakes at Kansas City and Topeka fairs, the one an inter-State and the other a State fair, where competitors were out strong enough in numbers and individual merit to make it an interesting hog show. Major Lee 31139, another early-maturing fellow, weighing at 9½ months 400, won first in class and headed the first prize young herd at the Kansas State fair. Another good one is Majestic Lad 82201, bred by Metcalf Bros., East Elmira, N. Y.; sired by imported Royal Hayter 80457, dam imported Majestic 30459, a winner of second place at the World's Fair in the strongest ring ever collected on American soil. The females of the herd are Silver Tips, Lee, Charmer, Empress, Kingscote, Black Beauty and other noted Berkshire strains. "I feel confident that I can supply boars to head herds that will make sure show winners. Another thing, I furnish pedigrees and certificates of transfer of ownership to all my customers."

C. J. O'Brien, manager of Circle U herd of Poland-Chinas, owned by B. W. Underwood, of Hutchinson, Kas., writes: "The herd is in splendid form and a very satisfactory spring pig crop here and arriving. Sixty already have put in an appearance. Among others already farrowed are Beauty 3d 17741 and Graceful G. 2d 17736, each with a litter of seven. These dams are the ones that farrowed the prize-winners belonging to the herd last year at the Kansas City Inter-State fair and at the Kansas State fair. Forty of this spring's young things were sired by Graceful Index 9289, the boar that sired the litter of pigs that won first, third and fourth prizes at the World's Fair. The reader will please stick a pin and try and remember this one fact about our herd. About twenty gilts that were bred to Protection Boy 10870 are beginning to farrow, and those that have put in an appearance are very stylish little chaps, encouraging us in the belief that he will prove himself a great breeder. Darkness F. 3d, the prize-winning sow at the World's Fair, is due to farrow May 1, and as usual we expect something toppy from her. Last week Mr. Underwood visited Cantral & Garrett's

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herd at Waynesville, Ill., and bought one of their best young boar pigs to use on our herd next year. If there is anything in pedigree and herd history as to prize-winnings and individual merit, this Illinois herd, headed as it is by Guy Wilkes 2d 17777, the \$750 boar, ought to send out something extra good, and no State ought to be more proud to receive it than wide-awake Kansas. We do not, at this time, desire to make many shipments, as we have concluded to hold the herd together as much as possible until early fall. We shall, however, be pleased to extend our acquaintance and be ready for future operations later on, as indicated above."

V. B. Howey, of Topeka, breeder of Polands and Berkshires, says: "My spring pig crop is nearly all here from twelve Poland-China sows and ten Berkshires, leaving only five ladies of the harem to report. I yet have a few fall pigs that I could spare, notwithstanding the past six months have been the best I ever experienced in the swine-breeding business. I could not supply all that was wanted. One encouraging feature was the call for young sows bred. My Berkshire herd is commanded by Onward II. 31136 and assisted by Sampson 32170. Among my best sows are Silver Tip 28096, Stumpy 32171 and Stumpy Empress, on whom I am depending for a royal lot of toppy pigs. Challenge 28795 and Corwin Index (Vol. 16) are doing the honors of the Poland division. The first named was sired by Lawrence's Perfection and the latter one by Graceful Index 27098. Your readers will doubtless remember that the get of Lawrence's Perfection and Graceful Index made the greatest record of any two sires at the World's Fair coming from west of the Mississippi river. I think that Corwin Index is the best all round individual boar that it has ever been my fortune to own, and that Challenge carries the largest bone and the equal in conformation of any boar in the West. Among the queens of the Polands are three that I especially desire to call the attention of the swine-breeding public to, and they are Nancy Hanks 75704, Corwin Maid (Vol. 16) and Corwin Princess. The last was bred by Lamp Bros., Van Wert, O., and the first by the prize-winning breeder, Dr. Pearson, of Kinsley, Kas. These two sows, I think, are among the best ever bred by these well-known and successful breeders. I have had several good judges pass on Corwin Princess, and all agree that nothing could be added to her conformation in the way of an improvement. She is now just about 12 months old and will weigh over 500 pounds. Take it all in all I am now about satisfied with myself as a swine-breeder and will continue and endeavor to please all my future patrons."

James Qurollo, the Berkshire and poultry breeder, of Kearney, Mo., writes: "My spring pig crop is coming on time and nearly all here. I have had good luck in saving about all of them, as they were strong and vigorous from the start. Your field man, Mr. Brush, will recall the strong conformation points and individuality of my king of the harem boar, King Lee II., that won first in class and sweepstakes at the Inter-State fair last fall at Kansas City, and from there he went into the competitive field for honors at St. Louis, the third strongest swine show of the United States in 1893, where he won all the honors possible in the class and sweepstake rings. His pedigree or blood combination, you know, is one of the greatest that the world-renowned Berkshire breeder of Sedalia ever blended in his years of Berkshire breeding. King Lee was sired by Gentry's Longfellow, out of Lady Lee 7th, by the great and well-known Model Duke. I think he is growing better, if anything, as he gets older. My brooders are mainly of the Oxford Bell and Beauty strains. I think the prize-winning Oxford Bell, with her late litter, will stand well up in the front row of any collection on American soil. I have had a trade beyond my expectations, and yet have some of the best of my last fall's pigs, sired by King Lee, that I should like that they go into good hands somewhere in the Kansas swine-breeders' field. I recognize that you want, at this writing, spring pig points, yet I think a word about our S. C. Brown Leghorns will not, at this time, be out of place. I sent some birds to the World's Fair that surprised some of our Eastern breeders, and among other sales made was one cockerel that went to a prominent Eastern fancier for \$40. Our yard No. 1 is headed by the first-prize cockerel at the Maryville poultry show, when he was scored by Felch, making 95 points. All his thirteen hen associates score 95 to 96, among whom are the prize-winners at Atchison, Maryville and St. Louis shows. Our Bronze turkeys came through the winter well. The hens that range on score 96 to 98 are mated with two 98 toms. Our egg trade is good and we, 'gude wife' and your humble servant, respectfully ask a further acquaintance with Kansas people."

The Home Circle.

To Correspondents.

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

The Petrified Fern.

In a valley, centuries ago,
Grew a little fern leaf, green and slender,
Veiling delicate and fibers tender;
Waving when the wind crept down so low;
Bushes tall and grasses grew around it,
Playful sunbeams darted in and found it.
Drops of dew stole in by night and crowned it,
But no foot of man e're trod that way;
Earth was young and keeping holiday.

Monster fishes swam the silent main,
Stately forests waved their giant branches,
Mountains hurled their snowy avalanches,
Mammoth creatures stalked across the plain;
Nature revels in grand mysteries,
But the little fern was none of these,
Did not number with the hills and trees,
Only grew and waved its wild sweet way;
No one came to note it day by day.

Earth, one time, put on a frolic mood,
Heaved the rocks and changed the mighty motion
Of the deep, strong currents of the ocean;
Moved the plain and shook the haughty wood,
Crushed little fern in soft moist clay,
Covered it and hid it safe away.
O the long, long centuries since that day!
O the agony, O life's bitter cost,
Since that useless little fern was lost!

Useless! Lost! There came a thoughtful man
Searching nature's secrets, far and deep
From a fissure in a rocky steep
He withdrew a stone, o'er which there ran
Fairy penicillings, a quaint design,
Veinings, leafage, fibers clear and fine,
And the fern's life lay in every line!
So, I think, God hides some souls away,
Sweetly to surprise us the last day.

BATTLE OF NEW ORLEANS.

The publication in a New York newspaper of an interview with "an elderly Louisiana gentleman," who attributes the grand tactics of the battle of Chalmette, January 8, 1815, to General Moreau, has led to some discussion concerning the events of that famous engagement. In all that has been said and written about this battle, there is nothing extant that comes directly from General Jackson. The only account of that affair from General Jackson himself was related by him in 1825 to General W. S. Harney, late United States army. As it has never been printed, it seems to be worth publication, prefaced with a brief statement touching General Harney and the way it was obtained from General Jackson.

The death of General William Selby Harney, in 1839, took from the roll of army officers of high rank a name that had been an honor to the service since January 6, 1815. He was born in Louisiana, not far from Baton Rouge, while the Territory was still under "the golden and bloody flag of Spain," to quote the epigrammatic words of the brilliant Pierre Soule. General Harney used to say that he had lived under three flags—those of Spain, France and "the star-spangled banner." Think of it! That there should have lived until our day a hale old man who saw three Spanish Governors rule over one of the fairest sections of the republic; after them Laussat, Colonial Prefect, appointed by the great Napoleon, and then the irrepressible American.

General Harney was a tall, well-grown young man when the famous battle of Chalmette, better known as the battle of New Orleans, was fought, January 8, 1815, and though he was not actually present it was not his fault. With other enthusiastic and impetuous youths he had reported for duty at New Orleans when General Jackson called for volunteers in the last days of December, 1814. Being well mounted, and knowing thoroughly every foot of the region from where the Bayou Lafourche enters the Mississippi river to New Orleans, he was engaged with others in patrolling the river, to see that the British did not gain the river above the city and descend upon it before the proper defense could be improvised. The fight at Chalmette began about 7 o'clock in the morning, and was over, so far as the infantry was concerned, by 9 a. m. In this short time a heterogeneous mass of regulars (parts of the Seventh and Forty-fourth regiments), Kentucky and Tennessee riflemen, creoles, free negroes (for there were two companies of free men of color engaged as a part of General Jackson's force), United States marines and sailors, and Baratarians pirates (under Lafitte and one of his captains, Dominique You), who were famous artillerymen and rendered great service that morning, the whole force, numbering in all about 6,000 men, had defeated an army numerically greater of British veterans, which had been trained in war under the eye of the Iron Duke (Wellington) himself on the Spanish peninsula by being pitted against Napoleon's die-hards, commanded by Sir Edward Pakenham, an experienced soldier (Wellington's brother-in-law), who had been especially selected for this command on account of his dashing courage.

Of this splendid force 2,000 were killed and wounded in less than thirty minutes, including Pakenham, Gibbs and Keen,

division commanders, seven full colonels and seventy-five line and staff officers—the entire British casualty list in "action" was 2,117—while the Americans only lost six killed and seven wounded—the most wonderful disparity of numbers in the history of modern war.

General Harney was a most interesting talker. It was the writer's good fortune to spend part of the winter of 1866-67 in the same house with him. I was recovering from a severe illness, and had gone to the Mississippi gulf coast, a charming place for an invalid, either in winter or summer. General Harney was most kind and used to walk with me, and in these walks I asked many questions. He adored General Jackson, through whose influence he had been appointed in the army. I asked General Harney if he had ever talked much with General Jackson about the battle of Chalmette, or of New Orleans, as it is now called, January 8, 1815. "Ah, yes," he said, "I've talked with all the leading officers who were in that battle. In 1825 I was promoted to Captain in the First infantry, and sent to Nashville, Tenn., to recruit for my regiment. While there I met Generals Jackson and Coffee very often and obtained from the former many details of the battle of Chalmette that are not in print. I asked Generals Jackson, Adair and Coffee, the latter having the immediate command of a brigade of the Tennessee and Kentucky sharpshooters, whose long rifles mainly did the work of death, if there were any cotton bales at all used in their works, and they all answered that there had been about 100 cotton bales taken from a flatboat coming from above, and put into the works where the artillery was. But Colonel Humphries, chief of artillery, fearing they might be set on fire by the shells from the British ships, directed that they be taken out and the space left to be built up with earth. For the infantry and riflemen the only works the Americans had were of earth, about two and a half feet high, rudely constructed of fence rails and logs, laid twenty-four inches apart, and the space between them filled in with earth."

"The Kentuckians and Tennessees," said General Jackson, "who were armed with ordinary rifles, were ordered, on the 12th, to prepare for the battle, which could not be delayed much longer, by molding 100 bullets for each rifle, and, as the bores of the weapons were of all sizes, no two rifles took the same bullets. Besides casting the bullets, 300 yards of linen, suitable for patches for the rifles, were distributed, the powder horns were filled up, and new flints put into the guns that needed them, and four new flints were given to each man in case those on hand gave out. All the tactical movements these riflemen had been taught were a sort of open-order skirmish drill, and they were deployed to take positions wherever there was sufficient cover to conceal them. The lines were about 100 yards apart when the American rifles were used with deadliest results. The firing of the rifles was very closely delivered, and the man aimed at fell at nearly every shot."

"Being young and having a taste for tactics, I asked General Jackson to describe the tactical formations of both the English and Americans at this famous battle. 'There was very little tactics on either side,' said General Jackson. 'A heavy fog was on the river on the morning of the fight, and the British troops were actually formed and moving before I had any arrangements made. But the instant I saw their formation I said to Coffee: "By—, they are ours!" Coffee's part of our line was on the flank, which extended into the swamp. About a quarter of a mile from it there was a huge plantation drainage canal, such as are common in the Louisiana lowlands. Here General Pakenham formed his first attacking column. His formation was by column in mass of about fifty files front. This was formed under the fire of the few regular artillerymen I had in the little redoubt in Coffee's front, and that of some cannon taken from a man-of-war, placed in a battery on the river, and served by sailors. Coffee, seeing the direction of the attack, which was intended to turn his flank, dashed forward and said to his men: "Hold your fire until you can see their belt buckles." The riflemen were formed in two ranks behind the works mentioned, and when the first rank fired the second was loaded and ready. There were about 1,800 men behind this frail cover, all of whom were dead shots, and each had 100 bullets in his pouch and the necessary powder in his horn. The British troops came up to within 100 yards of our works without firing a musket. It was a beautiful sight to see. They marched as steadily, shoulder to shoulder, as though they were on review. At 100 yards' distance the order was given them to charge. With a cheer and a double-quick, they came forward. They were about sixty yards distant from us when a long, blazing, crackling flash ran along our line. It was as pretty volley firing as I ever heard or saw.

"The smoke hung so heavy that for the moment I could not make out precisely what had happened," said General Jackson. "In another instant there was a second sharp,

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ringing volley that proved it came from the riflemen. I called Tom Overton and Abner Duncan, of my staff, and we galloped over to Coffee's line. Just then the smoke arose, and I saw that the head of the British column had literally melted away. In front of our lines lay one writhing, ghastly mass of dead and dying red-coats. The column recoiled and fell back to the canal they had started from, and were there reformed. This time the charge was led by General Pakenham in person, gallantly mounted, and riding as coolly and gracefully as if he were on parade. Just as he came within good range of my riflemen I saw him reel and topple out of his saddle, mortally wounded. I have always believed he fell by the bullet of a free man of color in the fight, who was a celebrated rifle-shot, from the Attakapas country of Louisiana."

He referred to a curious story current among the veterans of Chalmette as to how General Pakenham was killed, which is worth reproducing. Among those who flocked into New Orleans when General Jackson's proclamation for its defense was received was a free man of color from the Attakapas, who was a small farmer and herdsman on the high prairies of that region. The rifle was not much used by the Acadian, or early inhabitants, of the Louisiana prairies, but the man I speak of was a famous marksman, and carried the old long rifle, with a barrel of nearly five feet. He was of gigantic stature, and when he reported to Tom Overton (afterward General Overton), of General Jackson's staff, the latter did not know quite what to do with him. However, as men were needed, and there was no time to be particular, the colored sharp-shooter was ordered to the field with the rest, and took his place in the skirmish line. He soon attracted the attention of General Adair by some extraordinary shots. Adair had been used to the sharp-shooting of the Kentuckians in his brigade, but he saw that the negro was the equal, if not the superior, of the best marksmen he had ever seen. On the morning of the 8th, and when the British troops were being formed for their last charge, in which they expected to drive the riflemen from behind the frail works with the bayonet, General Jackson perceived at once what was about to be attempted, and knew that away from their cover his sharpshooters were almost useless. He had the insignia of rank worn by the British officers explained to his men behind the bales, and they were directed to pick off every officer who came within range.

General Pakenham was easily distinguished from the others, as he bravely tried to reform his men. "What!" he roared when not more than 400 yards distant from the American lines, "are the men who fought the veterans of Bonaparte and defeated them to be frightened by a lot of ragamuffin militia? For shame, for shame!" The awfully deadly nature of the fire from behind the cotton bales sorely dismayed the men of Salamanca, Badajos and Albuhera. In all their peninsular experience they had never met with so fatal a storm of bullets. "Form up and drive them from behind their works!" Pakenham shouted, and, turning his back to the American lines, he proceeded to form the English troops for a desperate charge. Just then General Jackson rode up to where General Adair sat on his horse watching the movement. "By—, if we could only get rid of that general we would be safe. Cannot some one hit him?" The colored man was not more than twenty paces distant, leaning against the wheel of a cart, which by some accident happened to be near. Seeing him, General Jackson said to Adair, "Who is that?" He was told who and what the man was. "Can't you hit the man with the white feather in his hat for me?" said Jackson. The colored man did not understand much English, but he comprehended what was wanted. He nodded his head. Taking some tow from his bullet-pouch, he drew his ramrod and carefully wiped his rifle. Then he filled the alligator tooth charger, hollowed out to measure his load of powder, poured it into the rifle, and filled it nearly half full again and put that into the bore with the rest. Carefully selecting a bullet without a flaw, he greasing his patch, firmly rammed it home. By this time the British line had formed and was nearly ready to move. Jackson and the Kentucky general kept their eyes on the free man of color. They saw him move toward the British line until he was within 300 yards of Pakenham. He raised his rifle, and after a second of motionless aim, its whip-like crack rang out on the heavy, fog-laden air. There was very little firing then on any part of the field, for the English had fallen back and the Americans would not leave their works to follow them. The two generals watched the man with the white plume. For half a minute he did not move. "He has missed him, by

—!" said Adair. "No, no," said Jackson, as the British general reeled in his saddle and fell; "he has killed him!" And so he had, for Pakenham only lived a few hours after being struck. It was a very long shot for the rifles of that day. Sending for him to reward him, General Jackson asked the man how he managed to hit Pakenham at such a long range. "I sighted him," was the reply, "and then elevated my rifle till the sight was lost above his head and fired." In other words, he allowed for the fall of the bullet, even with such a heavy charge of powder, and his calculation was true.

I have tried to tell the story of Pakenham's death as I heard it thirty years ago from General Overton's grandson, Walter O. Wynn, of Louisiana, who had it from his father's own lips. This episode of the colored sharp-shooter, I believe, has not been in print. It is interesting, as is anything touching those times, the living witnesses of which have all passed away.

General Harney might well enthusiastically admire General Jackson. Not only did the hero of Chalmette procure for the young Harney his first commission, but in 1838 he made him a major and paymaster, and in 1836, when the second regiment of dragoons was raised General (then President) Jackson commissioned his favorite lieutenant colonel of what was one of the crack regiments of the army. He was always what his men called "a fine, free swearer," and, in fact, was the most profane man in the army, excepting, perhaps, his brother, an army surgeon, who was simply worse in this respect than any officer of his time. As General Harney was the oldest, so he was the wealthiest officer in the army. General Harney was a man of very striking personal appearance, being six feet three inches in stature and perfectly proportioned. For many years he was noted for his agility, strength and swiftness as a runner all along the frontier, and many stories are told of his catching the most fleet-footed of Indians. General Harney was a man of most generous impulses, and many an officer whose head is now silvered gratefully remembers the delicate kindness of the hard-riding, hard-fighting and hard-swearing old dragoon in the years of long ago, when the recipient was green and far away from the home of his youth.—Washington Post.

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THE CHAS. E. HIRES CO., Philadelphia.

The Young Folks.

When I Awake.

- "When I awake in thy likeness,"
And see thee "face to face,"
Not "through a glass darkly,"
Sanctified by thy grace.
- "When I awake in thy likeness,"
Greet those whom my heart holds dear—
Where there's neither sorrow nor weeping,
Where "perfect love casteth out fear."
- "When I awake in thy likeness,"
Where pain and sin are no more,
From my Savior and friends never parted
On that blissful shining shore.
- "When I awake in thy likeness,"
In that heavenly home above
Where peace and rest reign alway—
And everlasting love.
- "When I awake in thy likeness,"
And tread the streets of gold,
And those wonderful visions of glory
My eager eyes behold.
- "When I awake in thy likeness,"
And stand with that blood-bought throng—
Singing, Holy! holy! holy!
A never-ending song.
- "When I awake in thy likeness,"
And cast my crown at thy feet—
Lay down my cross forever
And join in anthems sweet.
- "When I awake in thy likeness,"
In thy love and smile to abide
Sinless, pure and holy.
Then I shall be satisfied.
—Good Housekeeping.

The Origin of the Locomotive Whistle.

When locomotives were first built, and began to trundle their small loads up and down the newly and rudely constructed railways of England, the country roads were for most part crossed at grade, and the engine driver had no way of giving warning of his approach except by blowing a tin horn. This horn, as may be imagined, was far from being sufficient warning. One day, in the year 1833, a farmer of Thornton was crossing the railroad track on one of the country roads with a great load of eggs and butter. Just as he came out upon the track a train approached. The engine man blew his tin horn lustily, but the farmer did not hear it. Eighty dozen of eggs and fifty pounds of butter were smashed into an indistinguishable, unpleasant mass, and mingled with the kindling wood to which the wagon was reduced. The railway company had to pay the farmer the value of his fifty pounds of butter, his 960 eggs, his horse and his wagon.

It was regarded as a very serious matter, and straightway a director of the company, Ashlen Bagster by name, went to Atton Grange, where George Stephenson lived, to see if he could not invent something that would give a warning more likely to be heard. Stephenson went to work and the next day had a contrivance which, when attached to the engine boiler, and the steam turned on, gave out a shrill, discordant sound. The railway directors, greatly delighted, ordered similar contrivances attached to all the locomotives, and from that day to this the voice of the locomotive whistle has never been silent.—Cardiff Mail.

Profitable Currency.

The fractional currency of the United States was the most profitable form of money ever issued by the federal authorities. All of it that was lost or destroyed, and this is estimated in round figures at \$8,000,000, but it is probably more, is figured as a clear gain to the government.

The total amount of the currency emitted, including reissues, was \$368,720,079.51. The total amount redeemed aggregates \$353,447,026.50. This would apparently leave outstanding \$15,272,443.01, but in the last annual debt statement the outstanding amount is set down as \$6,900,504.62. This amount is merely an estimate of the authorities, but clearly illustrates the fact that \$8,271,938.79 has been marked off to profit and loss.

The government still stands ready to redeem its fractional currency and has no intention of repudiating any of it, although Congress has authorized the marking off of \$8,000,000. Very little of it is now turned into the subtreasuries, in consequence of the rarity of certain issues and the fact that large quantities are in the hands of collectors, who would not part with their specimens for ten times the face value.

There was redeemed last year exactly \$2,958 worth of this profitable currency, and so accurately are the accounts of the Treasury Department kept that the exact amount of each denomination destroyed can be ascertained. They were as follows: Three cents, \$3.49; 5 cents, \$28.43; 10 cents, \$602.05; 15 cents, \$50.11; 25 cents, \$1,095.42, and 50 cents, \$1,178.50. Fragments of bills are, of course, redeemed in proportion, which accounts for the apparent impossibility of redeeming total amounts that are not multiples of the face value of the notes.

Fractional currency was a feature of our money from August 1, 1862, when the first issue was authorized, until February 15, 1876, when the last or fifth issue ceased. The emission of it therefore covered a

period of fourteen years, and it is eighteen years since the last notes were issued.

Considering the length of time since the government discontinued the issue of fractional currency the amount outstanding is enormous, greater by far than any other form of the public debt, or, for that matter, all forms of the public debt unredeemed from the foundation of the republic down to 1862, when the legal tender notes were authorized. It is not likely now that more than \$50,000 of fractional currency will ever be presented for redemption, so that the total profit to the government will in the end amount to fully \$15,000,000 from its issue.

A curious fact about the presentation of fractional notes for redemption is the large proportion that spurious bills bear to the total. Last year, when but \$2,958 worth was redeemed, counterfeit fractional bills to the amount of \$228 were turned into the Treasury and destroyed. The proportion is very nearly 8 per cent., which illustrates two things: (1) How extensively the fractional currency was imitated, and (2) the tenacity with which persons who had been taken in by the bad money clung to the hope of eventually obtaining its value.—New York Herald.

The Discovery of Coffee.

The following story of the discovery of coffee is quite interesting, but it seems so much like a fable that one is apt to doubt the truthfulness of the account. It, however, is like most fables, very interesting reading:

"Towards the middle of the fifteenth century a poor Arab was traveling through Abyssinia, and finding himself very weak and weary from fatigue, he stopped near a grove. Then, being in want of fuel to cook his rice, he cut down a tree with dead berries. The meal being cooked and eaten, the traveler discovered that the half-burned berries were very fragrant. He collected a number of these, and on crushing them with a stone, he found their aroma increased to a great extent. While wondering at this he accidentally let fall the substance in a can which contained a small supply of water. Lo, what a miracle! The almost putrid liquid was instantly purified. He brought it to his lips; it was agreeable, and in a few moments after the traveler had so far recovered his strength and energy as to be able to resume his journey. The lucky Arab gathered as many of the berries as he could carry, and having arrived at Aaiden, in Arabia, he informed the mufti of his discovery. The worthy divine was an inveterate opium smoker, who had been suffering for years from the influence of the poisonous drug. He tried an infusion of the berries, and was so delighted with the recovery of his own vigor, that in gratitude to the tree called it *cafnah*, which in Arabic means force."

Frog Farming.

A great many people are familiar with methods of raising successful crops on farms that are under cultivation, but few possess knowledge of profitable investments in crops raised under water. Nat Wetzel, of Kansas City, who is at the Paxton, is an authority on the latter. He is interested in several extensive frog farms in Missouri, and is now in Omaha reaping the benefits of this season's harvest of hoppers.

"The most successful frog farm is a natural lake," said Mr. Wetzel. "The great trouble with frog-raisers is their desire to make the lakes too picturesque. A plain, everyday body of water, without improvements, is the best. I have one frog farm of fifteen acres in Missouri. It was originally stocked with 1,500 frogs for breeding purposes, and the results were most gratifying. Frogs should be 4 years old for breeding. Put them in the farm in the spring and you will find a crop of young frogs in the fall. The frogs of the first crop are not ready for the market until they are 1 year old. These frogs are caught and their legs sold as an epicurean delicacy at prices ranging from 6 cents to \$1.50 per dozen. The increase in demand for frog legs has made farming of this kind popular and profitable. There are many ways to catch the frogs for market. Some spear them, and others use target rifles with success, but the best method is to bait hooks with a piece of red flannel. Frogs are fond of red, and grab it wherever they see it.

"Frogs have more sagacity than they are credited with possessing. I firmly believe that they have a language, and it would be a good idea for Prof. Garner to devote his attention to the articulative powers of the American frog instead of wasting his energies on the African monkey. They certainly have signals or cries of warning when danger is near, as I have fully tested. Frogs, like ducks, will become accustomed to being fed, and line up on the edge of the lake, when farmers make a pretense of feeding them corn meal. There are several flourishing frog farms within the corporate limits of Kansas City."—Omaha Bee.

"Half a span of angry steel!" will produce no more fatal results than a neglected cold or cough. For all throat and lung diseases, Ayer's Cherry Pectoral is the best remedy. It is invaluable in cases of croup, whooping cough, bronchitis and la grippe.

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

Royal Baking Powder

ABSOLUTELY PURE

The Health-Giving Onion.

Mr. Walter Besant, during his stay in America, learned a fact or two concerning the odoriferous onion, which he recently made public for the benefit of English girls in general and ugly girls in particular. "If ugly girls," he remarks, "will eat onions, they won't be ugly any longer. Ugliness is often the result of bad health alone. Health is beautiful and onions are health-giving. They brighten the complexion, and consequently lighten the feminine heart. In America," says the famous author, "some of the best people, particularly in literary and academic circles, are 'not at home' even to their most intimate friends on Sunday. They devote that day to the consumption of the leek." Here is a grand new feminine excuse. The everlasting but convenient headache may now yield to the health-giving onion.

Throwing Away Chances.

How often we hear the expression: "Give me a chance and I'll succeed." And yet the various avenues of the business world are covered with chances that have been thrown away or kicked to one side. We have often been pained to see the young and inexperienced, deaf to counsels of faithful and wise friends, in their pursuit of mere glitter, cast from them the most precious gems that needed only the application of patient diligence to make them valuable to them beyond comparison. How many there are who throw away the chances of a good education, with which our country abounds, simply because they have become infatuated with the idea of making money, and because of their eagerness they throw away the very best means of getting it! What folly to prefer the lump of copper before the diamond, because the former lies nearest! Next to the renewed heart, there is nothing

so desirable as a cultivated mind. So many of our young people too early become possessed of the money-getting craze so prevalent in our age and country. In their haste to become rich in this world's goods they not only neglect to acquire the heavenly riches, so necessary to make this life a success, but they also fail to secure one of the best means to assure for them a successful career in a worldly point of view.

My young friend, whatever other chances you throw away, be sure to utilize to the utmost any opportunities that may be afforded to you to secure a good mental training.

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W. E. CAMPE ROOFING & MFG. CO., Kansas City, Missouri.

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ESTABLISHED IN 1863.

Published Every Wednesday by the

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To insure prompt publication of an advertisement, send the 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 St. Louis Post-Dispatch says that Kansas City men are offering to put up their last dollar that Kansas will this year raise 50,000,000 bushels of wheat. They will probably win if they get any takers.

As indicated by the bank clearings, the business done in the United States during last week was less than three-fourths as much as during the corresponding week last year. Production was probably cut to an equal extent and hired labor still more.

Another attraction has been added to the offer to any one who sends to the KANSAS FARMER \$1 for a year's subscription. You may now have your choice—one number of "World's Fair Views," one number of "The Holy Land Photographed," or one number of "Picturesque America." These are high art productions. A dollar bill is safely sent in a letter without the expense of postal order.

A reader of the KANSAS FARMER says: "We keep a package of postal cards handy when reading your paper and write to every advertiser who offers a catalogue or a sample. In this way we get excellent information right up to date, and we have secured some of the most valuable seeds." A good plan which every reader of the FARMER can follow with small expense and large profit. Those who advertise these things want you to send for them.

The Secretary of Agriculture has sent a statement to the Senate showing the available wheat supply, in accordance with a Senate resolution. Under the exact terms of the resolution the Secretary finds an apparent shortage of 50,000,000 bushels. In another and separate statement he shows the amount available for export from March 1, 1894, to July 1, 1894, to be 69,000,000 bushels, and the apparent discrepancy, 119,000,000 bushels, between the amount of supply and the quantity distributed is due, he says, to an underestimate of the reserve stock held by farmers on March 1, 1893.

Joseph Le Clerc, a thorough-going farmer of Noble, Rice county, Kansas, furnishes the following estimates of the cost and profit of raising wheat:

| | |
|--|--------|
| To plow one acre..... | \$1 00 |
| To harrow..... | 15 |
| To drill..... | 20 |
| Seed..... | 43 |
| Cutting..... | 1 00 |
| Threshing twelve bushels..... | 60 |
| Feed and board on one acre..... | 75 |
| Total..... | \$4 13 |
| Cost per bushel..... | 34.5 |
| Clear profit on twelve bushels at 58c..... | 2 83 |

Mr. Le Clerc observes that this is the result if one lies in the shade of a box elder while the hired man does the work, and that if one does his own work he gets, in addition to the above profit, a fair compensation for his labor. It is, probably, best to observe that the price stated, 58 cents per bushel, is away above this year's market in Rice county, but even at 40 cents per bushel Mr. Le Clerc's figures leaves a margin.

THE SITUATION.

Even the optimists of Wall street have assumed a plaintive wail in reviewing the situation. They assume that the settlement of the tariff issue must precede any considerable revival of business or industrial activity. If there were any reason to suppose that these dealers in money, stocks and bonds know more of the causes of the depression or what effects are likely to follow any course of action, or that they know more of what is going to happen in the near future than is known by any other well informed citizens, some importance might be attached to their predictions, even though like those of the weather prophets, they have missed oftener than they have hit during several months last past.

It is now predicted by these would-be seers that the pending tariff bill will be passed before Congress adjourns, but the date of passage has been set forward until August. The effect of the temporary settlement of the ever-present tariff agitation will be, it is assumed, a revival of business, and that without reference to the terms on which it is settled.

There may be considerable wisdom in this, and the people are coming to the conclusion that the contention over tariff is a good deal of a sham, intended to entertain the crowd and hold their attention while the Congressional participants in the battle indulge in a good deal that is not seen by the public.

But, to return to the consideration of Wall street's opinions, the prediction is made, by one of the writers from that center who usually takes a cheerful view of the situation, that the postponement of final action upon the tariff bill means a postponement of any considerable revival of business and industrial activity until next fall. This may be shrewd politics on the part of the majority in Congress, for it will tend to throw the responsibility for the depression upon the present tariff law, under which it has so long continued, and by bringing into effect the new law at the same time that the expected revival takes place, will inevitably associate returning prosperity with "tariff reform."

But the country is growing very tired of Congressional jugglery and the conviction is rapidly gaining ground that while the country might prosper under almost any kind of tariff laws, whether on a basis of protection or of revenue only or without any tariff at all, it is not possible to have other than a fitful prosperity while constantly changing systems—while partisans in Congress play a game of battledoor and shuttlecock with the industrial interests of the people.

But the prophecies of Wall street seers and of every other class of prestidigitators may all be made to appear very silly by events of the near future. It is not well to become unduly alarmed, and yet the present situation in the United States has many of the features which have attended or preceded great revolutions in the more or less remote past, and fortunate will we be if our revolution can be without violence. The unrest which comes from idleness, the activity produced by hunger, the organization which is prompted by want, the concert of action against conditions which are not believed to have been produced by chance, the vast multitudes disposed to act, the vaster multitudes disposed to help and encourage the movement to Washington, are elements with which this country has not heretofore had to reckon. Examination of the authority by which this rising force may be dispersed, or prevented from assembling at the national capital, or prevented from perfecting the most proficient form of military organization, discloses the lack of adequate provision. So long as the Army of the Commonwealth is orderly, marches under the stars and stripes, menaces no one, and is fed and cared for by the voluntary contributions of its friends, it has the right under our laws to go where it pleases. It has encountered little opposition and the annoyances which some branches have met have only tended to advertise and strengthen the movement.

It will be an anomaly of the ages, if

when such an organization shall have been perfected, embracing, as it seems likely, hundreds of thousands of able-bodied, earnest men, supported by a public sentiment which is spontaneous and almost universal, furnished with material supplies from the over-abundance of the products of the farm and factory—it will be a surprising anomaly if when such an organization feels its power some act or circumstance shall not precipitate a collision between it and some other force or movement.

If the Wall street seers are right, and the families of these men have to face yet another four or five months of semi-starvation and semi-pauperism, who can predict the dimensions to which the Army of the Commonwealth will have grown? Who can guarantee that the desperation of destruction shall not supplant the present desperation of determination to peaceably present personal petitions to Congress for the enactment of such measures as the petitioners believe will bring relief?

The Senate urges the preservation of its "dignity" as a reason why no committee should be appointed to receive on the part of the Senate the requests of the army now marching towards Washington. It is to be hoped that the true dignity of the Senate may be maintained, but it will surely have to listen to the petitions of the common people, represented by those now journeying towards Washington, as it has listened to the representatives of dollars in the past.

If our ship of state shall safely pass the stormy seas which appear to be ahead and shall again bring to the people general contentment where all is now unrest, and shall again restore prosperity where industry languishes, our institutions will have written for them an endorsement which shall be read and approved in all lands.

A GOOD SUGGESTION.

The great majority of fruit-growers have so much on their hands during the busy season that any entirely new work, however necessary, is apt to be neglected. Besides, few of them have had practical experience in spraying fruit trees, either to destroy insect enemies or to check the ravages of fungus. Here, then, is an excellent opportunity for active and energetic young men to begin a profitable business. Let them procure a first-class spraying outfit and go through their own and neighboring communities, making contracts to spray orchards as often as needed at a specified price per tree. A man used to the business can do the work quicker and better than the one unused to it can possibly do, and the owners of such orchards will cheerfully pay a reasonable price to have the work well done, which if not contracted for would probably be neglected altogether. There are thousands of men to whom this opportunity will give useful employment at better pay than they can get at anything else. It is just the kind of work, too, that will make hundreds of thousands of apple orchards pay a good profit this year where they have for a number of years been useless cumberers of the ground.

Talk is revived at Washington of a tariff commission to settle tariff matters and take the question out of politics. Senator Morgan proposes that the Secretary of the Treasury and four others, two from east and two from west of the Mississippi river, shall form a court to settle tariff rates and duties. Not more than two of these members are to belong to any one party. Something like this was proposed by Senator Plumb except that the late Kansas Senator did not propose to make a court of the commission, but only that it should furnish to Congress such information as to the effects of tariffs on the several industries of the country and the cost of living as should make clear the course of statesmanship.

Quite a number of our best swine-breeders report on the condition of the spring crop of pigs this week. These reports will be continued in next week's issue also. The pertinent pointers given and the contrast to last year is quite manifest.

GRAIN MEN AT WICHITA.

A meeting of considerable importance convened at Wichita last week to foster a commercial union between the West and South. The report states that delegates were in attendance from nearly all cities of the gulf and South Atlantic coasts and from Texas, Oklahoma, Kansas, Nebraska, Iowa and Minnesota. The city of Wichita, through her officers and her Board of Trade, received the convention with great enthusiasm.

The prime object of the movement appears to be the turning of the tide of Western grain shipments from Eastern to Southern ports. As a part of the program a vast grain center is expected to spring up in the heart of the grain-growing country. There is scarcely a question but that the city of Wichita will logically become this center. This feature readily accounts for that city's interest in the movement. Several cities on the gulf, but more especially Galveston and New Orleans, are competitors for the distinction of being the port through which this business will reach the high seas. The enthusiasm of the West as focused at Wichita, was strongly represented by Mr. K. Harris, of that city, in a red-hot speech in favor of commercial relations between the West and the South. He said that agriculture had been the Ishmaelite of productions since the world began against which all classes have been arrayed, because with a rise in its value the cost of living rose accordingly. He blamed this condition to the systems of the Eastern stock gamblers and said that this congress was a declaration of war in the cause of equity and justice. After reciting the injustice of the prevailing conditions governing the transportation of products, he said:

"The power is yours to wrest the scepter of sovereignty and plant a standard so rock bottomed that the prosperity you gain and enjoy may descend to your children forever.

"Make solemn covenant with each other to turn your products to the gulf; force the buyer to put his office nearer the supply point; add a per cent. of the freight to the producers' meager and toilsome profits; free the West from Eastern domination and obtain the option of going to any point of the compass instead of being, as now, severely punished, if not robbed, for obeying the natural impulse of shipping grain to a market which would add millions to the producer's purse instead of paying interest on mortgages, bonds and watered stocks, and salaries to 16 per cent. of the receivers of railway mileage of the United States, a nation on which prodigal nature has showered exhaustless resources, and yet to temper our possibilities we have the most luxurious, reckless, extravagant, wasteful, prodigal, penny wise and pound foolish railway system in the world, even if we concede honest management in the interest of salaried officials, and that watered stock is the result of a clerical error and not the consequent of malversation.

"Naught but fertility has prevented wholesale municipal bankruptcy and individual insolvency over the West."

An important and well considered address was delivered by Mr. Fred Gardner, of New Orleans, from which the following is taken as showing a feature of the discussion:

"In presenting to the notice of this very important convention a few of the leading features of the ever increasing export grain business of the port of New Orleans, and to prove to you, gentlemen, the urgent need of hearty united action on the part of the Western States and the gulf ports generally, it may be well to refer at once to the following statistics, which so recently caused some of the ablest business men of the West and South assembled in convention in the city of New Orleans, to urge the necessity of immediate united action on the part of all commercial bodies, West and South, to throw off a yoke which promises, if not destroyed quickly, to choke our business vitality for many years to come.

"The foreign trade of this country more than quadrupled itself in the twenty-seven years from 1865 to 1892, and the proportion shared by the West and South in this growth is shown by the following figures taken from the Bureau of Statistics: 'The total exports for the fiscal year ending June 30, 1893, amounted to little less than \$848,000,000; of this sum quite \$600,000,000, or over 70 per cent., was contributed by the products of the West and South, embracing grain, provisions, cotton, tobacco and other products, and exported to clothe and feed the teeming population of Europe and the far East. Deducting \$86,000,000 from the total exports as the amount that passed out of this country through Northern and lake ports and Pacific ports, we find that not quite \$762,000,000 reached the markets of the world through Atlantic and gulf ports.'

"Of this sum over 80 per cent. was contributed by the West and South, and it is a matter of special interest to this convention to trace its course and note the laws by which that course was determined.

"And here comes a curious array of fig-

ures, for whilst 80 per cent. of these exports were produced many miles nearer South Atlantic and gulf ports, yet we find over 64 per cent. passed through ports north of Baltimore, beginning with Philadelphia, and 46 per cent. passed through the port of New York alone. So much for the movement of exported products, and incidentally it may be well here to note that as regards imports for the same period, New York received \$549,000,000 out of a total of \$766,000,000 received through Atlantic and gulf ports.

"The port of New Orleans' share of this business was \$85,000,000 of exports and \$21,000,000 of imports.

"With the foreign trade of the United States so practically centered in the port of New York, of necessity all roads must converge there and in the end build up a through freight rate system which will tend to restrict the business of every Western and Southern center of trade to the narrowest possible limits, and as commented on so ably in the recent convention before referred to: 'By the very irony of fate, the wealth created in your brain, capital and muscle, will serve as the corner stone of a system that imposes commercial vassalage in its worst and most aggravated form.'

"As regards grain export trade it needs but a casual glance at to-day's situation to prove that its natural outlet is via the gulf ports, for it is a demonstrated fact that nearly all of the available surplus for export from the United States is now produced west of the Mississippi river, and it only remains for the West and South now to secure for themselves this part of the export trade of the nation which so naturally belongs to them."

The remainder of Mr. Gardner's address was devoted to the advantages of New Orleans harbor for export, and the claims of the Crescent city were, by him, ably represented.

A. W. Oliver, of Wichita, whose experience in handling grain and flour on a large scale adds to the weight of his utterances, showed that while desirable there are some obstacles to be overcome in turning the current of Western trade from its present to a Southern route. He declared, however, that these obstacles are not insurmountable, and that one of the chief of these, the danger of holding grain in large quantities at Southern ports, can be met by the establishment of grain centers in the grain regions. He declared:

"Wichita is ready to do her part, co-operate with you, and adopt any plan that will give us a nearer and better market. In the year 1892, 83,000,000 bushels of wheat was harvested within 100 miles of this city. No other city was ever surrounded by so much wheat grown within such a limited area. When the time comes that the surplus grain of the West finds its nearest export market and is shipped direct to its nearest local market, it will do more to bring prosperity to the West and South than anything else commercially could, as the South could ship to us direct what ever we demand of the fruit and the products of their manufactures. The produce houses of Wichita handle from 1,500 to 2,000 cars annually, a large per cent. of which is tropical fruits; and our wholesale grocers handle from 1,200 to 1,500 cars of sugar a year."

The interest of Galveston in the matter was presented by Mr. D. C. Imboden. He made the following, among other points, for his town:

"Galveston is the nearest port to Kansas and all the territory south, the next nearest practicable port being some 350 miles sail distance east of Galveston, but for the want of equitable mileage rates the West has been deprived of the benefits of this, their nearest port.

"In 1892, at a cost of a quarter of a million dollars, the Galveston Wharf Co. erected one of the finest and best equipped million-bushel elevators in the country, with fourteen separate and complete unloading sinks, elevator boots and hopper scales.

"Galveston, with her unsurpassed wharf and handling facilities and banking capital, is ready to do her share with the West to market the Western grain in the most direct and economical manner. Help us get equitable mileage rates to Galveston, and Galveston will take care of the rest."

There were many other addresses of importance in showing the mutual advantages of the establishment of the proposed commercial relations, but space will not permit their reproduction here. Ex-Mayor Clement, of Wichita, made such a showing for Kansas and the West as cannot fail to promote the competition for our business.

Bush & Knapp, of Osborne, Kas., have shipped to that city a carload of porous drain tiles to be used in irrigation improvements in that vicinity. It will be remembered that ex-Secretary Mohler, whose farm is in Osborne county, was the first to give prominence in Kansas to the proposition to apply water to the crops at the roots through buried lines of tile than by spreading it over the surface. It is complimentary to the ex-Secretary that the first extended attempts to apply this method are to be made in his home county.

THE CHINCH BUG A PUBLIC ENEMY.

The season for the opening of the campaign of the ill-smelling chinch bug is at hand, and some of the preliminary reports indicate that the little pest is on the ground and rapidly preparing for business. This, of course, means either fight on the part of the wheat-raisers or the sacrifice of portions of the crop to an army more useless than Coxey's. But since Chancellor Snow, of the State university, has provided the necessary ammunition at State expense, it will be absurd to allow the stinking little pest to carry the day without resistance.

The experience of the few years since the use of Snow's infection began has shown that to be certainly effective the disease must be handled by a person of some knowledge of the habits and life history of the bugs, as well as of the infection. To meet this Chancellor Snow has arranged a short course of instruction in his bacteriological laboratory at Lawrence, and receives there such young men as are sent by the County Commissioners or by interested individuals, and these young men receive such training in the use of the infection as enables them to proceed intelligently and without hesitation in the proper use of the remedy. It is understood that an intelligent young man who applies himself to the work becomes proficient in a few days.

It is well known that at a certain stage in their development chinch bugs migrate from field to field, so that the farmer who may have diligently fought the pest on his own place may, after all his trouble, see his crops covered with those hatched in the fields of his less thrifty neighbor. For this reason concerted action alone can be effective, and it is for this reason that the County Commissioners in some counties have taken the matter up in a public and general way by employing a person to apply the infection. Whether or not there is authority of law for such use of the county's money, it is certain that no use can be made of it which meets with so universal approval as in thus fighting a public enemy.

There ought to be, at this time, from every county in Kansas, an agent in Chancellor Snow's laboratory getting instruction, or else on his way home with his instruction and his diseased bugs, ready to spread death and destruction throughout his county to the first brood of chinch bugs, and to infect every colony which hereafter appears.

Questions.

EDITOR KANSAS FARMER:—(1) Is there a way to destroy ground moles? (2) Is carp culture profitable, and is there any other way to catch them without seining them? (3) Would you advise me to plant broomcorn seed in sandy land? D. L. SPITZER.

Wendell, Edwards County.
[Referred to the army of experts who read the KANSAS FARMER.—EDITOR.]

Arsenic for Moles.

EDITOR KANSAS FARMER:—I read in your last publication that you wish the experience of your readers as to how to exterminate moles. I have been bothered with them a great deal and have tried many plans, the best of which is to soak field corn a day and night in lukewarm water until it swells very large, then drain off all water and shake well in a bottle with a little arsenic; then drop in the passage ways of the moles at different places. This plan will invariably exterminate them. If some hard crusts of old cheese can be obtained I would prefer to use the cheese, as moles are very fond of it. If cheese is used, do not soak it in water, but simply shake well in bottle with the arsenic.

Fort Scott, Kas. A. B. COMBS.

New Secretary of the Holstein-Friesian Association.

EDITOR KANSAS FARMER:—Kindly state in the columns of your valuable paper for the benefit of your many subscribers who are interested in the breeding of Holstein-Friesian cattle, that at the annual meeting of the Holstein-Friesian Association of America,

held at Buffalo, N. Y., March 21, last, Mr. Thomas B. Wales failed of re-election as Secretary, and was succeeded by Mr. F. L. Houghton, widely known as the editor of the *Holstein-Friesian Register*, of Brattleboro, Vt., to which place the offices of the association will be removed from Boston on May 1, next, and that all correspondence should be so addressed at that time. Breeders are requested to send for new blank forms to be hereafter used.

F. L. HOUGHTON, Secretary.

Alfalfa Inquiries.

EDITOR KANSAS FARMER:—I wish to inquire of some of the readers of the FARMER with regard to alfalfa. When should it be cut? When it is beginning to bloom, in full bloom, or when rather declining from bloom? Is it hard to cure? Should it be cured mostly by the sun or in the shock? How should it be cut and taken care of for seed? What should be the appearance of the seed and pod when ready to cut for seed? How should it be threshed? With a common thresher? Is there any attachment to a thresher necessary to make a success in threshing it? If so, what is the cost of it? What is the price generally paid for threshing? Some one answering will confer a favor to me and I presume to other readers of the old stand up for farmers. Wheat is coming on rapidly—what did not freeze and blow out. Under favorable conditions cannot make more than 60 per cent. of last year's crop. Oats badly killed. There is a prospect for a few peaches and a fair crop of apples.

Hunnewell, Kas.

Trap for Moles.

EDITOR KANSAS FARMER:—In answer to the inquiry how to get rid of moles would say: I was troubled just the same as Mr. Clark. I tried every conceivable way I could hear of but without success. So I had one of our hardware men order me a mole trap from a wholesale house in Kansas City. I think he sent the third order before he succeeded in getting one, and I think it cost me \$1.50. It is made of galvanized steel and will last a lifetime, if a person dies when the proper time comes. It has no name on it, only the words "patent applied for." I don't think the person that invented it should be ashamed of his name, for the trap cannot be beaten by anybody. Now all I have to do when I see a mole's runway is to get my trap, set the heel of my boot on the runway so as to press the dirt down firm, then set the trap so the trigger almost touches the dirt, and the first time the mole comes along and roots up the pressed dirt it trips the trigger, and just that sure he is fast in the trap. It will catch a mole every time if properly set.

AMBROSE COCHRAN.

Little River, Kas.

Good Will.

EDITOR KANSAS FARMER:—I take great pleasure in your weekly visits through the columns of the FARMER. I have been greatly benefited by the valuable articles that have appeared regularly in the FARMER, and the strong hits for the people that appear on the editor's page are highly appreciated, and my wish is that the strong arm of the FARMER will be extended indefinitely to the weak and deluded. I hope that through the columns of the FARMER in the near future I will learn how I can utilize a large body of water twenty-five feet below the level of my farm land. I have a body of water that is from two to fifteen feet deep and probably three-fourths of a mile long and will average eighty feet wide.

A. H. COX.

[The good will here expressed, and which very many letters received at this office prove to be general on the part of our readers, is fully reciprocated by the editor and his co-laborers. The FARMER has been chary about publishing these kindly letters because we do not like to appear as sounding our own praises. As to the irrigation problem which our correspondent has on hand, fuller information than is given in his letter will be necessary to an intelligent consideration. It seems, however, to be simply an engineering problem.—EDITOR.]

About Celery.

EDITOR KANSAS FARMER:—The first of March I sowed celery seed, Golden-Heart, and when an inch and a half high transplanted them. They had four leaves at the time of transplanting and I have them in pans in the house. When shall I transplant them into the garden and when into trenches? I have read of cutting them off to make them stocky. Shall I do that before transplanting them into the garden or after? Would it be best to sow seed in the garden now for winter celery? Will you please answer these questions through the columns of your valuable paper. We get much information from the KANSAS FARMER.

A CONSTANT READER.

In the valuable little book published by W. Atlee Burpee, the Philadelphia seedsman, entitled "How and What to Grow in a Kitchen Garden of One Acre," the following are some of the points about celery:

"The seed should be sown in drills about six inches apart, to admit of working the soil with a narrow hoe, as the continued watering will harden the surface of the bed and check the growth of the young plants. When the plants are well up they should be thinned out so as to stand an inch apart in the drills and if the plants are ready some little time before they are wanted for setting out, they can be made more stocky and stronger by shearing off about half of the tops.

"When ready to set out, I run a double furrow where the row is to be—that is, the plow is run both ways in the same furrow, casting up a ridge of dirt on either side of a shallow trench; then in the bottom of this trench fine compost or well-rotted manure is placed to the depth of one to two inches, and some of the fine soil from the sides is drawn down over the manure with a fine rake until the manure is covered about three inches. This will still leave a depth of about two inches below the surface, which will serve to draw and retain the rain water, or, in a dry time, can be flooded with a hydrant hose or irrigating ditch. Where the ground has been heavily enriched or the celery is planted as the first crop—that is, when no early vegetable precedes it on the same ground—no manure is used in the trench or furrow, which is plowed out in the same way, the additional depth assisting in the labor of earthing up for blanching. To obtain fine quality and appearance the plant should be pushed to as rapid a growth as possible from the time the seed is sown until the stalks are ready for use; if allowed to become stunted, the stalks will become knotty in appearance and bitter in taste.

"For the main crop the young plants should be ready to set out by the 1st of July, though in a favorable locality they can be planted as late as the middle of August, as they spend the summer largely in making roots and do not grow much until the cool weather. As soon as the plants attain eight to ten inches in height, or rather, length of leaf stalk as they lie spread out, the earthing up should begin on all kinds of celery, although the seed catalogues will tell you that it is unnecessary in self-bleaching kinds. These latter may be bleached easily by tying the stalks together with straw or soft twine, but the earthing-up process is much more satisfactory both to produce a compact bunch of stalks and an even whiteness in color; otherwise the outside stalks will remain green."

Our readers who are ordering eggs, poultry and swine from our advertisers should always give the county as well as the postoffice address, for the convenience of the shipper, and to insure a more prompt delivery to the purchaser.

Never Found a Substitute.

HAGERSTOWN, MD., July 26, 1893.

The Lawrence-Williams Co., Cleveland, O.:

Yours of 22d to hand. It is a fact that I have not sent an order to your house for a long time. It is not because I don't use Caustic Balsam any more, but that I have been getting it from Baltimore, Md., a nearer point. You ask me what I have to say for Caustic Balsam, good or bad. I must say good. I hardly know what I would do without it. I have never found a substitute, nor any liniment to come half way. I think it should be more widely advertised.

W. C. ASH, V. S.

Horticulture.

HORTICULTURAL CATECHISM.

The following 100 questions and answers by members of the Missouri Horticultural Society are of great value, and are almost without exception as applicable in Kansas as in Missouri:

Question 1. Mention those fruits most successfully grown in Missouri.

Apples, pears, peaches, in south Missouri; plums (native), grapes, cherries (Duke and Morello varieties), strawberries, raspberries, blackberries, gooseberries.

2. Mention those less successfully grown.

Peaches in north Missouri; plums (foreign), apricots, nectarines, quinces, currants, mulberries, cherries (Heart and Bigarreau varieties).

3. Name, if any, the native fruits of Missouri.

Pawpaw, persimmon, haw, crab-apple, grapes, elderberries, strawberries, raspberries, blackberries, gooseberries.

4. Name the natural or wild fruits of Missouri that are profitable.

Strawberries, raspberries, blackberries, grapes and gooseberries.

5. Name the nuts grown successfully in Missouri.

Hickory, walnut, pecan, hazel.

6. Name the foreign fruits that find a market in Missouri.

Bananas, pine-apples, oranges, lemons, citron, grapes, prunes, dates and figs.

7. What fruits can we ship successfully to foreign countries?

Apples, oranges*, lemons* and grapes.

8. What fruits are shipped green and ripen after being shipped?

Bananas, oranges and lemons.

9. Name the common kinds of packages used in shipping fruits.

Boxes, baskets, crates and barrels.

10. Name the common kinds used in handling fruits at the orchard.

Quart boxes for berries, half-bushel boxes and baskets, one-bushel baskets and boxes, and barrels for apples.

11. What methods used in preserving and shipping fruits not in their natural state?

Evaporating, canning, drying, preserving and crystalizing.

12. What is the weight of a bushel of apples?

Forty-eight pounds.

13. What is the weight of a bushel of dried apples?

Twenty-four pounds.

14. What is a fruit?

That portion of a plant which consists of ripened carpels and the parts adhering to them; that part of the plant which contains the seed, covering and including the seed, such as apple, peach, pear, strawberry, raspberry, grape, etc.

15. What is meant by fruit candies?

Fruits dipped into hot sugar syrup and then dried.

16. What is meant by evaporated fruit?

Fruit dried in hot-air receptacles, which rapidly expel the moisture and bleach the fruit.

17. What purpose does fruit serve as food?

Assists the digestion, serves as an appetizer, contains sustenance for the body.

18. What is a cion?

The last year's growth cut from a plant, intended to be grafted upon another plant, known as the stock.

19. What is meant by a cutting?

The last year's growth cut from a plant, intended for propagation without grafting.

20. What is meant by a graft?

That union of the cion and the stock, thus forming a new plant of which the cion determines the variety.

21. Name the animals and birds which are enemies of fruits.

Rabbits, mice, gophers, moles, cedar-birds, blue jays.

22. Name the diseases and fungous growths which retard the growth of fruits.

Rust, mildew, blight, scab, rot, yellows, rosette, black-knot.

23. Name the hindrances to fruit-tree culture.

Injurious insects, fungous growth, atmospheric changes, adaptability of soil.

*This must be an error of the compiler.—EDITOR KANSAS FARMER.

24. What, do you think, are some of the greatest hindrances in the horticulturist himself?

Want of knowledge, lack of adaptability and love for the work; carelessness.

25. What are fungi?

A fungus (plural, fungi), is a plant of simple organization, without either leaf or flowers, which is never colored green.

The fungi are dependent on organic matter for their existence, and they obtain this either from dead plants or animals or from living plants or animals.

The parasitic fungi, like the rusts, smuts and mildews of cultivated groups, and bacteria, which cause the blight of the pear and many of the contagious diseases of animals, are illustrations of the class which feed on living beings.

The mushroom, and the moulds which occur on cheese and other food, illustrate the fungi which live upon dead organic matter.

26. What is leaf blight?

A special fungous growth which attacks the leaf growth.

(To be continued next week.)

Grafting the Grape.

Generally the grafting of the grape is unsatisfactory, among professionals as well as amateurs.

A correspondent to the *Orchard and Garden* has had such success with a Delaware grafted on a wild grape stock that he gives the method for the benefit of others.

When the first few leaves have formed and the sap is flowing, select the place on the young vine where you wish to graft.

This is best between two joints. Then wrap a cord tightly around the vine, which will somewhat prevent the return of the sap.

Two cuts are made, one downward and another upward, and these must be about an inch in length.

Select a cion which has a natural curve, and is a trifle longer than the distance between the cuts. Cut the ends wedge-shaped, and insert carefully, so that the bark is in contact.

Then bind firmly the cion near the middle to the stock, and if this is securely done, no binding is needed at the ends, but these points must be covered with grafting wax.

The bud will soon begin to show. Then by degrees all the shoots not belonging to the cion must be removed.

In the summer all the wood above the upper cut must be cut off, and in the fall that above the lower cut on the stock and above the bud on the cion.

It is said that if the stock is a strong grower and has grafted on it a Delaware or Jessica, the growth in the short space of three months will be surprising.

Some Popular Meteorological Misnomers.

By T. B. Jennings, Observer United States Weather Bureau, and Director Kansas Weather Service.

From the March quarterly report of the Kansas State Board of Agriculture, now in the hands of the State Printer.

Driving into a village one evening and putting up at the only hostelry in the embryo city, we had soon made a general acquaintance with the fifty-seven persons comprising the population of this peaceful hamlet (as the postoffice was next door to the National), and learned they were quite proud of their new "penitentiary."

An investigation next day disclosed a wooden structure eight feet wide by twelve feet long, and seven feet high, with a flat roof, one door, and two small openings for windows, iron barred.

And this was the "penitentiary."

Having occasion to travel over a cross-road in a neighboring State, the writer was informed that there were two freight trains and the "limited," all carrying passengers.

We preferred the "limited," and succeeded in getting about two quarts of blackberries while our "limited" was making the run of about forty miles, in addition to the satisfaction (?) we experienced when one of the freight trains ran past us, about half way along the road.

The above are given here simply as examples to illustrate the aptness of the American to generalize particular terms, or to misapply names, the full meaning of which he is not acquainted with; corn, for instance, is a true grass, yet who with a right understanding of English, would call it timothy?

These remarks have been called forth by the fact that the press, generally, has referred to "blizzards" in

THE best investment in real-estate is to keep buildings well painted. Paint protects the house and saves repairs. You sometimes want to sell—many a good house has remained unsold for want of paint. The rule should be though, "the best paint or none." That means

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

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These colors are sold in one-pound cans, each can being sufficient to tint 25 pounds of Strictly Pure White Lead the desired shade; they are in no sense ready-mixed paints, but a combination of perfectly pure colors in the handiest form to tint Strictly Pure White Lead.

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Kansas the past winter. "Blizzard" is a term technically used to denote a particular kind of storm, happily of very rare occurrence in Kansas, in which the temperature is much below zero; the wind blows with hurricane-like force; the air is filled with a fine, hard snow, driven like shot by the wind, and before which neither man nor beast can stand, but soon go down and perish. One of the severest blizzards recorded occurred April 13-16, 1873, and is thus described in General Greeley's "American Weather," page 223: "The wind blew at Yankton, Dak., from the 13th to the 16th, inclusive, for a continuous period of nearly 100 hours, at an average velocity of thirty-nine miles per hour, and on April 15 the velocity for the entire twenty-four hours was over fifty-two miles per hour. This hurricane-like wind, unprecedented in the interior of the United States for continued violence, was accompanied by fine, drifting snow, which was like sand, and so filled the air that one could not see a dozen yards. The Seventh regiment of United States cavalry was camped in Yankton at the time, and for more than forty-eight hours officers and men alike were obliged to seek shelter in the houses of the citizens. Business of all kinds was necessarily suspended, travel impossible, the suffering and damage prolonged and great. Large numbers of cattle were frozen to death. * * * It doubtless exceeded in violence and duration the more fatal blizzard of January, 1888, when scores of human beings perished in Dakota and Nebraska."

The storms of January, 1886 and 1888, were probably the nearest approach to a blizzard since the settlement of the State. From the foregoing it will readily be seen that no approach to a blizzard has occurred in Kansas during the past winter.

Another misnomer is the term "cyclone," as commonly applied. The true cyclone is a circular storm of considerable extent, ranging from 500 to 1,000 miles in diameter. The tornado, to which the term "cyclone" is so frequently misapplied, is a small circular storm of a few rods to 200 rods in diameter and of intense energy, and having a "funnel cloud" extending downward to the ground. It would be wrong to assert that no such storm ever occurred in Kansas. But few States east of the Rocky mountains have escaped their fury; yet, it is a grave error to quote Kansas as the home of the tornado.

These storms usually occur in the southeast quadrant of a cyclone, and are very destructive to life and property. Cyclones cross the United States during every month of the year, and are most frequent from September to May; tornadoes are most frequent in May, April, June and July, in the order named. Quoting again from General Greeley's "American Weather," pages 233 and 234: "As far as the

data go, the loss of life has been greatest in relative order in States, as follows: Missouri, Mississippi, Iowa, Illinois, Minnesota, Wisconsin and Ohio. * * * On February 9, 1884, an unparalleled series of tornadoes occurred from Mississippi, Tennessee, Kentucky, and Illinois, eastward to Virginia, North Carolina, South Carolina and Georgia. There were more than sixty separate tornadoes after 10 a. m. on that disastrous day. Over 10,000 buildings were destroyed, 800 people killed, and 2,500 wounded."

Again, the term "cyclone" is sometimes misapplied to "wind rushes," or straight blows, provided some building has been worsted by it. Yet the light, frail houses in western Kansas and Nebraska seldom are injured by our winds. The facts being as I have described, it is to be hoped that the term "blizzard" will be entirely eliminated, as it should be, from the Kansas vocabulary; that the term "cyclone" be dropped as descriptive of storms in Kansas, and that the term "tornado" be confined to actual tornadoes only.

Home of Silkwood 2:07.

Silkwood 2:07 is owned by J. Willits, of Santa Anna, Cal., who writes: "I have had great success with the Perfect Impregnator, bought of Specialty Manufacturing Co., Carrollton, Mo."

Small Fruits. 999,999 Strawberry plants over sixty varieties. Large stock of Kansas, Palmer and Older Raspberry tips. All other kinds of plants at lowest prices. Write for catalogue. F. W. DIXON, (Successor to Dixon & Son,) NETAWAKA, KANSAS.

OUR CATALOGUE IS DIFFERENT

from others. It is intended to aid the BERRY GROWER in selecting the soil; tells how to prepare it; how to plant; how to cultivate; with observations about variety, hints about markets and other information. B. F. SMITH, Highland Small Fruit Farm, Box 6, Lawrence, Kansas.

CONSUMPTION SURELY CURED.

TO THE EDITOR—Please inform your readers that I have a positive remedy for the above named disease. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy free to any of your readers who have consumption if they will send me their express and post office address. Respectfully, T. A. Slocum, M.C., No. 183 Pearl Street, New York.

WEAKNESS OF MEN

Quickly, Thoroughly, Forever Cured by a new perfected scientific method that cannot fail unless the case is beyond human aid. You feel improved the first day, feel a benefit every day; soon know yourself a king among men in body, mind and heart. Drains and losses ended. Every obstacle to happy married life removed. Nerve force, will, energy, brain power, when falling or lost, are restored by this treatment. All small and weak portions of the body enlarged and strengthened. Victims of abuses and excesses, reclaim your manhood! Sufferers from folly, overwork, early errors, ill health, regain your vigor! Don't despair, even if in the last stages. Don't be disheartened if quacks have robbed you. Let us show you that medical science and business honor still exist; here go hand in hand. Write for our book with explanations and proofs. Sent sealed free. Over 2,000 references.

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"The possibility of the phenomenal success that has crowned the efforts of this medical association would have been deemed a chimerical dream a dozen years ago."—From Chicago Globe's account of the World's Fair office of the Erie Medical Co.

ST. JACOBS OIL MAKES A Perfect Cure of BURNS, BRUISES, SCALDS, CUTS AND WOUNDS.

The Poultry Yard.

The Hen Fever of Jed Watson.

After it! follow it!
Follow the gleam!
—Tennyson.

(Copyrighted, 1894, by S. W. Foss.)

Jed Watson, he was after it; he followed up the gleam.
He chased the gorgeous vision of his life's perpetual dream;
He had a faith that urged him up through all life's wastes and fens,
That he could build a fortune up by simply raising hens.

Jed watched his growing pullets and there came a vision fair
Of palaces with porticos expanding in the air,
And those cloud bannered palaces, reared not of stones or bricks,
Were built of all the unlaidd eggs of all his unhatched chicks.

He preached the poultry gospel unto all men everywhere,
His wife said he'd permit a hen to lay eggs in his hair;
From morning, when the great red sun rose from the ocean foam,
He'd sit and theorize on hens until the cows came home.

Hens dangled from his heart-strings and made nests in his brain,
And great gigantic hen coops were his palaces in Spain;
And all his active intellect was focused, like a lens,
Upon the all-absorbing theme of hens, and only hens.

"One hen will lay twelve hundred aigs, I calculate," said Jed,
"An' hatch a thousin' chickens that'll mourn her w'en she's dead;
These chicks will raise a million more an' hev a few to spare,
I'll sell 'em for a dollar each—and I'm a millionaire."

So Jed he built a hen house that was after his own heart,
Though his own house in which he lived was all apart;
He gave his pullets dainties all, of corn and malt and meat,
While his own wife and his two boys had plain salt pork to eat.

He went to all the poultry shows and traveled here and there,
And put a mortgage on his farm to pay his railroad fare.
And he went to hen conventions and he talked to poultrymen
On "The Boundless Possibilities of the Developed Hen."

So Jed followed after it; he followed up the gleam
And chased his hen millenium down the vista of his dream.
"The hen house door's the way to wealth," said he, "no way is surer,"
But every extra hen he owned made him a dollar poorer.

His hens would not forget to eat, but oft forgot to lay,
And if they laid, forgot to hatch—a hen's provoking way—
For hens are haughty as the gods and whimsical as men,
And in ten billion leagues of hens there's not one perfect hen.

But Jed he followed after it, he followed up the gleam,
For every hen that clucked and scratched was perfect in his dream;
His dream hens all were perfect hens, but full of faults his real—
There is a marked discrepancy 'twixt actual and real.

So poor Jed lived a bankrupt life and died a debtor slave;
And then his hens went out and scratched the flowers from off his grave.
Ah, myriads of delusions vain have grown since time began;
But the hen dream is the vainest dream of all the dreams of man.

But we all follow after it; we follow up the gleam,
And we all raise expensive hens, all dream the sweet hen dream.
If my philosophy is true, no man was ever made
Who has not speculated some in this same poultry trade.
—New York Tribune.

Information Wanted.

EDITOR KANSAS FARMER:—What is wrong with my little chickens, and what can I do for them? They go blind, or their eyes go shut, and their legs get all covered with watery blisters; finally they die.
G. W. S.
Jennings, Kas.

How to Utilize Old Barrels.

Mr. W. H. Van Doren, Buckingham, Ill., in the *American Poultry Journal*, says: "I use barrels with both heads out to set my turkeys in, and by August (if dry weather) they begin to fall to pieces; so I make the staves into coops for my Plymouth Rocks. Size eighteen inches high and eighteen inches wide, and the length of the staves, and any hard wood (I use willow poles) will hold the nails well. I lap my staves when I put on the sides one-half inch, as you put on house siding, to keep out rain and cold; for I shall want them in the spring, and they make good, convenient and durable coops at little cost. I use one and one-quarter inch wire nails, and nail both sides to corner posts and in two places at equal distance, and these nails I clinch. The top is flat except being highest in mid-

dle about the curve of the stave. I have a cross-tie in middle on top to nail center of staves to. Give good lap for a good roof; I thus get some top ventilation."

Weights of Chicks.

For the first six weeks there is but little difference in the weights of chicks of any of the breeds as compared with the others. If one should affirm that a Leghorn chick will weigh as much as a Brahma it would excite surprise, yet in experiments with chicks of the different breeds when weighed in lots of ten, there was but very little difference between the large and small breeds. After the first six weeks there was a gradual increase and gain on the part of the large breeds, but even when eight weeks old the difference was not very great.

An Egg-Keeping Experiment.

The eggs were all wiped when fresh with a rag saturated with some anti-septic and packed tightly in salt, bran, etc. Eggs packed during April and May with salt, and which had been wiped with cottonseed oil, to which had been added boracic acid, kept from four to five months with a loss of nearly one-third, the quality of those saved not being good. Eggs packed in bran, after the same preliminary handling, were all spoiled after four months. Eggs packed in salt during March and April, after wiping with vaseline, to which salicylic acid had been added, kept four or five months without loss, the quality after four months being much superior to ordinary. Temperature of each box varying little from 60° Fahrenheit, and each box was turned over once every two days. Little difference was observed in the keeping of the fertile and unfertile eggs, and no difference was noticeable in the keeping qualities of eggs from different fowls or from those on different rations.—*New York Experiment Station.*

In the Dairy.

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

Cows in Calving.

Cows are frequently out of condition in consequence of accidents at calving. It is the best way to take every care of the cow at this time to avoid mishaps, which may spoil the cow for the whole milking season. When the cow is neglected or happens to be exposed to cold, the danger is that the after-birth may be retained and do much mischief during the whole season. When this is the case the milk will be bad, and with bad milk no good butter can be made. The treatment should be to give one pound of Epsom salts in some oatmeal or linseed gruel, and after this has worked off, give a tablespoonful twice daily of a mixture of one ounce of powdered gentian root, the same of ground ginger and sulphate of iron, with one pound of wheat shorts. These are well mixed and kept dry for use. The dose may be given in any convenient way, as with some bran or meal. It may be continued two weeks or a month.

Oleo Legislation in Iowa.

We cannot refrain from congratulating the dairymen of Iowa on the passage of the Boardman bill. This was the happy outcome of one of the greatest battles that has yet been fought in the war to compel dealers in imitation butter and cheese to be decent and honorable in their business transactions. For some time the fate of the bill hung in the balance; even the House Committee on Agriculture reported unfavorably, which was almost equivalent to killing it. The very men who, of all others, ought to have worked night and day to secure the passage of the bill, had either secretly discouraged it or absented themselves and refrained from saying a word in its favor.

But the friends of the measure were not idle. The *Farm and Dairy*, of Ames, Iowa, at heavy expense, got out two special editions warning dairymen of the critical situation and containing blank petitions for them to fill out and send in, and scattered them broadcast

over the State. Our friends in the creameries responded nobly, and, as a result, the members of the Legislature were literally snowed under with petitions praying for the passage of the bill. Senator Boardman has since informed us that these petitions were of great help in strengthening the backbones of weak members, and in convincing the Legislature that the people were in earnest in demanding this law. Mr. Homrighaus stepped in and took charge of the bill in the House. Other friends worked around the edges wherever they could do the most good, and the result is that oleomargarine has received a blow square between the eyes, from which it will not soon recover.

Dairy Instruction for Girls.

Mention was made in the last issue of the *Farm and Dairy*, Ames, Iowa, of the fact that the Iowa Dairy school is giving instruction in dairying to girls as well as boys. This is a feature of which we heartily approve. Here is what Prof. Wilson says of these girls: "Some of the brightest young ladies of the senior class select dairying at the agricultural college. They are taught practice with science without severe work, and very apt students they are. They will learn how to analyze milk, at what temperature to separate it, how to run the Baby separator, deep setting, ripening cream, churning, working and packing, and the sciences all along these lines. When they enter the creamery hats go off."

Dairy Notes.

The normal condition of a good dairy cow when at work is leanness and her carcass nearly always shows an absence of surplus flesh.

It is the milk from the fresh cow that produces the perfect butter flavor, hence it is an item to have some of the cows come in at different seasons, especially if butter is to be made all the year round.

Why not milk a cow the year round? Some one says the calf will not be so good as if the cow goes dry three or four months. But where is the gain in wasting \$25 worth of butter to improve \$3 to \$10 worth of calf? Let's go in for long milkers.

A New York dairyman tested his two cows and found that one gave 4,247 pounds of milk a year which yielded 123 pounds of butter, while another gave 4,308 pounds of milk that yielded 306 pounds of butter. One ate as much as the other. This is a simple illustration of the difference between a good cow and a poor one.

In testing a cow it is found that the fourth month after calving she gives milk near the average quality for the whole year. Make two tests, fifteen days apart, and in each test use the milk of eight consecutive milkings, and the average of these two tests will give the approximate average of the quality for the year. By knowing the amount of milk given during the year one can then get a pretty accurate estimate of the quantity of butter fats the cow gives.

WHAT IS THE MATTER WITH YOUR BLOOD?

YOU ARE NOT HEALTHY. DO YOU KNOW WHY?

YOU FEEL RUN DOWN. WHAT IS THE REASON?

IT IS YOUR BLOOD OUT OF ORDER.

WHAT MAKES BAD BLOOD? DISEASED KIDNEYS.

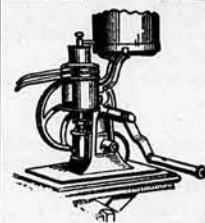
WHAT SHOULD YOU DO? CURE YOUR KIDNEYS.

There never has been but one reliable, one standard, one certain cure for diseased kidneys and impure blood, and that is, Warner's Safe Cure. This truth is acknowledged by the best doctors, the most renowned scientific men and the highest authorities in the world. Throughout all Europe, in every part of America, and even in Australia and other distant lands, it is admitted to be the standard, the only remedy for men and women whose blood has become deranged, for men who are unaccountably debilitated, and for women whose lives do not pursue their normal course. These are admitted truths, which you doubtless know, and we trust in reminding you of them we are doing you a favor.

It is easier to tell what a dairy cow does with her feed than a steer, for we have the milk as a daily guide, and when we find that one of our cows is a heavier feeder, and puts most of her feed into rich milk, that is the cow to tie to. She is a steam boiler that can be worked under heavy pressure, and if we watch the gauge and try the cocks, we can afford to shovel the fuel into the fire-box, knowing that there is no danger of loss of fuel or of bursting the boiler.—A. L. Crosby.

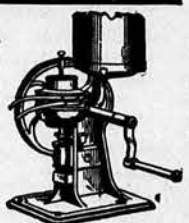
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in all sizes and shapes.
Ask for New Illus. Catalogue and Special Discounts.
When Writing to this Advertiser, Please say you saw their Ad. in this Paper.



Publishers' Paragraphs.

A spoilt broth results from an unnecessary number of cooks, so they say, and it's equally true that a despoiled customer is the product of too many price-swelling, commission-getting agents. Two people—and only two—ought to be concerned in every sale that amounts to dollars—the maker and the buyer. In this case the maker profits just as well as the buyer a hundred times better. The Elkhart Carriage and Harness Manufacturing Co., of Elkhart, Ind., do business upon this principle—much to their own credit and to the benefit of the thousands who annually patronize them. This company has issued a large and handsome catalogue descriptive of their carriages, wagons, harness, bicycles and special agricultural implements, which is full of interest to all of our readers. Mr. W. B. Pratt, Secretary, will gladly send this work to all applicants sending 4 cents for postage.

The May *Arena* closes the ninth volume of this leader among the progressive and reformative reviews of the English-speaking world. The table of contents is very strong and inviting to those interested in live questions and advanced thought. Among the important social and economic problems discussed and ably handled in a brave and fundamental manner, characteristic of this review, are: "The First Steps in the Land Question," by Louis F. Post, the eminent single tax leader; "The Philosophy of Mutualism," by Prof. Frank Parsons, of the Boston University Law School; "Emergency Measures for Maintaining Self-Respected Manhood," by the editor of the *Arena*. The saloon evil is also discussed in a symposium. One of the strongest papers on heredity that has appeared in recent years is found in this issue from the pen of Helen H. Gardener. Rev. M. J. Savage appears in a very thoughtful paper on "The Religion of Lowell's Poems," a fine portrait of Lowell appears as a frontispiece. Dr. James R. Cocke contributes a striking paper on the "Power of the Mind in the Cure of Diseases." A strong feature of this number is a brief character sketch by Stephen Crane, entitled, "An Ominous Baby." Stinson Jarvis' series of brilliant papers on "The Ascent of Life" closes with this issue. The *Arena* has made steady progress, its circulation having increased during the year, and it has necessarily been enlarged to 144 pages. There is, also, in addition to this, the book reviews, which cover over twenty pages, making in all a magazine of over 160 pages. The steady increase in circulation of this \$5 magazine during a period of unprecedented financial depression shows how deep-rooted and far-reaching is the unrest and social discontent, for this review has steadfastly given audience to the views of the social reformers of the various schools of thought.

Kansas City Stock Markets.

Our correspondent at Kansas City writes under date April 19:

"Our receipts this week 29,500 cattle, 57,800 hogs, 21,100 sheep, against 28,397 cattle, 56,680 hogs and 10,940 sheep the previous week; and 22,300 cattle, 44,300 hogs and 20,000 sheep same week a year ago.

"Our receipts to-day, 1,656 cattle, 41 calves, 6,354 hogs and 8,000 sheep."

"We quote cattle 10 to 20 cents higher than a week ago, but about 10 cents lower than last Monday. The medium and light-weight steers, 900 to 1,300 pounds, have advanced more than heavy shipping and export steers. After a very good market Saturday and Monday we had a heavy run on Tuesday, 9,900 cattle and 15,600 hogs, when both declined 10 to 15 cents; some cattle sold 20 cents lower. To-day heavy cattle firm, others 10 cents higher. Good fat cows and heifers continue to sell firm and 15 to 20 cents higher than a week ago. But little change in bulls the past week; half fat bulls continue slow sale. Stockers and feeders firm; not enough coming to supply the demand, and full 10 cents higher than last week.

"While hog receipts are a little heavier than last week, prices are 25 cents higher than a week. Tops to-day \$5.15, and \$5.25 on Monday.

"Our sheep receipts nearly double of last week, and prices have ruled lower—35 to 50 cents lower than best time ten days ago, and have sold slow and lower past two days."

Horse Markets Reviewed.

KANSAS CITY.

W. S. Tough & Son, managers of the Kansas City stock yards horse and mule market, report the market as having had quite a fluctuating nature. It was up one day and down the next. During the latter part of the week prices were a little better, probably owing to the improvement in the offerings. Considerable attention is being attracted by the combination breeders' sale to be held at the yards May 24, 25, 26, 28, which will probably bring together the greatest number of buyers and the greatest aggregation of fashionably bred trotters, speedy roadsters, saddle horses, extra knee-

acting cobs and coach horses ever seen in the Middle and Western States.

Mule market fairly active. Considerable trading in all grades. Prices strong at quotations.

Gossip About Stock.

The catalogue of Riverside stock farm, owned by O. P. Updegraff, North Topeka, is a thing of beauty and fitly represents the creditable breeding establishment for trotting and roadster horses and Berkshire swine. Mr. Updegraff proposes to help the cause of improved stock by making an unprecedented out in service fees of all his stallions for this season. This generous departure deserves an increased patronage from the farmers.

F. M. Curyea, a breeder of Lincoln, Neb., who has been advertising stock and the improved Chicago Chief incubator, writes: "I cannot help but congratulate you upon the success of your advertisers, and that Kansas knows nothing of hard times, as I have sold more incubators in Kansas than in any other two States, while last year Iowa led. Your paper has given good results and I desire to thank you for style in which you run my advertisement."

A. E. Staley, of Ottawa, Kas., writes: "Farmers are somewhat behind with planting, but as swine-breeders we are up with our Eastern brothers, judging from the stock sent us by them. We were in need of a young Poland boar, and as we had been imposed upon by a Chester White breeder, T. B. Evans, of Illinois, did not feel like ordering again from the East, so we started to look one up near home and accordingly drove some twenty miles to Richmond, Kas., and made Brother J. R. Killough a call, and to our surprise we found his herd of Polands to be first-class, consisting of some very fine brood sows, such as Little Bess 24453, Black Bess 20139, Howey's Bess 16676; boars, Solidity 10479 and Duke 7362, and a yard full of their get, consisting of boars ready for service and a fine lot of gilts, out of which could be secured foundation stock that would be hard to beat. We selected one little black fellow to head our herd, a son of Solidity, out of Little Bess, and we think that he will be heard from this fall. We advised Brother Killough to advertise in the *KANSAS FARMER* and find sale for his stock, as we have done, and we would advise our friends in need of breeding stock to call and see his stock. Our herds of Ohio Improved Chesters and Poland-Chinas are in good shape, and by close attention and good feed we keep the little grunthers happy. Visitors are always welcome."

An Opportunity Seldom Offered.

D. M. Osborne & Co., one of the oldest manufacturers of farming implements in the United States, offer free of charge to the first farmers guessing nearest the total 1894 yield of wheat in the United States, the following premiums:

1. Self or rice binder, seven feet.
2. Self or rice binder, six feet.
3. Self or rice binder, five feet.
4. No. 8 reaper.
5. Mower, six feet.
6. Mower, five feet.
7. Mower, four and one-half feet.
8. Hay tedder.
9. Flexible disc harrow, 12-20.
10. Flexible disc harrow, 12-16.
11. Rival disc harrow, 12-20.
12. Rival disc harrow, 12-16.
13. Self-dump hay rake, ten feet.
14. Self-dump hay rake, eight feet.
15. Spring-tooth harrow, twenty-three teeth.
16. Spring-tooth harrow, seventeen teeth.
17. Spring-tooth harrow, fifteen teeth.
18. Combination harrow, twenty-four teeth.
19. Combination harrow, sixteen teeth.
20. Hand-dump hay rake, ten feet.
21. Hand-dump hay rake, eight feet.
22. Peg-tooth harrow, 100 teeth.
23. Peg-tooth harrow, seventy-five teeth.
24. Peg-tooth harrow, fifty teeth.
25. One hundred pounds pure manilla twine.
26. One hundred pounds manilla twine.
27. One hundred pounds standard twine.
28. One hundred pounds pure sisal twine.
29. Twelve gallons Orbit machine oil.
30. Six gallons Orbit machine oil.

A complete stock of their implements is carried at all of the principal points in the United States, and every purchaser of any of their products is entitled to a guess, whether the sale is made direct or through one of their agents. Blanks for registering guesses have been supplied to all of their agents. Considering the reputation which Messrs. D. M. Osborne & Co. have earned during a continuous business career of forty years and the excellent quality of their goods, every portion of which is made under their own roof, this is an opportunity rarely presented to our readers and advantage thereof should be taken quickly.

If you do not possess a copy of their latest catalogue it will be promptly sent upon application to any of their houses.

Get up a club for *KANSAS FARMER*.

Haying Tools.

The hay stacker illustrated on page 1 is worthy of the attention of our readers. It is an extremely simple device and is said to be thoroughly practical and reliable in operation and capable of doing the largest amount of work with the greatest ease and expediency. It is composed of two poles which stand a-straddle of the stack and are connected at the top by a head-piece and braces, and is supported by guy ropes. The arrangement of the ropes and special pulleys and fittings is such that the hay is elevated at the end of the stack, as shown, until high enough to clear it, when the poles automatically swing over the stack and the hay can be dropped by the operator at any point along its center. It is easily operated, works well with or against the wind, does not scatter the hay but drops it so as to require the least handling, requires only one man to build and makes large stacks, which settle straight and stand storms well and turn water perfectly. This stacker handles the hay in any shape it may come, either on the ground or on the wagon, using either a hay fork or hay sling as may be preferred. The illustration shows it at work with a ground sling, an Alexander high wheel sweep rake being used to run the hay onto the sling. The stacker and sling will handle with ease the largest loads with a sweep rake. The Alexander high wheel sweep rake is also a prize-winner, and it will pay to look into its merits before purchasing. These tools are manufactured by the Loudon Machinery Co., of Fairfield, Iowa, and are sold on their merits. This firm is responsible and we would advise our readers to write them for their prices, terms, etc. They also manufacture a full line of other hay tools used on the farm, and it would be well to write for their catalogue and circulars describing all their manufactures.

Drs. Thornton & Minor,

Bunker building, Kansas City, Mo., the well-known specialists in the treatment of all rectal troubles, have established a principle in connection with their ever-increasing clientele that is well calculated to inspire confidence in their integrity and ability to perform to the last degree that which they promise when assuming to cure their patients, and that is, they decline to accept a fee until they have clearly demonstrated that a cure has been accomplished. Thousands testify to the efficiency of their treatment. Another specialty of their's is diseases of women, and of the skin. Beware of quacks. Ask for their circulars, giving testimonials of leading business men and high officials—they contain special information for the afflicted. Address, DRs. THORNTON & MINOR, Bunker Building, Kansas City, Mo.

If Grown in Texas, It's Good.

The Texas coast country vies with California in raising pears, grapes and strawberries. The 1893 record of H. M. Stringfellow, Hitchcock, Tex., who raised nearly \$6,000 worth of pears from thirteen acres, can be duplicated by you. G. T. Nicholson, G. P. A., Santa Fe route, Topeka, Kas., will be glad to furnish without charge an illustrated pamphlet telling about Texas.

Texas Wants You. You Want Texas.

If you like May weather in winter, apply to nearest agent of Santa Fe route. He will supply it in thirty-six hours. It is done by buying a ticket to Galveston or Houston. Perhaps less expensive than staying at home, because a big coal bill is saved.

Regular winter tourist tickets can be bought any day, but special excursions will be run the second Tuesday of each month from a limited territory to all points in Texas.

The excursion fare? Cheap enough—a little over a cent a mile; tickets good thirty days, with stop-overs south-bound.

The Gulf coast of Texas is a charming resort for invalids who don't like zero weather. Big attractions also for home-seekers; twenty acres of land there planted in pears nets the owner \$6,000 each year after orchard is established. Strawberries and grapes also profitably raised.

Talk it over with agent Santa Fe route, or address G. T. Nicholson, G. P. A., A. T. & S. F. R. R., Topeka, Kas., and ask for a free copy of "Texas Gulf Coast Country."

Shenandoah Valley, Virginia.

Have you visited it? If not, we are very sure you know its reputation through friends who have gazed on its mountains, inspected its fine stock and fruit farms, figured on its mineral and timber wealth, and were well pleased with its equable climate, its thriving towns, and the opportunities for securing the best of homes at surprising prices.

Now! Now! Now!

is the time to take advantage of low railroad rates and see this grand valley.

MARCH 8 AND APRIL 9 the Baltimore & Ohio railroad company will sell tickets at One Fare for the Round Trip from Chicago to points in the Shenandoah valley.

For information about these excursions, address L. S. Allen, A. G. P. A. Baltimore & Ohio railroad, Chicago, Ill.

For information about lands, business openings, etc., address M. V. Richards, Land and Immigration Agent, Baltimore & Ohio railroad, Baltimore, Md.

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and sweet five to seven days without ice.

Preservaline. Sample free. Preservaline Mfg. Co. 10 Cedar St., New York.

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\$1 and \$1.25 per day. Five minutes ride on electric cars from Union Stock Yards.

HORSEMEN!

Try Dr. Orr's Veterinary Remedies.

Tonic Cough Powder, for cough, distemper, loss of appetite, etc. Pound, by mail, 60 cents.

Tonic Worm Powder, for expelling worms and toning up the system. Pound, by mail, 60 cents.

Ready Blister, for curb, splint,weeney and all parts where a blister is indicated. By mail, 50 cents.

Magic Healing Powder, for sore necks, collar galls, etc. By mail, 25 cents.

Remit by postal note to S. C. ORR, V. S., Manhattan, Kas.

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For Sale at Low Prices and and on Easy Terms.

The Illinois Central Railroad Company offers for sale on easy terms and at low prices, 150,000 acres of choice fruit, gardening, farm and grazing lands located in

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They are also largely interested in, and call special attention to the 600,000 acres of land in the famous

YAZOO DELTA OF MISSISSIPPI

lying along and owned by the Yazoo & Mississippi Valley Railroad Company, and which that company offers at low prices and on long terms. Special inducements and facilities offered to go and examine these lands both in Southern Illinois and in the "Yazoo Delta," Mississippi. For further description, map and any information, address or call upon E. P. SKENE, Land Commissioner, No. 1 Park Row, CHICAGO, ILL.

When writing our advertisers please mention the *KANSAS FARMER*.

Climate and Crops Just Right.

Oklahoma has thousands of acres of the finest farming land in the world, waiting for you or anybody else with a little cash and lots of gumption. Climate crops are just right. Farms will cost more next year than this. To find out if this is the country you want, ask G. T. Nicholson, G. P. A., Santa Fe route, Topeka, Kas., for free copy of Oklahoma folder.

"Among the Ozarks,"

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

Leasing Oklahoma School Lands.

All persons wanting to lease school land in Oklahoma will be rewarded by sending for a free sample copy of the HOME, FIELD AND FORUM, Guthrie, Okla., the leading agricultural paper of Oklahoma Territory.

The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER. Give age, color and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. Sometimes parties write us requesting a reply by mail, and then it ceases to be a public benefit. Such requests must be accompanied by a fee of one dollar. In order to receive a prompt reply, all letters for this department should be addressed direct to our Veterinary Editor, Dr. S. C. Orr, Manhattan, Kas.

ENLARGED SCROTUM.—I have a two-year-old colt that has an enlargement of the scrotum which some call a "water stone." It is sometimes larger than at others and I have thought it might be a rupture. Can you tell me what ought to be done? L. S. C. Marion, Kas.

Answer.—It is barely possible there may be a rupture after castration (I have seen one case in ten years), but it is more likely a watery tumor (*Hydrocele*), which sometimes forms after castration. A qualified veterinarian can determine at once just what it is, and operate with a good chance of success.

UNTHRIFTY PIGS.—I have some pigs which came last December. Some have lost nearly all their hair; some have a cough. Their skin looks rough and unhealthy. Owing to circumstances I am compelled to keep them in a lot about sixty feet square.

La Harpe, Kas. A. T. E.

Answer.—You cannot benefit your pigs by giving medicines without giving proper hygienic treatment. Turn them out in a pasture; feed less corn and more roots and green food. Mix together equal parts of wood ashes, salt and sulphur, and place in troughs for them to eat as they want it, and you will see a change.

LAME HORSE.—I have a horse, 6 years old, that is lame in the hind legs; they commenced swelling Sunday and are badly swollen from the gambrel down. Give me your opinion as to what is the matter and whether I must work him. Answer in KANSAS FARMER. A day later.—The horse is swelling on the belly. It began back of the fore legs and has nearly reached the hind ones. He has not eaten much grain since Monday night and has lost about fifty pounds in weight. Louisville, Kas. G. C. R.

Answer.—You do not give any symptoms by which to determine the cause of the swelling, but a lame horse should certainly not be worked. As the case seems to be running its course very rapidly it will either be better or beyond recovery by the time this reaches you.

LUMPY-JAW—TUBERCULOSIS.—(1) I had fourteen head of cattle with lumpy-jaw last fall; I split the lumps open, squeezed out the pus and injected carbolic acid. The lumps all seem to be well now. Are they well, or will the lumps grow again? (2) Are the cattle infected with tuberculosis? Answer through the KANSAS FARMER. Hume, Mo. J. M. O.

Answer.—(1) While we do not doubt that you had fourteen head of cattle with lumps on their jaws, yet it is not at all probable that you had so many cases of true lumpy-jaw (*Actinomyces*); especially when you cured them all with carbolic acid. The tumors may have been of a tubercular character, or they may have been the result of injuries from striking the lower jaw on the sharp edge of a feeding trough. (2) The only way to determine whether your cattle have tuberculosis or not is to have them examined by a competent veterinarian.

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

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MARKET REPORTS.

LIVE STOCK MARKETS.

Kansas City.

April 23, 1894.

CATTLE—Receipts, 4,031 cattle; 52 calves. Prices fluctuated a good deal during the week but have landed to-day at nearly the same point occupied a week ago. Dressed beef steers ranged from \$4 3/4 for the top down to \$3 35, with the sales well distributed through the intervening scale. Fed Texas steers brought \$3 67 1/2 down to \$2 75, with most of the sales above \$3 25. Cows sold from \$3 05 all through the interval down to \$2 00; bulls, \$3 00@2 40; heifers, from \$3 00 down to \$2; calves, \$6 35@5; stockers and feeders, from \$3 50 down to \$2 50.

HOGS—Receipts, 4,847. Prices have been off somewhat during the week, and tops are yet 12 1/2 cents below last Monday's quotations. Pigs and lights sold at \$5 down to \$4 40. Heavy hogs \$5 10 down to \$4 80.

SHEEP—Receipts, 2,311. Prices were steady at \$4 50 down to \$4. A bunch of fifty shorn sold at \$3 50.

Chicago.

April 23, 1894.

CATTLE—Receipts, 20,000. Beef steers, \$3 00 @4 35; stockers and feeders, \$2 85@3 50; bulls, \$1 65@3 25; cows, \$1 50@3 30.

HOGS—Receipts, 25,000. Mixed, \$5 10@5 40; heavy, \$4 95@5 40; light weights, \$5 65 35.

SHEEP—Receipts, 20,000. Market demoralized. Natives, \$2 40; lambs, per cwt., \$4 25 30.

St. Louis.

April 23, 1894.

CATTLE—Receipts, 2,100. Some fed Texas at \$3 50. Native steers, common to best, \$3@4.

HOGS—Receipts, 4,500. Bulk, \$5 20@5 25. Top, \$5 30.

SHEEP—Receipts, 1,800. Market slow. Natives, \$2 20@3 75.

GRAIN AND PRODUCE MARKETS.

Kansas City.

April 23, 1894.

In store: Wheat, 371,013 bushels; corn, 23,298 bushels; oats, 24,616 bushels, and rye, 8,377 bushels.

WHEAT—Receipts for forty-eight hours, 32,400 bushels; last year, 34,200 bushels. More favorable crop news from everywhere and better receipts influenced a decidedly bearish market. All grades were 1/4@1c lower and buyers backward and the close dull and weak. By sample on track on the basis of the Mississippi river, local 6c per bushel less: No 2 hard, 6 cars 60 pounds at 57 1/2c, 4 cars 59 and 60 pounds at 57 1/2c, 5 cars 59 and 60 pounds at 57c, No 3 hard, 5 cars 57 1/2 pounds at 56c; 5 cars 57 1/2 to 58 pounds at 56 1/2c; No 4 hard, 53@55; rejected, 48@52c, 1 car at 53c; No 2 red, early 4 cars choice 60 pounds at 62c, late 2 cars 60 pounds at 62c; No 3 red, 1 car at 59c, and 1 car poor at 56 1/2c; No 4 red, 52@55c.

CORN—Receipts for forty-eight hours, 78,000 bushels; last year, 23,500 bushels. Market fairly active but lower, under the influence of increased offerings. Home dealers and order men both buying. By sample on track: No 2 mixed, 2 cars at 35 1/2c, 16 cars at 35 1/2c; 7 cars at 35 1/2c, 20 cars at 35c; No 3 mixed, 2 cars at 35c; No 2 yellow, 3 cars at 35c, 3 cars at 35 1/2c; No 2 white, 8 cars 56c, 10 cars at 35 1/2c, and 6 cars Memphis at 43c; No 3 white, 35@35 1/2c.

OATS—Receipts for forty-eight hours, 14,000 bushels; last year, 13,000 bushels. Arrivals better, but market steady and firm. By sample on track: No 2 mixed, as to quality and billing, 2 cars at 33 1/2c, and 2 cars choice milling at 34c; No 3 mixed, 2 cars at 32 1/2c, 2 cars at 32 1/2c, 3 cars at 33c, and 1 car choice at 33 1/2c; No 4 mixed, 31@32c; No 2 white, 34@34 1/2c; No 3 white, 33 1/2@34c; No 4 white, 31 1/2@33c.

RYE—Receipts for forty-eight hours, 600 bushels; last year, 600 bushels. Quiet but steady. By sample on track, on the basis of the Mississippi river: No 2, 51@52c; No 3, 49@50c. MILLET—Dull but unchanged. Per 100 pounds German 50@55c, and common, 50@60c.

BRAN—Steady and selling fairly. Bulk at 56c and sacked at 63@65c per cwt.

FLAXSEED—Firm and in good demand at \$1 10 per bushel upon the basis of pure.

HAY—Receipts for forty-eight hours, 100 tons. Market steady and demand very fair. Fancy barn, prairie, \$6 50; choice, \$4 50@5 00; low grades, \$3 50@4 00; timothy, choice, \$9 00; No 1, \$8 50; No 2, \$7 00@7 50.

BUTTER—Best table goods in fair demand. Store-packed dull. Creamery, highest grade separator, 20c per pound; finest gathered cream, 19c; fine fresh, good flavor, 18c; fair to good, 17c. Dairies—Fancy farm, 13@14c; fair to good lines, 7 1/2c. Country store-packed—Fancy 12c; fresh and sweet packing, 7 1/2c. Roll—Fancy, 12c; choice, 11c; fair to good, 7 1/2c.

EGGS—Quiet and weak. Fresh, 8 1/2c.

CHEESE—Herkimer county, N. Y., cheddars, 13c per pound; Crawford county, Pa., cheddars, 13c; Sheboygan, Wis., twins, 13c; Young America, 13c; Missouri, and Kansas full cream, 10c.

POULTRY—The market on turkeys and ducks is very firm and movement brisk. The supply very short. Hens and springs steady and offerings fair. Hens, per pound, 6c; roosters, old and young, 15c each; springs, large, per pound, 7 1/2c; broilers, per pound, 15c; turkeys, hens, per pound, 8 1/2c; gobblers, 6 1/2c; ducks, full-feathered, 6 1/2c per pound; geese, full-feathered, per pound, 5c; pigeons, per dozen, \$1 25; veal, choice 80@100 pounds, per pound, 4 1/2@5c.

POTATOES—Table stock was firm and in good request with light supply. Seed stock quiet. Colorado red, per bushel, 85@95c; Colorado white, 85@95c; Northern, choice, 75@85c; Northern, fair, 75c; Idaho, 75@85c; native, choice, 75@90c; native, good, 60@70c; native, common, 50c. Potatoes, sweet, \$1.

STRAWBERRIES—The receipts very light and the inquiry for choice stock brisk. Sellers could have obtained strong prices had there been any here. The trade can handle a great many more than are now coming, but they don't want the

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REFERENCES: Metropolitan National Bank, Chicago, and this Paper. **SUMMERS, MORRISON & CO.,** Commission Merchants, 174 So. Water Street, Chicago,

tail ends or culls of a shipment. Market firm and demand good. Prices range from \$3 to \$5.

FRUITS—Jobbing prices: Apples, fancy stand, per barrel, \$5 00@6 00; choice, \$4 00@5 00.

VEGETABLES—Jobbing prices: Beans, navy, California, per bushel, \$2 00@2 15; country, \$2 00 @2 10; beets, per bushel, 50@60c; cabbage, per 100 pounds, \$2 25; celery, California, 75c@1 00 per bunch; onions, Northern, per bushel, 80c; Spanish, per crate, \$1 25.

EARLY VEGETABLES—Asparagus, 20@30c per dozen; cabbage, California, per pound, 2 1/2c; cucumbers, per dozen, \$1 50@2 25; beans, per bushel, \$4; beets, per dozen bunches, 50@75c; egg plant, per dozen, \$1@1 75; kale, per bushel, 65c; new potatoes, per box, \$3 50@4; pieplant, per dozen, 40@50c; peas, per bushel box, \$2@2 25; radishes, per dozen bunches, 10@25c; spinach, per barrel, \$2@2 25, per bushel, 75@80c; tomatoes, Florida, 8 basket crate, \$3 25.

BROOMCORN—Hried, green, 3 1/2@4c per pound; green, self-working, 2 1/2@3c; red-tipped, do., 2 1/2@3c; common do., 1 1/2@2c; crooked, half price, Dwarf, 2 1/2@3c.

GROUND LINSEED CAKE—We quote car lots sacked at \$25 per ton; 2,000 pounds at \$26; 1,000 at \$14; less quantities \$1 50 per 100 pounds.

WOOL—Steady but slow sale. Missouri, unwashed, per pound, heavy fine, 9@10c; light fine, 10@13c; combing, 13@15c; low and carpet, 12@14c. Tub-washed, per pound, choice, 25@27c; medium, 23@25c; dingy and low, 19@22c.

Chicago. April 23, 1894.

The following table shows the range of prices for active "futures" in the Chicago speculative market for the speculative grades of the commodities. This speculative market is an index of all prices and market tendencies:

| | High-est. | Low-est. | Closed Apr. 16. | Closed Apr. 23. |
|------------------|-----------|----------|-----------------|-----------------|
| WHEAT—April..... | 57 1/4 | 57 1/4 | 60 | 57 1/4 |
| May..... | 57 | 57 | 60 1/4 | 57 1/4 |
| July..... | 61 1/4 | 60 1/4 | 62 1/2 | 60 1/4 |
| CORN—April..... | 38 | 38 | 38 1/2 | 38 |
| May..... | 38 1/2 | 38 1/2 | 38 1/2 | 38 1/2 |
| July..... | 39 1/2 | 39 1/2 | 39 1/2 | 39 1/2 |
| OATS—May..... | 32 1/2 | 32 1/2 | 32 1/2 | 32 1/2 |
| July..... | 29 1/2 | 29 1/2 | 29 1/2 | 29 1/2 |
| PORK—May..... | 12 57 1/2 | 12 30 | 13 30 | 12 33 1/4 |
| July..... | 12 67 1/2 | 12 45 | 13 40 | 12 47 1/2 |
| LARD—May..... | 7 60 | 7 50 | 7 7 1/2 | 7 55 |
| July..... | 7 27 1/2 | 7 15 | 7 50 | 7 15 |
| S. RIBS—May..... | 6 52 1/2 | 6 45 | 6 80 | 6 45 |
| July..... | 6 45 | 6 35 | 6 72 1/2 | 6 35 |

WHEAT—Cash—No. 2 red, 58 1/2c; No. 3 red, 53@55c; No. 2 hard, 55c; No. 3 hard, 52@54c.

CORN—Cash—No. 2, 38 1/2c; No. 3, 38c; No. 2 white, 39c; No. 3 white, 38 1/2c.

OATS—Cash—No. 2, 32c; No. 2 white, 35@35 1/2c; No. 3 white, 34 1/2@35c.

St. Louis. April 23, 1894.

WHEAT—Receipts, 7,000 bushels; shipments, 1,000 bushels. The market was lower 1 1/2c on generally bearish crop and foreign news. No 2 red, cash, 54c; May, 53 1/2@54 1/2c; July, 56 1/2@56 3/4c; August, 57 1/2c.

CORN—Receipts, 132,000 bushels; shipments, 83,000 bushels. This grain weakened with wheat

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| Official Receipts, 1893..... | 1,746,828 | 1,948,373 | 569,517 | 35,097 | 99,755 |
| Slaughtered in Kansas City..... | 956,792 | 1,427,763 | 372,385 | | |
| Sold to feeders..... | 249,017 | 10,125 | 71,284 | | |
| Sold to shippers..... | 360,237 | 510,469 | 15,200 | | |
| Total sold in Kansas City..... | 1,566,046 | 1,948,357 | 458,869 | 22,522 | |

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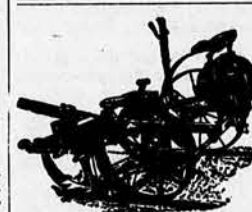
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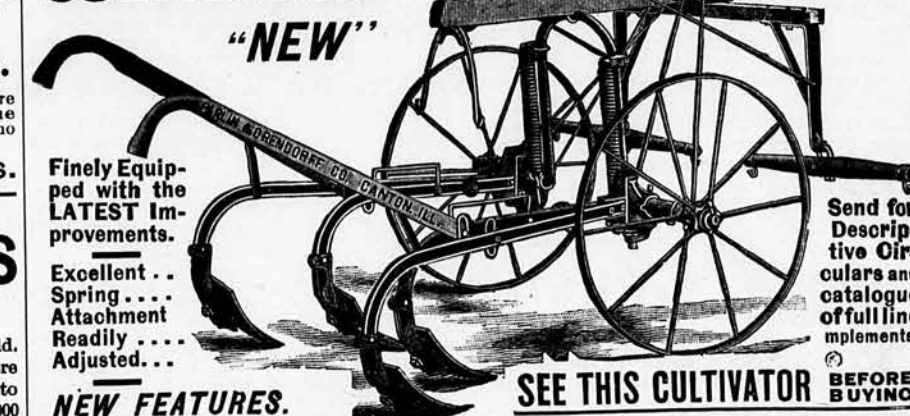
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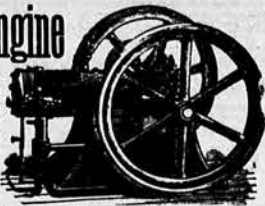
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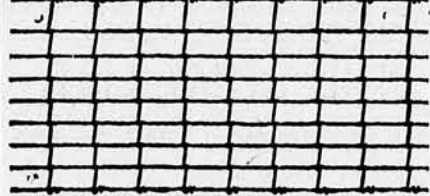


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I remain, gentlemen, with high regards, yours truly.
FRANCIS A. HOFFMAN,
Agricultural Editor Germania, etc.

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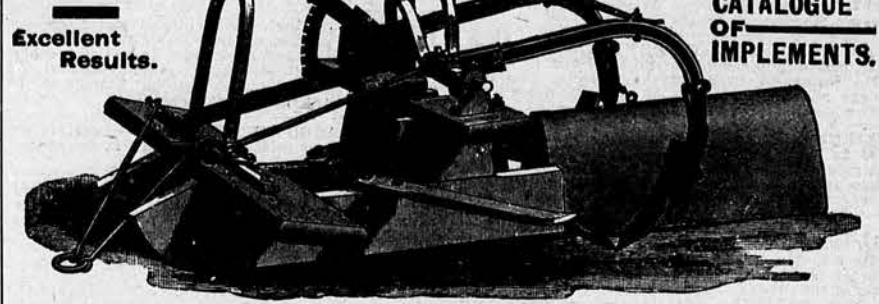
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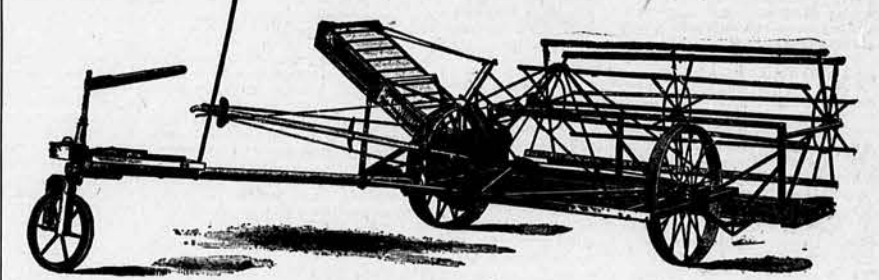


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ACME HAY STACKERS, the first successful Stackers ever built, and acknowledged by all now to be the most complete made.
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TWO-CENT COLUMN.

"For Sale," "Wanted," "For Exchange," and small advertisements for short time, will be charged two cents per word for each insertion. Initials or a number counted as one word. Cash with the order. Special:—All orders received for this column from subscribers, for a limited time, will be accepted at one-half the above rates, cash with order. It will pay. Try it!

WHITE PLYMOUTH ROCKS EXCLUSIVELY. Eggs fifteen for \$1. Mrs. W. P. Popenoe, Bertrorton, Shawnee Co., Kas.

PHENIX POULTRY FARM—Eggs from a fine pen of Single-comb Brown Leghorns, fifteen for \$1. Mammoth Bronze turkeys, stock first-class, eggs 12 1/2 cents each. S. M. McHarg, Belle Plain, Sumner Co., Kas.

FREE SEEDS—Choice muskmelon seed sent free to any KANSAS FARMER subscriber who will divide with his neighbors next spring. Send postage stamp to defray cost of mailing, to Clarence Skinner, Topeka, Kas.

JERSEY BULL—Baron Coomasse 32488 A. J. C. C. Three years old. Color solid dark fawn with black tongue and switch. One of the finest animals in the State. For sale by C. F. Armstrong, proprietor of the Clyde Creamery, Clyde, Kas.

WANTED—The farmers of Kansas to know that we sell and exchange more farms and ranches than any firm in the West. Send description of what you have and write for what you want. R. T. Darnall & Co., 217-218 Sheldy Building, Kansas City, Mo.

FOR SALE OR TRADE—160 acres of land in Comanche county, Kansas. Barred Plymouth Rocks exclusively; fifteen eggs \$1, thirty \$1.60. Thos. Francis, Severance, Kas.

CHOICE HEREFORD BULLS FOR SALE—Eight to thirty months old. Wilton stock. Fine condition, registered and all right. Also a few fine heifers, 1 and 2 years old. Six miles north of Harveyville in Osage county. J. Q. Cowee, Grand Haven, Kas.

FOR SALE—Two Short-horn bulls, sired by Imp. Thistletop, ready for service; fit to head a first-class herd. Also S. C. Leghorn eggs at \$1 per 13. Address Peter Sim, Wakarusa, Kas.

WANTED—Sale bills, horse bills, catalogues and other printing. A specialty at the Matt job printing rooms, 900 North Kansas Ave., North Topeka.

FOR SALE—Holstein-Friesian bulls, one 2 years old and one spring calf. Both thoroughbreds. Address W. E. McCarter, Box 156, Topeka, Kas.

TWO REGISTERED HOLSTEIN BULLS—For sale cheap. Will exchange one if desired. Correspondence solicited. G. J. Coleman, Mound Valley, Kas.

NEED CORN—The best ninety-five day Yellow Dent seed corn on earth. Took an award at the Columbian Exposition in competition with the world. One dollar per bushel. A. E. Jones, Topeka, Kas.

E. E. FLORA, Wellington, Kas. breeds Barred Plymouth Rocks, Single-comb White Leghorns, Partridge Cochins. Eggs \$1.50 per setting. M. B. turkey eggs 15 cents each.

LIGHT BRAHMAS EXCLUSIVELY—The farmer's "stand-by." Eggs, \$5 for fifty. Mrs. Emma Brosius, Topeka, Kas.

CHOICE BARRED PLYMOUTH COCKERELS—At \$1.50 apiece. Also White Holland turkeys. Young toms \$3 each, \$5 a pair. Mrs. E. P. Mason, Belle Plaine, Kas.

GALLOWAY BULLS FOR SALE—I have some fine young Galloway Bulls for sale cheap; also Scotch Collie Pups. Come and see them, or address, F. R. Huntton, Snokomo, Wabausee Co., Kas.

WANTED—Ten thousand bushels German millet; 10,000 bushels sorghum seed. Send samples. Kansas City Grain & Seed Co., Kansas City, Mo.

FOR SALE OR TRADE FOR OTHER STOCK—Sheep preferred, imported English Shire stallion. Recorded, large, sound; a good breeder, as his stock shows. Address Wm. Roe, Vinland, Douglas Co., Kas.

HEREFORD BULL FOR SALE OR EXCHANGE.—The Kansas State Agricultural College offers to sell the Hereford bull, Parley 30782, or will exchange him for a good young Hereford bull. The college also offers to sell several fine yearling Short-horn bulls sired by Imp. Craven Knight. Also some Aberdeen-Angus heifers. Address Prof. C. C. Georjesson, Manhattan, Kas.

LAST CHANCE—One White sewing machine left. Order quick. Kansas Farmer Co., Topeka, Kas.

ALFALFA AND RED KAFFIR CORN. Fresh stock. Address W. P. Haywood, Lakin, Kas.

RASPBERRY AND STRAWBERRY PLANTS—B. Strawberries, Captain Jack, Jossie, Warfield, Bubach, at \$2.75 per 1,000. Raspberries, Nemaha, \$3 per 1,000; Cuthbert, red, \$3 per 1,000. Early six weeks potatoes, \$2 per bushel. D. G. Watt & Sons, Lawrence, Kas.

FOR PURE ALFALFA SEED—Direct from the grower, address E. G. Jones, Syracuse, Kas.

HIGH SCORING BARRED PLYMOUTH ROCK eggs. Fifteen, \$1; thirty, \$1.50. Good hatch guaranteed. Lucy Ziller, Hiawatha, Kas.

FOR SALE—Two pure-bred Red Polled bulls, one 5 years old, the other 2 years old; from best families. Write or come and see. F. Schiltzbaum, Eden, Kas.

WANTED—A situation as head manager on farm or stock ranch by a middle-aged single man; would prefer a fruit and vegetable farm; am willing to work for wages or interest in the proceeds. Address Box 445, Topeka, Kas.

FOR SALE—One hundred and sixty acres valuable farm land near Oklahoma City. Title clear. Terms cash. For particulars address G. M. Fiegar, 508 East Third St., Topeka.

PASTURE—For 500 head of stock. Tame grass. J. H. Davis, Straight Creek, Jackson Co., Kas.

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FOR EXCHANGE—South Dakota farms. Sixteen farms of 160 acres each. All choice wheat lands. Some improvements on each farm. All clear. Will trade any one or all of them for a stock and grain farm in western Missouri or eastern Kansas. John G. Howard, 423 Kansas Ave., Topeka.

TWO-CENT COLUMN—CONTINUED.

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

CHEAP ROOFING.—We will sell you a two or three-ply roofing, ready to lay, that any one can apply, suitable for dwellings, barns and other buildings, for \$1.75 and \$2 per square of 100 feet, including tin caps, nails and coating. Topeka Roofing Co., 109 East Fifth St., Topeka, Kas.

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WANTED—To sell two good residence rental properties. Choice and central location in Topeka. Or will trade for good farm land. Address "H. A.," care Kansas Farmer, Topeka.

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RED KAFFIR CORN—For sale at \$1.55 per 100 pounds; sack, 20 cents. D. P. Norton, Council Grove, Kas.

PURE FELCH LIGHT BRAHMA EGGS, \$1 PER 15. Wm. Plummer, Ossage City, Kas.

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

TREES AND SHRUBBERY—Finest lot of shrubbery in Topeka. Roses, altheas, Persian lilacs, white lilacs, deutzias, weigelas, syringas, wisterias, trumpet creepers, honeysuckles, clematis, fruit and shade trees and evergreens. B. B. Smyth, tree yard, 522 Kansas Ave., Topeka.

SEND TO-DAY FOR FREE SAMPLE COPY OF Smith's Fruit Farmer, a practical Western horticultural journal; 60 cents a year. Smith's Fruit Farmer, Topeka, Kas.

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CANCER CURED. We use Dr. Schultz's wonderful old German remedy. Never fails. Draws them out root and branch, or no pay. Particulars 2 cents. Topeka Remedy Co., Box 585, North Topeka, Kas.

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FOR SALE OR EXCHANGE—Shire stallions, Jack Jennets, Galloway bulls and cows. Commodore Dapple gray, foaled in 1887, never has been beaten for sweepstakes prize. Standard Tom—Dark brown, foaled in 1887, weighs 1,380 pounds; sired by Gilbey's Spark, winner of first prize at Royal show, England; colts here will show breeding of above horses. Jack, Monte.—Black, foaled in 1887; 15 1/2 hands high; weight 1,010 pounds; sired by Black Prince, he by Rein's Mammoth, second dam by Mogul, etc. Monte's reputation is A. 1 as a breeder, and sold upon condition that Jennets are disposed of first. Jennets—Are a selected lot that cost upon an average of \$400 each for the original stock. Galloway Bulls and Cows—Are of the best strains of the Galloway breed. Contemplating a change in my business will dispose of above animals at very low prices. Address Chas. E. Mustick, Hughesville, Mo.

TREES, PLANTS, BULBS AND SHRUBS—Special. The following nursery stock is strictly first-class. Having a surplus, we offer at extremely low rates. Apple, 75 per 100—three to four feet, \$3.50 per 100; cherry, plum and pear, 18 cents each, \$15 per 100; peach, 88 per 100; Russian apricot, 10 cents, \$8 per 100; Concord grape, \$1.50 per 100, \$12 per 1,000; evergreens, red cedar, arbor vitae and Scotch pine, two to five feet, each 25 cents, per 100, \$15; Norway spruce, eight to ten inches, \$10 per 100; asparagus, two year, \$4 per 1,000; rhubarb, 15 cents per 100; hardy hybrid perpetual roses, 15 cents each, per 100, \$12; climbing and moss roses, 15 cents, per 100, \$12; hardy shrubs, six for \$1; bulbs, cannas, tall kinds, \$3 per 100; for \$1 we will furnish ten cannas, ten gladioli, six dahlias and four iris; or thirty greenhouse plants, assorted; or twenty colors, ten sorted, per 100, \$3; bulbs and plants included; huckleberry, 10 cents each; twenty assorted hardy outdoor plants, \$1. Bonner Springs Nurseries, Bonner Springs, Kas.

HOMES IN SO. DAKOTA AND MINNESOTA FOR SALE \$5.00 to \$10.00 per acre. 10 years time, low int. FARMS TO RENT OR EXCHANGE. WE HAVE Rich soil, healthy climate, good schools, churches and markets. Information and list of farms free. S. W. NARRGANG, Aberdeen, S. Dak.

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FREE CATALOGUE OF THE NATIONAL MFG. & IMPORTING CO. Write to-day for our large FREE illustrated catalogue of latest designs and styles published.

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NORTH STAR CURRANT. PERFECTLY HARDY in any climate. Berries do not shell or DROP OFF. Fruit large, most DELICIOUS FLAVOR. Very sweet, uses only half the sugar. FINE 2-year plants, 50 cts. each. \$5 doz. THE JEWELL NURSERY CO., Nursery Ave. No. 17, Lake City, Minnesota.

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THE STRAY LIST. FOR WEEK ENDING APRIL 18, 1894. Cherokee county—P. M. Humphrey, clerk. COLT—Taken up by Jas. Stone, in Mineral tp., April 1, 1894, one buckskin-colored horse colt, about 1 year old, white strip in face, white hind feet, had on halter; valued at \$7. FOR WEEK ENDING APRIL 25, 1894. Sumner county—Chas. Sadler, clerk. HORSE—Taken up by J. W. Morgan, in Guelph tp., P. O. South Haven, March 27, 1894, one iron grey horse, fifteen hands high, harness marks, scar on left knee; valued at \$35. MARE—By same, one dun mare, fifteen hands high, harness marks; valued at \$35. Chautauqua county—G. W. Arnold, clerk. MARE—Taken up by H. Craft, in Belleville tp., P. O. Jonesburg, April 16, 1894, one sorrel mare, 3 years old, fifteen and one-half hands high, white hind feet, had on halter, no brands, mule colt about three days old following; valued at \$20. Harper county—Wm. Duffy, clerk. MARE—Taken up by E. S. Semple, in Eagle tp., March 31, 1894, one roan mare, 10 years old, branded H on left hip. HORSE—By same, one brown horse, 6 years old, no marks or brands; valued at \$20 each. Montgomery county—John W. Glass, clerk. MARE—Taken up by J. W. Scoville, in Fawn Creek tp., one brown mare, 4 years old, fourteen and one-half hands high, white strip down forehead; valued at \$20. MARE—Taken up by B. Brown, P. O. Tyro, April 8, 1894, one dark brown mare, about 4 years old, fourteen and one-half hands high.

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