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BREEDERS' DIRECTORY.

Cards of four lines or less will be inserted in the Breeders' Directory for \$15 per year or \$8.00 for six months; each additional line, \$2.50 per year. A copy of the paper will be sent to the advertiser during the continuance of the card.

HORSES.

PROSPECT STOCK FARM.—Registered, imported and high-grade Clydesdale stallions and mares for sale cheap. Terms to suit purchaser. Thoroughbred Short-horn cattle for sale. Two miles west of Topeka, Sixth street road. H. W. McAfee, Topeka, Kas.

CATTLE.

VALLEY GROVE HERD OF SHORT-HORNS.—For sale, choice young bulls and heifers at reasonable prices. Call on or address Thos. P. Babst, Dover, Kas.

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HOLSTEIN-FRIESLIANS.—From this herd were furnished some of the winners at the World's Fair. Write for catalogue. M. E. MOORE, Cameron, Mo.

H. W. CHENEY, North Topeka, Kas., breeder of HOLSTEIN-FRIESLIAN CATTLE. Farm four miles north of town.

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BERKSHIRES.—Wm. B. Sutton & Sons, Rutger Farm, Russell, Kansas. Choice February and March pigs. Young boars ready for service. Young sows bred. Good individuals and choicest breeding.

KAW VALLEY HERD FANCY POLAND-CHIN-as. Among the lot are ten Free Trade sows, and Bebout's Tecumseh at head. Inspection invited. Prices reasonable. M. F. Tatman, Rossville, Kansas.

V. B. HOWEY, Box 103, Topeka, Kas., breeder and shipper of thoroughbred Poland-China and English Berkshire swine and Silver-Laced Wyandotte chickens.

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PURE-BRED LANGSHAN, BARRED PLY-mouth Rock and S. C. B. Leghorn eggs, one dollar per dozen. Address Robert Crow, Missouri Pacific Railway Agent, Pomona, Kas.

MULBERRY GROVE FARM.—Barred Plymouth Rocks and Black Minorcas. Eggs \$1.50 per thirteen, express prepaid. J. R. Cotton, Stark, Kas.

Z. TAYLOR, Marion, Kansas.—Single-comb Brown and White Leghorns, Silver Wyandottes, Black Langshans, Barred Plymouth Rocks. Eggs \$1.25 for fifteen. Buff Leghorn eggs \$2 for fifteen. High-scoring birds.

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Fancy Poultry and Eggs Turkeys, Geese, Ducks and forty varieties of Chickens. Prepaid and expressed. Write us. **J. R. Brabazon Jr. & Co.,** Delavan, Wis.

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MAKIN BROS., Florence, Kansas, breeders of HEREFORD CATTLE. We offer cheap good well-bred young bulls and heifers. Also choice show heifers and bulls. Write or come.

SHORT-HORN CATTLE Poland-China Swine, Buff Cochins Fowls. Inspection invited. **E. L. KNAPP,** Maple Hill, Kansas

SUNNY SLOPE FARM, C. S. CROSS, Proprietor, Emporia, Kas. Breeder of pure-bred Herefords. Beau Real 11055 heads the herd. Young bulls and heifers for sale. Also for sale, Poland-China swine. Choice bred young boars and sows by the World's Fair prize-winner, Longfellow 29785; and Berkshire swine of the noted Duchess and Lady Lee strains of N. H. Gentry. Bismark and General Lee, both Gentry bred boars, in service.

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T. A. HUBBARD Rome, Kansas, Breeder of POLAND-CHINAS and LARGE ENGLISH BERKSHIRES. Two hundred head. All ages. Fifty boars and forty-five sows ready for buyers.

W. E. GRESHAM, Burrton, Kansas, Breeder of POLAND-CHINAS. Won six prizes, including first blue ribbon west of Mississippi at World's Fair. Stock all ages for sale.

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J. R. KILLOUGH & SONS, Richmond, Kansas, breeders of POLAND-CHINA SWINE. The very best strains. Nothing but first-class stock will be shipped to any. Come and see us or write.

P. A. PEARSON Kinsley, Kansas, Breeder of Poland-China Swine. All ages for sale. Herd headed by Dandy Jim Jr. and Royalty Medium, a son of Free Trade.

HILLSDALE HERD Short-horn cattle and Poland-China hogs, bred by C. C. KEYS, VERDON, NEB. Prince Byron 109513 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.

R. S. COOK Wichita, Kas., Breeder of Poland-Chinas. Won seven prizes at World's Fair—more than any single breeder west of Ohio.

CIRCLE U HERD POLAND-CHINA SWINE. W. H. Underwood, Hutchinson, - Kansas. Graceful's Index 9289 S, 27089 O., sire Seldom Seen 2d 23045 O., dam Graceful L. 28768 O. He was the sire of the Kansas World's Fair winners that won first, third and fourth prizes.

RIVERSIDE HERD Poland-China Swine. For sale sows bred to farrow in March, April and May. Also young stock at reasonable figures at all times. Satisfaction guaranteed. Correspondence as well as inspection invited. **J. V. RANDOLPH,** [Established 1893.] Emporia, Kas.

THIS BIT combines QUALITIES of other patent bits and will easily control the most vicious horse at all times. It is the COMMON SENSE BIT because it can also be used as a mild bit. XC Sample mailed \$1.00. Nickel - - - 2.00. **RACINE MALLEABLE IRON CO.,** J. P. DAVIES, Mgr. RACINE, WIS.

Wholesale Prices! 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.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

OCTOBER 2—C. C. Keyt, Short-horn cattle and Poland-Chinas, Verdon, Neb.

BREED BERKSHIRES FOR PROFIT.

Why Berkshire swine are a profitable breed to handle is explained in an article by F. O. Lash, Hendrix, Ill., who says that "whatever occupation or profession man engages in, it is generally for the purpose of making money, and the swine-breeder is no exception to the rule. It is true we occasionally hear of a man that is in the business for love of it, but observation has led us to believe that their love increases and decreases in a corresponding ratio with their profits. But whatever may be the motive that prompts the professional breeder, with the general farmer it is purely a matter of business and sentiment does not enter into the question at all. Whether the breeding and feeding of swine results in profit or loss depends, to a great extent, on the kind we handle. There are certain qualities which they must possess, or they will be money-losers instead of money-makers, except in times of abnormally high prices, when there is something to be made in handling most any kind of swine. But the progressive farmer is no longer satisfied with that kind. He not only wants a breed that will return a profit for the feed and care given them, but he wants the breed that will return the greatest profit. This explains the rapidly increasing demand for Berks. Swine-breeders and farmers as well, have at last learned that prejudice is an expensive luxury, and it is being superseded by impartial investigation, with the result that the superior merits of the Berkshire are being recognized. Each of the improved breeds of swine have their champions who are constantly presenting to the public the merits (either real or imaginary) of their favorite breed, some of whom even go so far as to assert that their particular favorite combines the good qualities of all the others, and none of their defects. Now, if the first part of this statement were true, there would be no denying the latter part, for if any one breed possessed the good qualities of all the others, there would be no room for any defects, not even on the frame of a Tamworth. But the show ring has clearly demonstrated that no breed has ever produced anything like a perfect specimen, and every fair-minded man must admit that there is no breed but what has both good and bad qualities, and that the only difference is, they are mixed in different proportions. We only claim for the Berk that he has a greater proportion of the good than any other breed, and as we are in the business for profit and not for our health, it naturally follows that we are breeding Berkshires. There are five principal reasons why the Berkshire is becoming so popular.

"First—They are prolific breeders of large even litters.

"Second—The dams are good sucklers and the best of mothers.

"Third—They have an abundance of what is commonly termed constitutional vigor.

"Fourth—They are easily fattened at any age.

"Fifth—They make the kind of pork the market demands.

"The cost of keeping a brood sow a year forms an important item in our expense account, and all other things being equal, the one that produces ten pigs at a litter is worth at least double the one that produces only five, and the former is not an unusual number for a full developed Berkshire sow. But they often run as high as twelve and even fifteen at a litter. But it is not only important that the litters should be large—it is equally important that the pigs should be uniform size. For if they are not, the stronger will take more than their share of the mother's milk, and as they grow older the rations of the weaklings will steadily diminish. And it is the common experience of feeders that the results are more or less unsatisfactory whenever

hogs of different sizes are fed together. Uniformity, both as to size and form, is attained by the Berks to a greater degree than by any other breed. For the reason that they have been bred pure longer than any other, consequently their characteristics are more firmly fixed and are transmitted to their offspring with more certainty. The first few weeks of the pig's life is a critical period, and there is no food so well adapted to his needs at this time as the dam's milk, and unless this is furnished in liberal quantities, it is very doubtful whether piggy will ever make a respectable hog. The experience of breeders proves conclusively that with proper care it is seldom a Berkshire sow will fail to furnish an abundance of nourishment. But with all these excellencies the brood sow is a failure unless she is a careful mother, and the most pronounced enemies of our favorite are compelled to admit that they are unequalled in this respect. It is very provoking to own an otherwise valuable sow that is in the habit of over-laying her pigs, apparently for no other reason than that she is too lazy, or too indifferent to get off of them. And with the owners of some breeds this is not an uncommon experience. But the breeder of Berks is never tempted to profanity on this account, for if he has provided his sow with comfortable quarters he can rest assured she will take good care of her pigs.

We now come to the third point under consideration, constitutional vigor. This is not generally given the consideration which its importance demands. If we are to be rewarded for our labor it is absolutely necessary that our swine should be healthy. The hog is a machine to convert the raw products of the farm into pork. And the work of that machine depends on the power of the assimilating organs. The annual loss to swine breeders from the ravages of disease are enormous and it is apparent that an animal with a strong constitution is better prepared to resist disease than one with a weak constitution, and our favorite is not lacking in this respect. His straight back, well-sprung ribs and deep chest are strong external evidence of well-developed and healthy internal organs. Such a frame cannot enclose a weak constitution. There is such a diversity of opinion among feeders as to the proper age to put hogs on the market, and differences that cannot be easily reconciled, owing to the fact that conditions are not the same in all parts of the country, some being so situated that they can grow frames at but little expense while others can not. Consequently a hog cannot win popular favor unless he is easily fattened at any age. This requirement is fully met by the Berkshire, and in addition they are rapid growers. A spring pig can easily be converted into a good porker before snow flies in the autumn. But some contend that the Berkshire is too large and point to the fact that, as a rule, very heavy hogs do not bring the best prices on the market. Now, if it were true that the Berkshires would weigh no more at six to eight months old than the small breeds, we would agree with them, but it is not. If there is any of the small breeds that will equal them in weight, at any age, we have never seen them. If the prices of beef were to change so that 1,000-pound steers would command a premium in the markets, would cattlemen commence breeding Jerseys for beef? They certainly would not. They would continue breeding the Short-horn and Hereford. Neither would they attempt to reduce the size of their breeders, for they have learned that rapid growth is essential to success, and that in this respect the small breeds are sadly deficient. The same is true of swine, and if the market demands 200 to 250-pound hogs, sell them at those weights, and your neighbor that is breeding for small hogs will sell his a few months later. Only a few years ago the hog that carried the most fat was the best seller. But there are forces at work that are making radical changes. Cattle and other cheap substances have reduced the value of lard. And as the nation increases in wealth people become more discriminating in their tastes. They have learned that pork

does not consist of a good deal of lard and a little bit of meat, and they demand a more equal distribution of these two elements. They have issued their edict, and swine breeders must accept it whether they want to or not. Some will probably object, but the Berkshire breeder will not, because he is breeding a hog with a large proportion of lean to fat, and that is the kind of hog that is wanted. The Berkshire has never been pushed to the front, as he deserved, but breeders have at last been aroused from their long lethargy and will hereafter wage an aggressive campaign. A new epoch has begun in the history of swine-breeding, and viewing it either from the standpoint of the professional breeder or general farmer, the breeders of Berkshires have a bright future before them."

Feeding and Rearing Hogs.

The present price of hogs is a great encouragement to farmers to improve the method of feeding and rearing these animals. The increase of consumption is due to the improvement in the character of the meat by reason of the vast use of canned provisions. This has taken the place to an enormous extent of the fat pork formerly used on ships, in mines, lumber camps and even in private families. The necessity for some provision of meat that might be kept ready for use every day in the year therefore no longer exists, and the former clear mess pork is not wanted, but in place of it the less fat bacon and hams that have become popular, as well as the light fresh pork that may be had every day in the year.

This has totally changed the demand for pork meats, and the small leaner pigs that weigh no more than 120 to 150 pounds are now wanted. And this class of pigs is really more profitable to the feeders than the larger animals that must be fed over one winter or two before they are ready for market. The method of feeding these small pigs is quite different from that needed for the larger ones, which were fed mostly on corn. The modern model pig is not more than nine or ten months old when slaughtered and is reared on clover pasture and only finished on corn by moderate feeding for a month or so. Indeed the pigs are always ready for market, and may be taken direct from the pasture if a little corn or meal is given to them while running in the field, or being fed on the skimmed milk in dairies. The dairy-fed pigs are the best of their kind, and fill the needs of the butchers to perfection. All this is to be considered, as well as the fact that the number of pigs coming to the market is not now a guide as to the quantity of meat, as it was formerly, when the average weight was twice that of the present time. Doubtless the mistake of not estimating this fact has led feeders to reduce their stocks so largely as to cause a deficient supply, with the result of the present higher prices.

Clover, corn and pigs are the rule now. And in this new system the farmer has, as he never has had before, a method of improving his land by the growth of clover for pasture only. Clover is an excellent substitute for milk. It affords the nitrogen for the tender, quickly grown flesh, and a little corn given makes the fat, laid on between the lean meat, thus making the typical meat or bacon. And in addition to this good result it adds to the soil a large supply of the most costly element of fertility in the nitrogen derived cheaply from the atmosphere by this invaluable crop. The increased fertility of the land pays all the cost of the clover several times over and leaves the pigs an almost clear gain.

The old system of estimating the cost of pork by so many pounds of corn to the pound of meat will now be changed to the new one of so many pounds of meat to an acre of clover, and the corn will become a mere incident of the cost of feeding. This is the way of all improvements. Cost of product is lessened, and the profit is made by those farmers who study how to improve their methods and keep abreast of the rapidly changing course of events. One who does not read or study fails to meet the new demands upon him, and is in his ignorance look-

PERFECT IMPREGNATOR



Barren Mares

made to breed regularly by its use.
SURE, SAFE, HARMLESS.
Hundreds of Testimonials from all States. Guaranteed, and sent with full directions on receipt of price, \$5.00.

SPECIALTY MFG. CO.,
119 Main St., Carrollton, Mo.
ILLUSTRATED BOOK ON STERILITY SENT FREE. WRITE FOR IT. Refer to Commercial Bank, St. Louis; Midland Bank, Kan. City; and entire city of Carrollton.

ing about in a bewildered condition, asking himself how it is that he is standing all alone, left behind by the advancing crowd, who have gone out of sight. And his mournful complaint is that "farming does not pay."—*Western Swineherd.*

Wind Power on the Farm.

The following facts are from actual experience, and go to show what the use of a very small portion of the power that passes over a farm almost daily, coupled with some ingenuity on the part of the farmer, will do in the way of saving labor.

A twelve-foot geared steel windmill furnishes power in abundance for the following work: By means of lever arms and reciprocating wires two pumps are driven, distant seventy-five and three hundred feet, respectively. The latter always gives a supply of pure water, indispensable for dairy cattle and desirable for any stock. A shaft of gas pipe carries the power for churning to a cellar sixty feet distant. A belt which can be readily thrown on runs the grindstone, a fact appreciated by the small boy when there are two or three sickles to be ground, and a convenience at any time. Inside of the mill-house enclosing the lower portion of the tower are other belts connecting with a corn-sheller and a corn elevator which carries the shelled corn up out of the way. A grinder attached direct to the driving shaft is capable of grinding fourteen bushels of corn per hour, and has an automatic feed. Fine meal and Graham flour can both be ground for house use, and a fresh article is insured.

It occasionally happens that a churning must be done or a tool ground when there is no wind; resort must be had to the old way, but even this need not occur often.

Not all described here would be practical on very many farms, but portions of it would be decidedly so. By the use of wind power the farmer can usually obtain a supply of pure water for his stock, save 4 or 5 cents for every bushel of ground feed used and save a large amount of labor in various ways. The possibilities are not limited to the uses mentioned above; apples can be ground into cider, the wood sawed, or feed cut for stock by a windmill.

It is not probable that wind power will ever entirely supercede steam power for farm use, but it is encroaching upon it rapidly. Manufacturers have made rapid strides in the production of a good mill, and the mill of to-day is far ahead of its predecessors in strength, durability and efficiency, and we can add to this that the power itself costs absolutely nothing.—*John E. Taylor, in Industrialist.*

It Removes Curls.

SOUTHAMPTON, Mass., October 23, 1898.
The Lawrence-Williams Co., Cleveland, O.
Please send me pamphlet with full directions how to use your Caustic Balsam. I have some but mislaid the directions, as it has been over one year since I used it. I took a large curb off of a two-year colt. I wish to blister a horse's ankle for enlarged windpuffs.
F. W. WARNER.

"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.

Agricultural Matters.

EXPERIMENTS WITH CORN.

(Continued from last week.)

The following excerpts from Bulletin No. 45, Kansas Experiment Station, give further results of Prof. George-son's experiments with corn:

FREQUENCY OF CULTIVATION.

An experiment having in view the influence which greater or less frequency of cultivation has upon the yield was carried out on thirty plats, each being one-twentieth of an acre in size and having twelve rows, with the usual distance of three and one-half feet between the rows. These plats were cultivated with a "Daisy spring-tooth cultivator" the number of times indicated in the table, all plats under the same treatment being cultivated at the same time. The results are shown in the averages, and averages are also given for two years' trials of the same experiment, while cultivation twice a week, once a week and once in two weeks has been tried for three years, the averages of which are given:

AVERAGES OF PLATS AND RATE OF YIELD PER ACRE IN BUSHELS OF EAR CORN.

Times cultivated.	Times cultivated during season.	Yield of good ears in pounds.	Yield of rubbish in pounds.	Bushels per acre.
Three times a week.....	20	37.5	44.0	23.28
Twice a week.....	14	45.3	46.0	26.05
Once a week.....	7	54.3	45.8	28.65
Once in two weeks.....	4	39.1	43.8	22.25
Once in three weeks.....	3	35.8	43.8	21.34
Once in four weeks.....	2	22.4	40.7	18.02

AVERAGES OF TWO YEARS' TRIALS.

Times cultivated.	Times cultivated during season 1891.	Times cultivated during season 1892.	Times cultivated during season 1893.	Bushels per acre.
Three times a week.....	15	20	24	24.86
Twice a week.....	11	14	17	27.15
Once a week.....	6	7	9	27.86
Once in two weeks.....	4	5	6	25.25
Once in three weeks.....	3	3	4	24.09
Once in four weeks.....	2	2	3	16.01

AVERAGES OF THREE YEARS' TRIALS.

Times cultivated.	Times cultivated during season 1891.	Times cultivated during season 1892.	Times cultivated during season 1893.	Bushels per acre.
Twice a week.....	9	11	14	40.31
Once a week.....	6	6	7	41.29
Once in two weeks.....	4	3	4	40.86

It appears from the results that it is possible to cultivate corn too much, as well as too little. Cultivation once a week gives the best yields, in each series of averages. Care has been taken during these experiments to injure the roots as little as possible, but it would be idle to claim that the roots were not injured at all, and it is possible that the falling off in yield as a result of frequent cultivation is due to injuries which the roots have sustained in the process. In all cases of these experiments, the corn was dropped sixteen inches apart, by measure, in the row, two sound kernels being planted at each place, and covered with a hoe, and after the first cultivation it was thinned to one plant in a place. Previous experiments have pretty fully settled the fact that the large varieties of corn produce best on this soil (which is of but moderate fertility), when the rows are three and one-half feet apart and the stalks sixteen inches apart in the row.

EFFECT OF REMOVING TASSELS.

Sixteen plats, in two series of eight plats each, were planted for this experiment. One of the series was, however, on somewhat higher ground than the other, and it was so much injured by the hot winds that it had to be rejected. The results of the remaining series of eight plats are given in table II.* Two plats, of eight rows each, were experimented with, as follows: (1) On plats 79 and 83, alternate rows had the tassels removed; (2) on plats 80 and 84, the tassels were not removed; (3) on plats 81 and 85, all tassels which first appeared were pulled, all stalks tasseling thereafter being left entire; (4) on plats 82 and 86, alternate stalks in all the rows had the tassels removed.

*Table II, except summary, is omitted.

AVERAGES OF TABLE II. AVERAGE OF PLATS 79 AND 83—Alternate rows had tassels removed.

	No. of stalks.	No. of barren stalks.	No. of abortive ears.	No. of good ears.	No. of short ears.	No. of partly filled ears.	Weight of good ears, pounds.	Weight of rubbish, pounds.	Total weight, pounds.
Tassels off.	273	5 0	51	112	29	83	75.18	39.42	114.55
Tassels on.	262	4.5	25	159	86	50	156.10	29.63	185.74

AVERAGE OF PLATS 80 AND 84—No tassels removed.

	541	12.5	53	353	81	100	295.79	61.61	357.30
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AVERAGE OF PLATS 81 AND 85—All first tassels removed.

	561	12.5	72	313	88	110	253.01	73.5	326.51
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AVERAGE OF PLATS 82 AND 86—Alternate stalks had tassels removed.

	No. of stalks.	No. of barren stalks.	No. of abortive ears.	No. of good ears.	No. of short ears.	No. of partly filled ears.	Weight of good ears, pounds.	Weight of rubbish, pounds.	Total weight, pounds.
Tassels off.	242	9	76	70.5	37.5	55	48.21	26.56	74.77
Tassels on.	262	8	53	148 0	37.5	49	121.43	30.18	151.61

The variety used was the "Piasa Queen," a medium early yellow corn. Rows were in all cases three and one-half feet apart, and the stalks sixteen inches apart in the row. The seed was dropped by hand, two kernels in a place, at measured distances, and where two plants appeared the weaker one was removed after the first cultivation. All plats received shallow culture with a spring-tooth cultivator. The tassels began to appear on July 12, and the first were pulled on the 15th, and every day or two thereafter as they appeared. Just at this time the drought was severe and the corn suffered much from the hot winds. Many of the tassels which were designed to remain were injured by the hot and dry weather, so that they produced little or no pollen. This, of course, was disastrous to an accurate test of this experiment.

It does not require a close scrutiny of the averages from these tables to see that there has been a marked loss in the yield of grain by removing the tassels. Comparing first, the averages of plats 80 and 84, on which no tassels were removed, with plats 81 and 85, where the first appearing tassels were removed, it will be seen that the latter have the smallest proportion of good ears as well as of total weight of ears: In the same way, comparing plats 79 and 83, on which alternate rows had the tassels removed, with plats 82 and 86, where alternate stalks had the tassels removed, we see in like manner that the average results are against the practice of removing the tassels.

Had the season been a normal one, i. e., had the rainfall been sufficient during the period the ears were forming and the tassels developing, these results would appear in a stronger light than they do now. But it has already been remarked that the season was unfavorable at this period, causing many of the tassels to dry up and die before the pollen was discharged, with the inevitable result that many of the ears failed to become fertilized, and proved abortive or only partly filled; and it will be seen by the tables that this evil increased when the tassels were removed.

The conclusion seems to be, that, owing to the unfavorable weather at this critical period in the growth of the crop, there was scarcely pollen enough produced to fertilize the ears, even had all the tassels remained, and that removing them made the evil worse. It was different in 1892, when a similar experiment was carried out on forty-eight rows, twenty-four of which had the tassels removed and the other twenty-four left entire. †Table III shows the result of this experiment. It is just the reverse of last season's results, and is decidedly in favor of the removal of the tassels. The total weight of ears was in that year heaviest from stalks having the tassels off, 474.4 pounds, and from stalks with the tassels on, 338.4 pounds. But in that year the conditions were not unfavorable to the crop during the period of pollination. A removal of the tassels from every other row still left enough to fertilize the entire crop, and the results were that the stalks which did not have to expend part of their strength on the production of tassels produced heavier ears and more of them.

These experiments were carried out with the greatest care both seasons,

†Omitted.

and they therefore show the futility of drawing conclusions from a single season's experiments. At other experiment stations, contradictory results have in like manner been reached on this point. Our own results seem to warrant the conclusion that, in seasons favorable to the production of much pollen, when the pollination can take place under normal conditions (as to rainfall and temperature), it is advantageous to remove a portion of the tassels; but that, in seasons like the last, where the contrary conditions prevail the practice results in diminishing the crop.

Leaves of Trees as Fodder.

The consular report for February, 1894, gives an account of this use for leaves in Europe. The scarcity of hay, especially in France, has compelled the farmers to resort to the leaves and young branches of hazel, aspen, ash, elm and willow. The leaves are first dried and are then fed with other fodder. It is found that the best results are obtained by harvesting the leaves in July and August. The consul who writes the report ends by asking, "Why do not the European farmers take our maize? All this trouble in Europe is taken to find substitutes and to save cattle, and yet 2,000,000,000 bushels of the best food for man and beast burden the farmers and barns of the United States." He adds that the Europeans do not know enough about our land and recommends that "the efforts now being made by the Department of Agriculture should be supplemented by a combined effort of the States likely to profit by the introduction of maize into Europe.—Prof. A. S. Hitchcock, in *Industrialist*."

Is Salt a Fertilizer?

The use of salt as a fertilizer has often been urged, and examples of apparently beneficial results have been cited. But now comes a German writer, B. von Herff, and says:

"The use of salt for fertilizing purposes is still prevailing to some extent, and especially in such agricultural regions where fertilizers have only recently been introduced and where the principles of artificial manuring are as yet little understood.

"It is true that salt occasionally produces, upon some crops and upon certain soils, a moderate increase of yield for a season or two, but the apparent benefit is not lasting; on the contrary, such applications leave the soil in an impoverished condition; that is, a continued application of salts is followed by decreasing yields. The effect of common salt is readily explained by the fact that it acts as a solvent upon potash compounds contained in the soil, and potash being plant food, causes an increased yield. Salt in this manner acts as a stimulant and enables the plant to draw from resources already present in the soil at a much quicker rate than would be the case under normal conditions, and instead of increasing fertility it promotes a rapid exhaustion of the soil, which becomes apparent as soon as the plant food stored therein has been consumed.

"Any one familiar with agricultural chemistry knows that salt does not contain anything that may serve as plant nourishment; it is a simple compound of chlorine and sodium. Chlorine, if anything, is injurious to plants (hence the disastrous effect sometimes observed where salt is used at the time of planting, or in too large quantities),

CONSUMPTION

is not inherited. It develops only when lungs are weak and the system run down.

Scott's Emulsion

the cream of Cod-liver Oil, often cures Consumption in its early stages and *always* prevents it. Coughing is stopped, Lungs are strengthened and the system built up. *Physicians*, the world over, endorse it.

Don't be deceived by Substitutes!

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

while sodium, though not harmful, cannot by any means assist plant-growth. The small quantities needed are always and abundantly present in every soil, and it is not any more advantageous to fertilize with sodium than it would be to use sand or silica as a fertilizer.

"Now, it has been recently claimed, by one evidently not familiar with the simplest agricultural principles, that soda may take the place of potash, and he even went so far as to recommend common soda as a fertilizer. How could this be in the face of the fact that ashes of plants usually contain ten times as much potash as soda? It is true that Prof. Wagner demonstrated that plants, when oversupplied with sodium, did absorb more of this ingredient than they would have done had the supply been normal, but there is no experiment on record to show that any plant can live and grow without potash. The ill-advised farmer, then, who follows such extravagant theories and tries to feed his crops with soda will waste his money and shorten his crops."

Prof. R. C. Kedzie, of the Michigan Experiment Station—one of the most reliable of the authorities, reports in Bulletin No. 101 (December, 1893,) on flat pea (*Lathyrus silvestris*), as follows: "On the Station grounds two-year-old plants made a good growth, measuring three feet on July 13. A square rod, cut July 12, yielded at the rate of sixteen tons of green forage per acre, equal to four tons of hay. An analysis of *Lathyrus silvestris* gave the following results:

	Per cent.
Moisture.....	7.99
Ash.....	8.32
Crude fat.....	2.08
Crude proteins.....	27.17
Crude fibre.....	26.70
Nitrogen-free extract.....	27.74
	100.00

As it is a well-established fact that catarrh is a blood disease, medical men are quite generally prescribing Ayer's Sarsaparilla for this most loathsome and dangerous complaint. Where this treatment is perseveringly followed, a thorough cure is invariably the result.

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.

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.

Irrigation.

IRRIGATION FOR EASTERN KANSAS.

While an irrigation movement of the first magnitude has captured western Kansas, comparatively little of this excitement is shown by the eastern portion of the State. To be sure Salina and Wichita have had the most enthusiastic of irrigation conventions, but the assembling at these points has been more on account of their accessibility and size, and the interest the towns themselves feel in the movement from their being gateways, in a sense, to the undeveloped country beyond them, than to any actual interest in irrigation on the part of the farmers in those sections.

With the exception of Mr. Munger's plant, just constructed in Greenwood county, irrigation enterprises of any magnitude are confined to the western half of the State.

People who are conscious of living in a region with from thirty to forty inches of rainfall annually are apt to think that water-rights and ditches and the sub-flow are matters of no interest to them. They are even at times too busy in digging ditches to take care of surplus water to think for a moment of a ditch to lead water onto their land.

Is it then necessarily true that the subject of irrigation has no interest to the people of eastern Kansas beyond the charitable wish that their western brothers may be able to secure some relief from their unfortunate condition? Has the East never suffered from drought, or seen promising crops perish for lack of a little water at the proper time? No one will deny that it has. Whether this lack is great enough to justify an expensive outlay for dams, ditches, etc., that water may be applied to general farm crops, is a question that the future must answer. I believe that the same question is pertinent to western Kansas.

The value of the crop that may possibly be produced, and the cost of procuring and applying the necessary water to that crop, are questions that must be carefully weighed by the irrigator in any land. No mere impact of enthusiasm can make irrigation profitable when the water costs more than the value of the crop that may be produced.

Except where the water supply is very abundant it may be doubted whether the irrigation of such common field crops as wheat and corn can be made profitable in either eastern or western Kansas. It is only with the highest degree of intensive culture that the use of high-priced water can be made profitable.

Such vegetable crops as are commonly included under the head of "truck" not infrequently give returns of from \$100 to \$200 or even more per acre. Orchard and small fruits sometimes give still better returns. Three hundred bushels of strawberries have been grown on a single acre of land times enough to leave no doubt about the fact. At 5 cents a quart, \$480 would be the value of this crop. With such crops as these in danger from drought, water at even a high price could be very profitably applied.

The quantity of water required to cover an acre one inch deep is 27,155 gallons. Making this an even 30,000 gallons, to allow for waste, the cost of an acre-inch of water at 12½ cents per 1,000 gallons, the price at which the city of Manhattan furnishes water to large customers, would be \$3.75. What market gardener or small fruit-grower has not seen the time when an inch or two of water on his crops would have been worth many times this price?

There are a few gardeners of my acquaintance to whom the well, with windmill and tank, is as essential a part of the outfit as team and tools. Water is used in abundance in setting plants, if the ground is dry, and a perfect stand thus secured, which is one of the most important factors to success. If the crop flags during a drought, water is turned on to help out till rain comes.

When raspberries and strawberries have set an abundant crop and are nearly ready to harvest, a drought does not alarm them, for the water is

ready and brings the fruit to perfection, while their less provident neighbors, after picking a few acres, must see the rest of their crop wither on the vines.

Over much of eastern Kansas the best small fruit and truck land is found on the river and creek bottoms where inexhaustible water may be reached at from twenty to thirty feet. With the pumps and windmills of large capacity now manufactured for this special work, such a well will become indispensable to the gardener who has once learned the worth of it.

There are, within a few miles of Manhattan, a score of large springs which run away unused, even damaging land upon which they discharge, which, if the water were properly piped and distributed, would make the land below them the most valuable portion of the farm. There are small streams on many farms that might be dammed at a trifling cost, and the culture of a few acres adjacent to these ponds made more profitable than large fields devoted to staple crops. The wisdom of following the one course or the other must depend largely upon the man, and a good deal upon the location and market; but the time is surely not far distant when such opportunities for intensive farming will be held at their true value.

If more men were trained to the most skillful means of making an acre of ground yield its utmost, the cry of the unemployed would not be so often heard in our land.—Prof. S. C. Mason, in *Industrialist*.

Potato Culture in Kearney County.

By W. B. Logan, read before Kearney County Farmers' Institute.

We give you our experience in growing potatoes, or in our effort to do so, since we became a citizen of this county.

The first year (1887) was in the north part of the county and resulted in a complete failure. The second year we had learned that there was something else required more than planting and cultivating the crop. We planted in a well-plowed piece of land; after cultivating a couple of times, we then completely covered the ground with old straw and refuse from the barnyard. This done we waited for results. The consequence was we raised potatoes. This was outside of irrigation.

Since then we have farmed under the ditch, but failed to raise potatoes—for the first two years, owing to not understanding the art of using water just as it should be used, so as to do the most good. Our first idea was to flood the ground, potatoes and all—the more water the better—but found that this would not produce the potato. We then concluded that it was impossible to grow potatoes in this valley, on account of the alkali that was in or mixed with the soil, and actually began to argue that way in a talk with McHue, who once lived north of town. I made the assertion that potatoes would not grow here. Mr. McHue took the other side of the question, and claimed that they would. Said he had raised as fine potatoes here as ever grew. He gave me the date of his success and told me about his mode of cultivation. I afterwards, upon inquiry, found that his statement was true. The next crop that I heard of was raised just east of town, on the farm now owned by Ott & Tewksbury, of Topeka. This was reported to have produced about two hundred bushels to the acre, and now, after a residence of seven years here and keeping close watch of the producing qualities of the soil, we find that potatoes can be grown here as cheap as anywhere, provided, always, that they are cultivated.

We will name a few of the successful potato-growers of this county: J. E. Bennett has been growing potatoes for the last three years and has been very successful; also, our German friend, Carl Frolick, from whom I bought my first seed, three years ago, has never failed on a good yield of potatoes. Mr. Frolick gave me his rule for watering his potatoes, and I have found it good. Never water potatoes until you have plowed the ground, so as to throw up a ridge and leave a ditch between the rows, so as to let the water run between

A CIRCUS

ON THE BILL-BOARDS

and a circus on circus day are two kinds of a thing. The greatest circus is usually on the Bill-boards, and the circus on Circus Day is consequently a disappointment. There is, of course, the occasional exception which proves the rule. McCormick Binders and Mowers are an exception. Their promise on the "Bill-boards" is always fulfilled on "Circus Day." For years the makers of McCormick Grain and Grass Harvesters have been telling the World that they could and would at any time demonstrate the superiority of their machines in the actual competitive field test. The "Bill-boards" of other manufacturers have glaringly proclaimed that *their* machines are the best. But "Circus Day" came at length. The World's Fair urged all these manufacturers to take their machines into the field that the results might be compared. The McCormick was there; its show went on. Its promises to the World were carried out. But how about the other "great and onlies"? They stayed at home consoling themselves with the reflection that "the people like to be humbugged," and their artists got up new pictures for the "Bill-boards." Before deciding about going into these field trials, the competitors of the McCormick went and examined the crops to be cut, and realizing the severity of the conditions, they said to themselves: "We don't propose to come here and compete with the McCormick;"—"a live coward is better than a dead hero;"—"a sucker is born every minute, and we'll catch some of 'em anyway." That policy may answer for the "Bill-board" sort of circus; it will not do for the McCormick. Promises must not be broken. If McCormick machines are not better than all others, they must not be so advertised. If they are so advertised, every Binder, every Reaper and every Mower must be ready at a moment's notice to go out into the field and show up. That's business. Write to the McCormick Harvesting Machine Co. Chicago;—or, better yet, call at once on your nearest McCormick agent

the rows and not on the vine. Plant either early or late potatoes, and cultivate well. Do this next spring. Don't depend on Colorado or Utah for your potatoes. I have raised from two hundred to three hundred bushels for the last two years and done it with less hard work than we did when we lived further east, where potatoes were considered a sure crop.

Sub-Irrigation--A Caution.

Wherever the idea of sub-irrigation may have originated, its present popularity as a matter of discussion seems to have grown out of successes in the greenhouse by means of it.

In the widespread interest which has been excited in anything pertaining to irrigation of late, many speakers and writers have advocated sub-irrigation by means of tiling sunk in the ground as an excellent means of solving various problems connected with the general subject.

As a result of this and in spite of the knowledge that this system would prove very expensive, that the conditions under which it proved useful in the greenhouse were never to be met with elsewhere, and in spite of the fact that nobody had tested its usefulness on the farm, information now comes through the press that farmers in western Kansas have prepared and others are now preparing to use this system upon a somewhat extended scale during the present season.

Some of the difficulties to be met and overcome by those who adopt sub-irrigation will be climatic, others mechanical. The climate in all regions where irrigation is necessary is excessively dry, and the evaporation enormously rapid. It follows, then, that if the dispersion of the water through the soil should be slow, the evaporation will take up the water before it shall have accomplished its purpose.

While the soil in the irrigation districts is very often of such a nature as to admit of the freest circulation of water, it will be seen that another difficulty will present itself in the gradual filling up of the pores of the tiling from the sediment in the water, and thus prevent that rapidity of movement so necessary in the growing season. Nor has it yet been established that any other application of water than in the manner provided by nature, viz., surface application, as in rain storms, will be as beneficial to plant growth.

Some conclusions lately arrived at by the Utah Experiment Station from experiments there are here quoted as directly in point. They are: "(1) Sub-irrigation, whether by large open drains or by the cement pipe system,

fails to supply moisture enough for growing crops. (2) The lateral movement of water was too slow to furnish the requisite supply for the evaporation of plants, being at the rate of a very few inches per day. (3) The sub-irrigated soil was warmer than the surface-irrigated soil. (4) The atmosphere around the plants, to the height of twelve inches, was warmer by sub-irrigation than by surface irrigation. (5) The sub-irrigated plat did not contain as much moisture as the surface-irrigated plat. (6) It is concluded that for this locality the lateral movement of water cannot be made rapid enough for maximum crop growth. (7) The system is too costly for ordinary farm crops."

While sub-irrigation by means of tiling or perforated pipes undoubtedly has its uses, and while it may find a valuable place in our agriculture, yet, in the absence of any widespread experience to prove that its place has been determined, the writer would caution farmers against undertaking it except in a very limited way until its value is better known.

The initial expense is considerable, and if the plant proves not to be highly effective, it can only be considered as so much loss.—I. D. Graham, in *Industrialist*.

Miss Susan B. Anthony and Miss Carrie Chapman will address the suffrage mass meeting at Hamilton hall, this city, Wednesday evening, May 9. Mrs. Otis, Mrs. Johns, Mrs. Childs, Mrs. Diggs and Rev. Anna Shaw on Thursday at 10 a. m., 2:30 and 7:30 p. m. All are invited.

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."



FISHERMEN'S OPPORTUNITY
If your local dealer does not keep
Paddock's Angler's Outfits
send stamp for catalogue to PADDOCK
& Co., 195-197 Halsey St., Newark, N. J.

THE SPRING PIG CROP OF 1894.

J. R. Killough & Sons, Poland breeders, of Richmond, Franklin county, Kas., say: "Our spring pig crop is about all here and very satisfactory to us. The herd is in very fine condition and trade very encouraging, in fact, inquiries coming about every day. Our October pigs were an extra fine lot, some of which we yet have of both sexes. So good is their individual merit and top blood lines that we feel safe in stating that they will make show yard fellows and prize-winners. We have also a few good ten-months-old males that are well bred that we could spare now. So you will see that we conduct and plan our breeding so as to be able to fill orders from our customers at all times."

H. Davison & Sons, breeders of Poland-Chinas, at Princeton, Franklin county, write: "Our herd got through the winter all right, and among others that have arrived are thirty little fellows that we think can't be beat, both for individual merit and top lines of breeding. We have five of our choicest brooders yet to hear from. The young things were sired by three boars, viz.: Business, Guy Wilkes 8d and Christmas Gift. All our breeding stock are recorded in the Central Record and are eligible to any swine breeder's record. The advertisement in the KANSAS FARMER did us lots of good last year, and if nothing happens the herd and our now bright prospects we will again, in the near future, extend our further acquaintance through the columns of the FARMER."

One of our Eastern advertising patrons, the well-known Pennsylvanian, W. S. Smith, breeder and importer of thoroughbred live stock, at Cochranville, Chester county, writes: "In all my years of experience in breeding, especially swine, have I ever had a more favorable winter and a better crop of spring pigs than now. The 200 breeding sows came through the winter splendidly, and the youngsters, consisting of Poland-Chinas, Berkshires, Chester Whites, Yorkshires and Jersey Reds, are being booked at a rate the equal of last year, when I thought or rather anticipated a falling off for 1894, on account of the dull times that succeeded last season's business. I am thoroughly convinced that the continued demand through the foreign or European market has kept up the price of the American swine products, and that the demand for properly bred thoroughbred pigs will keep up far enough to make the raising of porkers profitable. I am in touch with the American swine field and my conclusions are based on the continued good results of my business as a breeder, in common with the experience of others in the same line of business. My trade during the past few years has increased many fold, and I believe that when a breeder exercises good judgment and attention to his business that his returns will continue to be satisfactory and profitable for many years to come."

Wm. B. Sutton & Sons, proprietors of the "Rutger farm," Russell county, Kas., write: "The year past has added its confirmation to the belief we have long entertained, viz., that the hog is 'king of the farm.' Our business was, during the past year, profitable, and our dealings with our patrons pleasant, while the arrivals and the prospective members of the spring pig crop find ample guarantees in the pens vacated by their predecessors. We have laid our plans to grow and sell 125 spring pigs (this is to some extent counting some of our chickens, etc.) but the hatching progresses finely, as one sow presented us with twelve and the same day another (first litter) ten. Reasonably prolific, we think, for Berkshires. Our youngsters were sired by Snowflake 26653, a boar of splendid form, size, quality and even temper, and his breeding combines the leading and best blood of the Berkshire breed. His co-worker in the harem is Charmain Duke 31873, sired by Minnie's Duke II. 22865; dam Charmain II. 28569. Our brood sows were bred by Rutger Lord 20997, by Royal Peerless 17183, King William 22253, by Gentry of Whitehall 18122, who was a son of Longfellow, and by Snowflake 26653. Barring the coldness of the latter part of March the spring has been unusually favorable for the little fellows, and without boasting will say that we never had a better lot nor more promising."

James Mains, one of the most successful veteran Kansas swine breeders, proprietor of "Main's Herd Pure-Bred Poland-Chinas" at Oskaloosa, Jefferson county, Kas., writes: "I now have, without any degree or shadow of boasting, the best individual and collective spring pig crop I ever had since the beginning of my career in swine breeding. They were sired by I. X. L. King 29519 O., Monroe's Model U. S. 29983 O., and Tornado 30595 O. The latter two I purchased in Ohio last spring of Monroe & Son and Shellenberger & Co., respectively. The youngsters are out of a carefully selected lot of brood sows, five of which were purchased of S. E. Shellenberger, of Camden, Ohio. About fifty of the hundred pigs were here by the 1st of March, and by the time all the sows that are due to farrow have lit-

ters, I expect to have over one hundred and fifty head from which to select good ones for my early customers. About all the sows that I bred to sell are gone except one or two that I had intended to keep that I might spare if they were to go into good hands. I am so situated that I can safely take care of farrowings at any season of the year and will have something extra, or expect to have, along in the coming fall—something that I can sell at very reasonable prices. Among the late recruits added to my herd is a young boar from J. W. Monroe, Boke's Creek, Ohio. I have not named him yet but think it ought to be Joe Dandy. But it's enough to say that he is a very fine pig. My early pigs will do to ship any time now. They are all out on blue grass with plenty of range and doing first-rate. I have a good many fall gilts that I could let go if any body wants them. In conclusion, will say that my offerings are of extra length and size, of good color and style."

M. H. Alberty, breeder of Poland and Duroc-Jersey swine and Holstein cattle, located at Cherokee, Cherokee county, Kas., writes: "Both of my swine herds wintered tip-top and getting on finely through the farrowing season. I yet have a few male pigs old enough for service at reasonable, hard-times prices. The spring pig crop, while not as extensive in numbers as some years past, will, I think, make up to me the difference in quality. Some of them are the get of Waldo 6074 S., an individual of low build, fine style and a No. 1 transmitter of his good qualities. The female division are mostly of my own breeding and were sired by Bob Ingersoll Jr. 5441 S. and General Polk 8160 S., and out of dams purchased in Ohio, Indiana and Illinois. I expect a grand outcome from the produce of these sows. I think that Queen Tecumseh De Ef, sired by Bebout's De Ef 21187, and out of Queen Tecumseh 2d 64482, will show a very strong and choice litter. The Duroc-Jerseys were bred to farrow a little later than were the Polands, but indications now are that I will have an extra fine string of the reds. They will be here in time to get the full benefit of the surplus milk from our Holsteins. Experience has taught me that a full ration of nice sweet milk, fresh from the cow, is one of the very best kinds of food to push the youngsters along until after weaning time. Milk, clover, rye or alfalfa range and good blood in the beginning make the early matured fellows that top the market on leaving the farm. As the Holsteins are in reality a part of the swine herd here on the farm, a word about them will not be out of place. They wintered well and are doing well, as old and young are in good condition. I shipped two of my favorite heifers to Illinois last week. All the male calves old enough for service are gone, though I have some finely-bred ones coming on."

M. C. Vansell, proprietor of Ashland stock farm, at Muscotah, Atchison county, Kas., says: "My spring pig crop is proving very satisfactory and are, as the old saying goes, 'as fine as silk.' About thirty-five of them were sired by Admiral Chip 7919 and Abbotsford 28351 O. The stock comprising my several herds, consisting of Poland-China swine, Short-horn cattle and Plymouth Rock fowls, were founded and since re-enforced by the best that money could buy, coming as they did from Ohio, Indiana, Illinois and Missouri. Among other breeders that have contributed to my herd are Ed. Klever, Blossomburgh, O., J. B. Duffield, of Somerville, O., L. E. Parret, of Washington C. H., O., James Mustard, Broad Ripple, Ind., Sheppard & Alexander, of Charleston, Ill., and D. F. Risk, of Weston, Mo. The blood lines of the herd are mainly Give or Take, Tom Corwin 2d, Success, Moorish King and Black Bess. Late last fall I purchased a half interest in Admiral Chip 7919 S., that sold last October at public sale for \$250, and another fine boar pig of L. E. Garrett, a full brother to his Cup Bearer, that took second honors at the late World's Fair. Among the females that have lately been added to the herd was a fine promising young sow of S. E. Shellenberger & Co., of Camden, O., at a long price. She was sired by Corwin Chip 26777 O., and was bred to the World's Fair Champion 27219 O., and Mr. Shellenberger pronounces her one of the best bred and highly conformed individuals that he ever bred. I have some fall pigs that could go now, as they are ready for service. My Short-horn cattle came through the winter O. K., and if any of your readers want a good bull or two I can supply them at reasonable prices. The Plymouth Rocks, I think among the best in Kansas, are proving themselves prolific and profitable."

H. L. Leibfried, manager of Sunny Slope farm, near Emporia, Lyon county, Kas., writes: "Your inquiry relative to our spring pig crop duly at hand, and in reply will state, that we have up to the present time bred fourteen sows to our World's Fair prize-winning boar Longfellow 29785 O. Five of these sows have farrowed since April 1st, and the smallest litter was six pigs—ranging from six to eleven—which so far is very satisfactory to us, considering that the farrowings were by a boar just in

from his show ring condition. We are breeding all of our U. S. and Tom Corwin sows to this same Longfellow. In another division we have ten sows due to farrow along the first week of May that were bred to Tecumseh 25123 O., sired by King Perfection, who took first prize at the Kansas State fair, and thus far is showing his get to be very fine pigs. We also have a string bred to our old stock boar Black Prince 10118 S., who is also a prize-winner. Our spring crop will consist of youngsters from over fifty brooders. So far the results confirm us in the belief that we have made a great nick on our U. S. and Tom Corwin brood sows by breeding them to Longfellow. When one takes into consideration the blood lines of the prospective dams and the reputation, conformation and prepotency that Longfellow already shows, we ought to have a big demand for his pigs if there is anything in the very promising results of his get already here on the grounds. Our Berkshire division reports right up along with their Poland neighbors, and to be fully appreciated should be seen. We are breeding five well up sows to Major Lee 81139, that won first in class at the Kansas State fair. He is assisted in the Berk harem by General Lee and Bismarck. About ten of our up-eared sows are due to farrow within a few days. Blue Ribbon 29559, a royal, peerless sow and a prize-winner is bred to Major Lee, as is Duchess 115-27533, bred by Mr. Gentry in his great Duchess family. The individuals belonging to our Lady Lee families are among the best of our Berkshire harem. The combined blood lines or families to which our brood sows belong numbers fourteen and we are now fixed and expect to have from 300 to 500 pigs for our customers yearly."

In response to an invitation from Mr. R. S. Cook, of Wichita, Kas., to visit his herd in person, our field man, Mr. Brush, paid him a visit last week and makes the following report. He says that he found the lay of the farm and improvements thereon admirably adapted for swine breeding. The hog barn and paddocks were arranged for both the convenience of the breeder and the comfort of the herd. Adjoining these are pasture runs of alfalfa, rye and blue grass, and on a casual inspection of the storehouse one gained some knowledge or information how Friend Cook made it possible to win at the World's Fair more prizes, and that, too, on individuals under one year, than did any breeder west of Ohio. The taking of seven prizes on eight pigs very naturally raises the inquiry in the mind of the reader, especially if he be a breeder of swine, how did he do it and what were his methods? The reader will bear in mind that during Mr. Cook's nineteen years of actual experience in the profession—for it is undoubtedly a profession as well as a science—that he always worked for two principal things, viz., the adaptability of the mother to produce a full, strong litter, and then have the natural power or ability to nourish them up to weaning time. Patiently and carefully noting when these characteristics were above the average in the individuals of the different families, and then by the aid of the male whose ideal conformation points were constantly improved in the individuals from time to time as the history of the herd grew each year since its foundation was laid. Having secured, then, the two ideal essentials, the ration, range and care came in for its share in the part played that brought the results to the notice of the swine-breeders of the United States, and in fact all the modern swine-breeding world. The herd now has its history, and a brief review of its ancestry, as it were, will doubtless be of some interest to the reader, purposely so if he be an intending buyer. Among the more prominent males that have been used were De Ef Boy 17203, he by De Ef by Corwin Prince, and he by Tom Corwin 2d; dam Fruitful, she by Seldom Seen out of Black Sally U. S., and she by U. S. 1195 S. Another prize-winning sire was used, Lawrence Perfection 27399, he by Nick o' Time 9679, he by King Butler 5577; dam Lone Lawrence 56834, she by Rarity Boy, he by Ja Em Kay, by Tecumseh 4339, and he by U. S. 1195, and a string of other noted sires, among which were Challenge 4989 and Hoosier Tom 1625; Cook's Royalty by Old Royalty; Tecumseh Duke, by Tecumseh Lad, by Tecumseh's Last, and he by Tecumseh 4339; World Beater by Avalanche F. 26413, he by Avalanche 23841, he by Black U. S. 13471; Longfellow 29785 by Lawrence Perfection 27399, out of Beauty's Prospect 51128, she by Boraker's Good Enough by Bravo and he by Success 1990. The spring pig crop had about all arrived and the twenty-five brood sows were, as the saying goes, in the pink of condition. An extra fine lot of gilts were reserved last year, and those that had farrowed brought forth litters of six to eight each and the matured brooders had litters ranging from eight to eleven each. There were about one hundred youngsters that were ready to take to the alfalfa pasture. No disease, such as scours and sore mouth, was seen, and the young things were strong, active, and showed that they were rapid and even growers. Among the juveniles were litters

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sired by the noted breeding boar Lawrence Perfection 27399, that sired more winners at Chicago than any boar shown there at the World's Fair. To see them is to know them to be actual beauties and models. In conformation points their color is very black, nice head and ears, broad backed, square, blocky fellows, with that nicely turned finish that characterizes all the get of their noted sire. In another section of the paddocks were found some finely-bred litters sired by Longfellow 29785, the young boar that stood at the head of Mr. Cook's herd that won first at Chicago. The get of this fellow are uniformly marked, no spots except those in the face, light feet and tip of tail. The get of Tecumseh Duke are like all the other youngsters similarly turned, while those of Cook's Royalty, a half brother of Free Trade, the noted \$800 boar, are, as the Indiana man would say, "purty as picters." In the array of sires, the young and vigorous fellow, World Beater, a half brother to Lawrence Perfection, places his sons and daughters well up in the prize-winning company in the Champion herd. He now promises to be as great in the value of his get as is his half brother. Every visitor that comes wants him, as it takes only an ordinary observer to discover his good head and ear, full crest, full shoulders, an extra good girth, well-sprung ribs, full loin, deep, heavy hams that come down over his hocks, and stands on a good, clean-turned bone, well up on his toes. He was sired by Black U. S. 13471, the \$500 boar that the Iowa boys brag so much about as one of the greatest breeders now known in Poland-China experience. Mr. Cook thinks he will score higher than any animal he ever raised on the farm. The visitor to Cook's place in nosing round will recognize the young sow Gem 73792, that won first in class and first in herd at Chicago. She has a very interesting little family of six that were sired by Royalty Beauty C. 71962. Her sister, that won also at Chicago, fourth in class and first in herd, has seven splendid youngsters, sired by Tecumseh Duke, notwithstanding many of the breeders that fell out of the winning line at Chicago predicted that Mr. Cook would never succeed in getting his young sows that won to breed. To understand Cook and his success, the Western breeder should take a day off and enjoy a few hours' hospitality at the home of the Champion herd, ask questions, observe the methods and note the ideas of its director in mating to bring out these characteristics that stamp the individual as being one of strong constitution, good feeders, easy keepers, early maturers and well turned in all exterior conformation requisites that attract attention in the show yard and bring the most profit when turned off on the market.

Gossip About Stock.

Frank T. Blackiston, West Plains, Mo., wants to buy some Lincolnshire sheep, but sheep breeders are so modest and shy that we have no customers that we can refer this inquiry to and many other similar ones received at this office in regard to the mutation breeds of sheep.

The many friends of C. H. Makin, the junior member of the well-known firm of Makin Bros., Florence, Kas., will be pleased to learn of his new venture in the "sea of matrimony," and that he is now fully fledged as a man among men. And as an indication of his improved condition and that business is looking up with his firm, is evidenced by the good will extended to his fellow men in new advertisement on the first page of this issue and the choice bargains offered in the way of first-class Hereford cattle.

In our notes last week on "The Spring Pig Crop," an error, or rather an unintentional slip, crept in, in the notes on the herd of Messrs. Dietrich & Gentry, breeders of Poland-Chinas, at Ottawa, Kas. The boar now at the head of their herd is Loyal Duke 29823 O., who was sired by Mc's Tecumseh 14979, and he by Tecumseh's Chip 10211. The dam of Loyal Duke was Low Down 56918; her sire Combination 11017, and he by Tom Corwin 2d 2037. Fellow breeders will therefore take due notice thereof and govern themselves accordingly.

Its either Direct Legislation through the INITIATIVE and the REFERENDUM or another Revolution. Which shall it be? For books, information and plan write W. F. BRUSH, Topeka, Kansas.

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 Lawyer's Sons.

Five stalwart sons had Lawyer Giles,
Who, as they grew around him,
Made crow's feet 'neath the lawyer's eyes
To see such cares surround him.
Good boys, and clever though they were,
What trades, the father pondered,
To set them at. The boys grew up,
And still the lawyer wondered.

At last, result of anxious thought,
He took his eldest brother
And set him on his office stool
Beside his youngest brother.
The second son he sent, equipped
With thorough education,
To mingle with the crowd on 'Change,
For gold's accumulation.

The third, of warlike temperament,
Donned uniform and sabre,
And, like good patriot, went abroad
To kill his foreign neighbor.
The fourth—alas! poor Lawyer Giles
Could find no occupation
For Jack, the unambitious youth,
Who scorned a gentle station.

So Jack, the fourth, of common tastes,
Of mind too prone to grovel,
Was made a farmer—sent to hoe
And use the plow and shovel;
And Jack, the rough and countrified,
The sunburnt, and the burly,
Worked hard and steady, rose each day,
Like summer sunshine, early.

And, once a year, he took a trip
To see his native city;
There, every year, he brought his wife—
A buxom girl, and pretty.
The lawyer brothers and their wives
Received them rather chary;
They called the wife just "Mrs. John,"
Not like a sister, "Mary."

The soldier, home on furlough, scorned
To bend his stately figure
To Mrs. John and John himself,
Who taller was, and bigger;
The swell on 'Change guiped down his pride,
And grandly patronized them;
The simple couple saw it not,
Though kinsmen ostracized them.

And, when they sought their rural home,
Knee-deep in grass and clover,
The kinsfolk smiled in gratitude
To have the visit over.
Yet, none the less, when Brother John
Sent after every visit
Huge hampers, packed with country cheer,
Straight from the soil that "riz it."

The grand relations took the gift,
And ate t' eggs and bacon,
The dainty fruit; and, last, the jam,
Of honest Mary's making.
Time went on the simple pair,
Grew wealthy by their labor,
The soldier brother died abroad,
Spiked on a Russian sabre.

And hard times fell upon the town:
The lawyers implicated
In banks, and institutions "sound,"
Were sadly complicated.
The broker fell a broken man
Beneath financial trouble,
But John's old farm, amid the storm,
Ne'er made nor burst a bubble.

And now, amid the clover fields,
The brothers' children ramble,
They eat Aunt Mary's bread and jam,
And through the hedges scramble.
The colonel's widow sits in peace
Beside their door, relating
Her endless tales of better days,
And sighing while narrating.

The bankrupt brothers start again
On money John has lent them—
At nought per cent., and let us hope
They of their pride repent them.
For John and Mary—common folk—
Have kindness failing never.
They'll keep their kin while times are bad—
And that may be for ever.
—M. E. F., in *Australian Agriculturist*.

THE WHITE TROUT.

There was wanst upon a time, long ago, a beautiful lady that lived in a castle upon the lake beyant, and they say she was promised to the king's son, and they wor to be married, when all of a sudden he was murdered, the crathur, (Lord help us), and thrown into the lake above, and so, of course, he couldn't keep his promise to the fair lady—and more's the pity.

Well, the story goes that she went out iv her mind, bekase av losin' the king's son—for she was tender-hearted, God help her, like the rest iv us!—and pined away after him, until at last no one about seen her, good or bad; and the story wint round the country that the fairies took her away.

Well, sir, in the course o' time, the white trout, God bless it, was seen in the strhame beyant, and sure the people didn't know what to think av the crathur, seein' as how a white trout was never heard av afor nor since; and years upon years the trout was there, just where you seeen it this blessed minit, longer nor I can tell—aye throtho, and beyant the memory o' th' ouldest in the village.

At last the people began to think it must be a fairy, for what else could it be?—and no hurt nor harm was iver put an the white trout, until some wicked sinners of sojers kem to these parts, and laughed at all the people, and gibed an' jeered them for thinkin' o' the likes, and one o' them in partic'lar (bad luck to him; God forg' me for saying it!) swore he'd catch the trout

and ate it for his dinner—the blackguard! Well, what would you think o' the villainy of the sojer? Sure enough he catch the trout, and away wid him home, and puts an the fryin'-pan, and into it he pitches the purty little thing. The trout squeeled all as one as a Christain crathur, my dear, you'd think the sojer id split his sides laughin'—for he was a harden'd villain; and when he thought one side was done he turns it over to fry the other, and what do you think, but the divil a taste of a burn was an it at all, and sure the sojer thought it was a quare trout that could not be briled. "But," says he, "I'll give it another turn by-and-by," little thinkin' what was in store for him, the haythen.

Well, when he thought that side was done he turns it agin, and lo and behold you, the divil a taste more done that side was nor the other. "Bad luck to me," says the sojer, "but that bates the world," says he, "but I'll thry you again, my darlint," says he, "as cunnin' as you think yourself," and so with that he turns it over and over, but not a sign or a spark of the fire was on the purty trout.

"Well," says the desperate villain—for sure, sir, only he was a desperate villain entirely, he might know he was doing a wrong thing, seein' that all his endeavors was no good. "Well," says he, "my jolly little trout, maybe you're fried enough, though you don't seem over well dress'd, but you may be better than you look, like a singed cat, and a tit-bit afther all," says he, and with that he ups with his knife and fork to taste a piece o' the trout, but, my jew'l, the minit he puts his knife into the fish there was a murtherin' screech, that you'd think the life id lave you if you hurd it, and away jumps the trout out av the fryin'-pan into the middle o' the fire, and an the spot where it fell up riz a lovely lady, the beautifullest crathur that eyes ever seen, dressed in white, and a band o' goold in her hair and a strhame o' blood runnin' down her arm.

"Look where you cut me, you villain," says she, and she held out her arm to him—and, my dear, he thought the sight id lave his eyes.

"Couldn't you lave me cool and comfortable in the river where you snared me, and not disturb me in my duty?" says she.

Well, he thrimbled like a dog in a wet sack, and at last he stammered out something, and begged for his life, and ax'd her ladyship's pardin', and said he didn't know she was on duty, for he was too good a sojer not to know betther nor to meddle wid her.

"I was on duty, then," says the lady, "I was watchin' for my true love that is comin' by wather to me," says she, "an' if he comes while I'm away, an' that I miss iv him, I'll turn you into a pinkeen, and I'll hunt you up and down the world for evermore, while grass grows or water runs."

Well, the sojer thought the life id lave him, at the thoughts iv his bein' turned into a pinkeen, and begged for mercy; and with that says the lady:

"Renounce your evil courses," says she, "you villain, or you'll repent it too late; be a good man for the futhur, and go to your duty reg'lar, and now," says she, "take me back and put me quietly into the river again, where you found me."

"Oh, my lady," says the sojer, "how could I have the heart to drown a beautiful lady like you?"

But before he could say another word the lady was vanished, and there he saw the little trout an the ground. Well, he put it an a clean plate and away he runs for bare life for fear her lover would come while she was away, and he run, and he run, even till he came to the cave agin, and he threw the trout into the river. The minit he did the wather was as red as blood for a little while by rayson av the cut, I suppose, until the stream washed the stain away, and to this day there's a little red mark an the trout's side where it was cut.*

Well, sir, from that day out the sojer was an altered man, reformed his ways, and went to his duty reg'lar, and fasted three times a week—though it was never fish he tuk an fastin' days, for afther the fright he got, fish id never rest an his stomach—savin' your presence.

But anyhow he was an altered man, as I said before, and in course o' time he left the army and turned hermit at last, and they say he used to pray evermore for the soul of the White Trout.

[From "Irish Fairy and Folk Tales," by Samuel Lover. These trout stories are common all over Ireland. Many holy wells are haunted by just such blessed trout. There is a trout in a well on the border of Lough Gill, Sligo, that some paganish person put once on a gridiron. It carries the marks to this day. Long ago the saint who sanctified the well put that trout there. Nowadays it is only visible to the pious who have done due penance.]

*The fish has really a red spot on his side.

A child was cured of croup by a dose or two of Ayer's Cherry Pectoral. A neighbor's child died of the same dread disease, while the father was getting ready to call the doctor. This shows the necessity of having Ayer's Cherry Pectoral always at hand.

IVORY SOAP

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A Picture of Slavery.

It was with a curious interest that we studied the buildings and customs of the town, so different in every way from those of our Northern homes. The long, airy houses, with their three stories of piazzas, the negro quarters in the yards, often much larger and more imposing than the dwelling of the master and mistress, swarming with happy and careless life, as the many servants passed to and fro between house and quarters; and the little darkies of all ages were free to play and tumble to their hearts' content, unless, indeed, a sweet-voiced call came from the rear piazza, "George Washington and Columbus, come notice Miss Elvira!" followed by the rush of perhaps half a dozen small darkies of varying ages, all eager to play with and care for the heiress of the house and of them. And the loving and reverent care which they did take of little Elvira was beautiful to see! Then the long stretch of the yard, with its pump in the middle, where a buxom serving maid was filling her pails of water, which came into the house afterwards, one poised on her stately head, while she carried two in her hands; the queer wooden shutters, and the bewildering arrangement of the numbers of the houses on the street, where it was said that every citizen, if he moved, carried his number with him as a part of his personal property; the inevitable negro everywhere, waiting on and serving us at every turn; the beautiful gardens, whose high gates opened mysteriously and swiftly by invisible hands at the appeal of the loud-echoing bell. While one negro led us up the path, another opened the front door, a third escorted us to the drawing-room, while a fourth announced our arrival to the gracious mistress, and a fifth chubby little girl or boy appeared before we were fairly seated with a tray of cooling drink. And the procession of servants from the kitchen when dinner was in course of serving, one servant for each dish, so that everything was smoking hot, though it had come some distance in the open air. The queer and fascinating dialect of the negroes, and the altogether fascinating accent of the Charlestonians, the flare of the live sighlike breath of the pitch-pine knots in the fireplace in the evening or the early morning, when the servant who came to make our fire entertained us all the time of her stay by her remarks, and never quitted the room—which she did half a dozen times during the process—leaving us in doubt as to what her errand might be, but announcing encouragingly each time, as she opened the door and disappeared, "Now I'm going for the matches," "Now I'm going for to fetch the dust pan," etc. All was new and full of interest and suggestion.

The regulations under which it was considered necessary to keep the colored population were to us new and interesting. The law at that time forbade their being taught to read. A colored woman could not wear a veil in the street, nor were two negroes allowed to walk arm in arm except at funerals. A curious and suggestive thing happened, therefore. Every negro funeral was largely attended, and the corpse was sure to be followed to the grave by an imposing line of mourners, all walking arm in arm. One very marked figure in the city was the old man at the ladies' entrance of the Charleston hotel. I think I have never seen a man who had more the appearance of being somebody's grandfather than this kindly old Marcus. One day he had disappeared, and there was no one at the door. After long and futile search, a messenger brought word that he wanted the loan of money to in order return, and the mystery was finally solved by the discovery that he could not come, not because he had bought either oxen or land, or married a wife, but for the simple reason that, having become more than specially interested in his one only pastime of gambling the night before, he had, in a fit of noble rage at his persistent ill-luck, rashly hazarded his clothes—and lost the game. A contribution from his friends at the hotel soon restored him, clothed and in his right mind, which was a very positive one. There is a tradition current that one evening, as a party of lately arrived Northerners were having a pleasant conversation in the parlor somewhat late, they were surprised by the appearance of Marcus, who gravely informed them that he had come to sweep the par-

lors, and that "our folks in dis house always goes to bed by half past ten, sah!" The intimation was humbly heeded. Of course no one could resist the law of the hotel when the decisions were handed down from such a height.—*Harper's Magazine*.

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.

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Cleaning windows with chamois skin; or, with a little alcohol.
Removing paint from windows by applying a copper cent.
Removing a window pane by applying a hot poker to the putty.
To take out fruit stains in linen, using powdered starch; or, pouring boiling water through the stain; or, washing in hot milk; or, a weak solution of oxalic acid; or, bleaching, while apple trees are in blossom.
Washing out refrigerators with soda water.
To drive away ants, borax mixed with Persian insect powder.—*Good Housekeeping*.

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The Young Folks.

An Undiscouraged Farmer.

I met a jolly farmer in a lovely western vale,
A man of fertile fancy that was never known to fall.
Who, when I told of hailstone seven ounces full
in weight,
Said he had seen twelve-ounce ones back in
eighteen sixty-eight.
And when I spoke of fish I'd caught, in certain
foreign hills,
That measured twenty-seven feet from narrative
to gills,
He said, with brow unruffled and a manner
frank and free,
That he had caught them twice as long in eight-
een sixty-three.
And then I spoke of having met a fellow in
Berlin,
Whose mouth was large enough to get three po-
tatoes in,
Whereon he wished Jim Hankinson—his cousin
—were alive!
He'd seen him hold six apples in his mouth in
sixty-five.
It seemed to make no odds to him how I'd ex-
aggerate;
He'd always go one better; so I thought that I'd
narrate
How with an ass' jawbone did the mighty Sam-
son slay
Ten thousand of his foemen—just to see what he
would say
He listened most intently, with an ever broad-
ening smile,
As though he were a parson that had never heard
of guile;
And when I'd done, he told me that he knew my
tale was true,
For Samson's self had told him so in eighteen
sixty-two.
—Harper's Bazar.

A HICKORY SAPLING AND A BEAR.

To one unused to such a treat, the spend-
ing of an evening, along about this time of
year especially, at any of the few remain-
ing typical backwoods taverns of Penn-
sylvania would be a revelation. He would
see nothing, he would hear nothing, but
what was of the woods woody. He would
find that beyond the limits of that hunting
range or that particular logging area there
was no world. He would hear a good deal
of talk about Christmas and New Years,
but only as incidents to be taken in connec-
tion with a shooting match here or a
"hustling" match there. Your genuine
backwoodsman doesn't raffle. He hustles.
He doesn't throw dice. He shakes seven
old-fashioned copper cents in an equally old
fur or woolen hat, dumps them out on the
bar and counts the heads. There are sets
of hustling cents in Pennsylvania back-
woods districts that have done duty for
generations.

The stranger passing an evening thus and
with this people would listen in vain to hear
any one ask for the latest news about the
Hawaiian situation or the state of the coun-
try in general. But he would hear much
of such talk as this:

"Hullo, Josh! How many deer'd ye hang
up this fall?"

"What's yer idee ez to logging this win-
ter, 'Lijer?"

"I heerd ye gathered in ten b'ar a'ready
this year, Peter. You're a good 'un, by
cats, ye be!"

He would hear tales of contemporaneous
prowess in the chase and reminiscences of
hunters long since departed to the happy
hunting grounds, that would surely make
the bones of Davy Crockett and Daniel
Boone rattle in their graves if it were not
more than likely that those bones have been
for years impalpable dust and utterly in-
capable of rattling. He would hear, also,
pleasant recollections of some of the old-
time landlords and their eccentric ways,
and of old-time dispensers of justice and
their novel ideas of dispensing it. Then, if
he happened to be at a certain tavern away
back among the hills that shed their spark-
ling waters into the Delaware valley, he
would be sure to hear the tale of old Land-
lord Elijah Rosencranse and his wonderful
memory, a tale that has become a back-
woods classic. Elijah kept a tavern in the
early stage-coach days.

"Wunst a chap got offen a stage at 'Lijy's
to stay all night," some backwoods Homer
will tell you. "He was a man mebbe 40
year old, but nice an' spruce an' chipper.
He said he wanted to get the fust stage
nex' morning, an' he paid for his lodgin' an'
went to bed. The stage came along pooty
'arly in the mornin', but 'Lijy had the
stranger called in plenty time. He were
slow in gittin' downstairs, though, and the
stage were at the door, ready to start.

"'Gimme some rum an' tansy, lan'lord,
quick?" says he to 'Lijy. 'An' take one
yerself."

"'Lijy hurried an' fixed the rum an'
tansy, not fergettin' his own, an' the stran-
ger throw'd a shill'n' on the bar, for ye
must know that drinks was only 8 cents a
snifter in them good ol' days. But jist as
the stranger chucked the shill'n' down, an'
fore he could drink his rum, the driver
tooted his horn an' away went the stage.
The unfort'nit stranger had to run to ketch
it, leavin' his rum an' his shill'n' behind.
'Lijy were sorry fer him, but managed to
worry down his own rum an' tansy, it bein'
well paid fer.

"This were in 1825. Twenty years arter-
w'ds an ol' man got offen one o' the stages
at 'Lijy's tavern an' went in. He were

wrinkled an' gray an' bent consid'able.
'Lijy were 'hind the bar.

"'Mornin', says 'Lijy, jist ez if he were
use to seein' the ol' man ev'ry day. Then
'Lijy mixed a glass o' rum an' tansy and
got it on the bar before the ol' man, an' laid
down a sixpence 'long side of it. The man
looked up at 'Lijy kind o' queer like fer a
second or two, and then says:

"Take one yerself."

"Bleeged to ye," says 'Lijy, 'but I had
mine. Thar's yer change."

"Wall, all tha is to it is, the ol' man were
the chap that didn't hev time to git his rum
an' tansy that mornin' twenty year afore,
an' 'Lijy 'membered him the minute he
come inter the tavern, an' jist made things
square."

And among the memories of old-time
woodsmen the stranger passing an evening
in that 'wayback tavern would hear many
of Uncle Jim Hatton. But he should have
lived long enough ago to have seen and
heard Uncle Jim himself. It is said that he
never fired a gun in his life, but no one ever
lived in that country who could sit down
and tell you of more desperate bear fights
or combats with panthers with such close
attention to circumstance and detail as
Uncle Jim could of his. He and Jabez
Shiner were invariable and inseparable
comrades in all the hunts he used to tell
about, and although it was well known that
Jabez Shiner was of the same degree of
tangible existence as Sairy Gamp's friend,
Mrs. Harris, that fact made no difference
to Uncle Jim. Jabez always figured in his
stories. If the 'stranger sojourning in that
rude region could hear Uncle Jim Hatton
narrate his favorite story, as I have scores
of times, he would hear something very
much like this:

"The fust time I ever see Jabez Shiner,"
Uncle Jim used to say, "I had to laugh. I
thought a whole museum had come to town
an' that Jabez was it. He was short an'
thick, an' his eyes as round as bullets an'
not much bigger. They sot almost plumb
up agin his nose, an' his nose was narrow
at the top an' flarin' at the bottom. An'
red? Mortal man! but how red his nose
was! He had woolly little eyebrows an'
his hair was woolly. His ears was sot on
him so as they flared out like little wings,
an' he could flop 'em. But the crownin'
part o' Jabez's build was his legs. They
wasn't none too short, but the bend in 'em
was amazin'. Them legs o' his'n was bent
so that it wouldn't be no trick at all to
shy a good-sized bear cub right through the
hole they made 'twixt the knees without
touching either leg. But I hadn't ben
'quainted with Jabez long 'fore he says to
me one day:

"'Couldn't me an' you slip out an' fetch
in a bear or two to-day?"

"'Well, I says, 'such things has been
done."

"An' so me an' him went out. As we
was on the way I couldn't help lookin' Jabez
over, an' I says to myself, 'We won't git no
bear; not if the bear sees Jabez first!' But
I found out that, though Jabez had a lot o'
p'int sticks out all over him, so's it
wasn't no trouble to see 'em, he had a good
many more p'int that didn't show on the
outside.

"It was along late in the fall, but the
season had been warm, an' we knowed the
bears hadn't holed up yet. As it had
turned blamed cold that day we calc'lated
that the chances was that we'd run ag'in a
drove o' bear, mebbe, on their way for win-
terin' places. Consekently, it bein' a likely
part o' the deestric' to suit a congregation
o' that kind, we struck into a piece o' tim-
ber where there had been a windfall durin'
the summer. We got onto the down tim-
ber an' stopped to look at a good-sized
hick'ry saplin' that'd ben hit by the top of
a big tree as it was fallin', an' which had
bent the saplin' over to the ground as slick
as could be an' held it there.

"'If that young hick'ry ever gits loose,
says Jabez, 'I wouldn't want to be standin'
over it,' he says, 'not unless I wanted to be
hoisted over into the next township,' he
says.

"'I guess you're right, Jabez,' says I.
'That hick'ry wouldn't think nothin' o'
sweepin' the clouds with a feller if it should
spring up sudden an' ketch him,' says I.

"'As we stood there talkin', what should
pop out o' the top of a tree that was layin'
off to the right of us but two fair-sized bears
—big enough to make a lively tussle if they
had a hankerin' that way. Well, it hap-
pened that they did have a hankerin' that
way, as we soon found out. I blazed away
at one of 'em an' Jabez he blazed away at
t'other one, but neither blaze didn't seem to
do nothin' but put vim into the bears, an'
the next minute I was waltzin' round
'mongst the down tree tops with one bear,
while Jabez was sashayin' an' alamandin'
left an' cuttin' pigeon wings with t'other
bear fer a partner. We cavorted an' galla-
vanted, an' out an' slashed an' pounded an'
choked them bears, but they only seemed
to think we was playin' with 'em. I begun
to git discouraged an' I hollered to Jabez,
'twixt tugs an' hugs an' cuts an' twistin's:

"'Jabez,' says I, 'this bear's going to
down me sure as flint!'"

"'Jabez hollers back, puffin' an' blowin'
an' bleedin':

"'There's nothin' short of a stroke o'

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lightnin' on this bear's conk that kin save
me,' he hollers, 'an' it wants to strike quick
at that!'"

"'But we kep' on a-tusselin', an' jist as
Jabez had hollered out good-bye to me, kind
o' gaspey and weak like, I had hollered
back the same to Jabez, 'whuz-z-z!' went
somethin', an' I felt me an' my bear,
hugged close together, raise up in the air
an' go a-sailin' up the side o' the ridge like
a hurricane. As I started up I turned to
give a farewell look at Jabez, an' I see him
a-scootin' straight upwards, p'inted toward
the top of a big dead oak tree, with his
bear a-follerin' close behind him. Then it
all come to me what had happened. We
had raseled so long in the tops o' that
down timber that we had loosened the
fastenin's o' that bent hick'ry an' it had
sprung up an' sent us flyin'."

"I hung onto my bear like grim death, an'
was wonderin' when an' where we'd bring
up, when we went kerplunk up ag'in some-
thin' that stopped us quicker'n a wink. The
stop was so sudden that I was knocked
loose from my bear an' went right on fer
more than forty foot. I piked myself up
an' ran back to see what we had struck.
There laid my bear deader'n a smoked her-
rin', right on top of another bear as big as
two o' mine. It didn't take me more'n a
second to figure out the situation. As me
an' my bear was travelin' up the ridge,
goin' forty miles or so an hour, we had met
the big bear comin' down. We couldn't
turn out fer him and he didn't have time to
turn out fer us, so we come together, head
on. The collision broke my bear's back an'
twisted t'other bear's neck out of its socket,
an' there they was!

"'But of course I didn't hover long over
the carcasses, fer I was worryin' to find out
whether Jabez had landed yet. I run back
down the ridge, an' there, clingin' to a limb
o' the dead oak tree, more'n sixty foot from
the ground, was Jabez, an' hangin' to him,
with his head 'twixt Jabez's bow legs, an'
kickin' discons'lit like, was Jabez's bear.
Jabez had ketched the limb as he was
passin' upwards, an' hadn't more'n fas-
tened onto it when along come his bear,
head first, an' shot right through between
Jabez's knees, where the big bow in his
legs was. Jabez didn't let the bear go no
further, but jist drawin' them bandy legs o'
his'n together, an' lockin' one foot over
t'other one, he shet the bear's wind clean
off, an' the bear would be a heap more
comfortable if it had ben in a vise. It was
in its last kicks when I got there.

"'Hullo, Jabez!' I hollered. 'How ye
feelin'?"

"'Chipper!' he yelled back, as the bear
drew up its hind legs an' twisted an'
shook itself.

"'Why don't ye let the consarned critter
drop?' I hollered, 'spectin' to see 'em both
come tumblin' down ev'ry second."

"'That'd kill him!' yelled Jabez, givin'
his legs an' extra squeeze on the bear's gul-
let. 'I want him to die 'fore I drop him, an'
then he won't hurt hisself!'"

"'Fore long the bear quit kickin' and
hung as limp as wet overhauls on a fence
rail. Then Jabez unhooked his feet and
loosened the grip of his legs on the bear,
an' down it souzed all in a heap on the
ground. Jabez edged over to the body of the
tree, an' wrappin' his bandy legs 'round
the trunk, jist as if he mowt-a-ben a quate
an' somebody had pitched him at the tree

an' made a ringer with him, he slid to the
ground. Me an' him had a good many bear
fights after that, but none jist ezac'ly as
amazin' as that one.'—New York Herald.

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We print in this issue an article on the cost of raising wheat, from the able pen of C. Wood Davis, the noted statistician. The fact that Mr. Davis conducts a farm of many hundreds of acres, and that he is a thoroughly competent business man as well as farmer, should make his figures exceptionally valuable, and when to this is added the absolute and unimpeachable integrity with which he treats all subjects, his showing may be taken as conclusive.

The part which the great wheat-producing countries contribute respectively to the world's markets is illustrated by the record of clearings from the ports for the second week in April. The United States sent off 1,408,000 bushels, Russia 1,864,000 bushels, the two South American republics 2,608,000 bushels, Australasia 336,000 bushels, and India 384,000 bushels. It will be seen that while our place is important it is by no means first, and that India, whose much heralded capacity for cheap and large production was the nightmare of the agricultural world a few years ago, contributes a comparatively insignificant part to the export supply.

The quarterly report of Kansas' Secretary of Agriculture for March 31, is one of those publications about which it is impossible to write a satisfactory notice within the limits of a newspaper article. It is a book of near 250 pages and contains as a leading feature the papers read before the State Board of Agriculture at its last meeting, together with the stenographer's reports of the discussions on the subjects presented. On account of this part, which really occupies about two-thirds of the book, it should be in the hands of every farmer in Kansas. The other part of the report, besides the usual statistical and meteorological information, contains a well-selected, well-edited and well-prepared assortment of "Miscellaneous Articles and Information," tending to correct misapprehensions about the State, and supplying in readable form a summary such as has rarely been brought together.

The following appreciative note on Secretary Coburn's first official report, is from the *Kansas City Star*:

The report of the Kansas State Board of Agriculture for the quarter ending March 31, 1894, shows the mettle of the new Secretary, Mr. F. D. Coburn, who knows a good deal of practical agriculture and is a ready writer on agricultural subjects, and most valuable of all in his present position, knows what an agricultural report should be and what it should look like. Mr. Coburn's work is full of interest not only to tillers of the soil, but to every intelligent person who cares for mother earth or Kansas. In part I there are twenty papers on various subjects of importance, but most entertaining is part II, containing the addresses, papers and discussions of the twenty-third annual meeting of the board. Here with some space occupied with political and other dissertations having no connection with agriculture in Kansas, there is much greater room given to the experience of farmers and orchardists with the Kansas soil and climate, amounting in fact to a history of horticulture and agriculture in

Kansas for the past quarter century and more. This is really valuable and will gain in value for reference as the years go by. Secretary Coburn and Kansas are to be congratulated.

THE WAGE QUESTION.

The KANSAS FARMER has on former occasions called attention to elements of the situation in this country, and to their inevitable effect of reduced wages for labor. While deploring the rapid progress toward the unfortunate conditions of the old world, with respect to the compensation and opportunities of the toiler, it has not seemed wise to close our eyes to the fact that these conditions are here, rushing forward impetuously and apparently irresistibly. The exhaustion of the arable public domain is the first, the natural and an inevitable element in the causes of this condition. To this is added the fact that in our best developed manufacturing industries we have now capacity to produce manufactured articles far beyond the necessities of the present demand. It is the common complaint of manufacturers that they are idle for want of orders. It is true that we are using far less of the products of the factory than we ought to use, but there seems small prospect that we shall, in the immediate future, use much more. Again, our manufacturers are shipping their products abroad and selling in the competition of the open markets of the world. Thus the London *Ironmonger*, speaking of the Canadian buyers, says:

One correspondent writes: "For the first time since we have been buying steel boiler plates we can purchase cheaper in the States than we can in Glasgow. The quotations we get from the United States compel us to send our orders to manufacturers there. There seems to be no bottom to prices in the States at present."

Another letter says: "Our market prices are continually shrinking, and the indications are that they will go still lower. * * * Since 1890 Bessemer pig has shrunk in value \$15 per ton and Bessemer steel billets nearly \$20. Our manufacturers say these prices are unremunerative, even if they do not mean a loss, but they are all eager for business."

A third letter has the following: "Unfortunately you were too dear, the Americans having named a price that secured the order. You have mentioned the competition from that quarter in some of your recent letters. It means at present that they are going to secure the bulk of the business in steel plates, hoops, wire, tubes and sundry other lines that always came from your country or the Continent. It is not a pleasant matter for many of us; but it may be as well for some workers on your side to wake up to the fact that the world is no longer their market."

It was doubtless foreseen by all schools of economic thinkers in this country that this time must come when, from the boundless stores of iron ore and coal, we should produce more than we should consume, and that then competition would begin the work of lowering prices to the level of the general market. Combinations and trusts are yet fighting against this inevitable result by "limiting production," and on many articles they are receiving in the protected "home market" higher prices than they are willing to accept from foreign purchasers. But we have in the quotations from the *Ironmonger* the admission of the defeated competitor that American prices won the contracts abroad. Perhaps American producers of grain and other articles, Americans who use implements of iron, will be willing, for a time, to pay more for their iron than is charged foreigners with whom these producers of grain, etc., compete in the open markets of the world, but the absurdity of the injustice must soon make itself felt, and together with the competition for the home market bring prices to the world's level. This, of course, means the reduction of wages to the same world's level.

The third element tending to bring wages down, and one of the most potent, is an artificial one, namely, the appreciation of the value of money by the enactment of laws limiting the standard of values to the present supply and small production of gold. Unless relieved by some further legislation this cause appears to be a continuous one, which must more and more depress all prices, including wages, with the possible exception of official salaries.

These are not pleasant reflections, and yet it is the duty of the honest journal to present matters of such im-

portance as they are, rather than as the writer could wish them to be. That we are not alone in the more somber of these views is shown by the following from Henry Clews' latest Wall street circular:

"The general demand in the manufacturing and mining industries for lower wages thus becomes a matter of the first importance to the revival for which all interests are hoping. So far, the trades unions are offering stubborn resistance, upon a broad scale, to this demand; and it does not seem impossible that the struggle may be prolonged. That labor will have to yield in the end, there can be no doubt; for manufacturers are now in no position to continue doing business at a loss and will prefer stopping their works to taking that course. It thus becomes a question whether, following the tariff uncertainties, we are to have a labor conflict. Upon that hangs the further question—when may we hope to see our industries restored to a basis of reasonably active prosperity? Could the doubts on that point be removed, there would be a solid basis of confidence in the revival of trade; for, in all other respects, the country is prepared for an active resumption of trade and for the undertaking of enterprises that would afford free employment for labor and capital. For our part, notwithstanding the present unyielding attitude of labor, we incline to the opinion that a rational public opinion will bring about a second thought among the unions that will bring them to soon accept the inevitable."

With the armies of the unemployed clamoring for work, with the pathetic appeals of hollow-eyed wives and hungry children for bread; with the "inevitable" reductions to "lower levels," whose ultimate "lowness" is not yet realized, but with the stubborn fact that the reduction is inevitable, staring them in the face, it is equally hard to see how the labor organizations are to successfully maintain the struggle against reductions and how they are to surrender their contention.

BUSINESS PROSPECTS.

The Cincinnati *Price Current*, one of the old statistical stand-bys of this country, says editorially: "That the spring trade of the country has been wofully disappointing all over the country, is patent to all observers, and there are no indications that it will materially improve in the early future. The trouble is that but few are making any money in general trade or in manufacturing industries and the money that is being spent is such as is yielding an income from permanent investment as a rule; of course people must live, and those who are earning money must graduate their expenditures according to their earnings. The bulk of the workmen who are employed, receive scarcely enough compensation to cover their living expenses, and there are comparatively few business men who are realizing a profit on current trade." It concludes the article with the following doleful words: "The business world does not seem to have much confidence that business would be improved by anything which is likely to meet with favor in the present Congress, but it is endured under the conviction that things can not be made much worse."

WHO ARE "WE"?

A correspondent at Bird City writes: "What makes the editor or editors of the KANSAS FARMER so bashful that I can never find his name or their names at the head of the paper? Come, speak up. You don't need to be ashamed of the 'old reliable.' It is a good enough paper for any man to be proud to have his name at the head of it. I have been reading it for a number of years and know what I am talking about."

Our correspondent has supplied the exact word we wanted. We hardly liked to say it was our modesty, for that were self-praise. We could not say we were ashamed, for that would not be true, but our friend has hit it exactly; it is our "bashfulness" that keeps our names from appearing at the head of the KANSAS FARMER for the columns of which it is an honor to write. Again, there are several of us—all equally "bashful." But if the reader will agree to say nothing about it we will whisper to him that a wicked picture man is suspected of a design to show in the KANSAS FARMER, at some time in the future, the faces as well as the names of its editors and leading contributors.

The publishers have worked hard to make a journal of high merit generally

and of special value to each reader in every issue. We are anxious and ambitious to have a large circulation of the best farmers, and bashful as we are we honestly think the merits of this journal warrant us in asking every reader to do something at every available opportunity to secure us more subscribers. Do your duty. Circulate the KANSAS FARMER.

RAILROAD ASSESSMENT AND EQUALIZATION.

The following is the much-talked-of letter of the Secretary of the Board of Railroad Assessors to the County Clerks of the State. It will be remembered that the valuation of railroads last year was greater than that of the year before by about \$10,500,000. The purpose of the letter appears to be to secure complete returns from all of the railroads and from all of the County Clerks before entering upon the work of assessment and equalization. Following is the letter:

TOPEKA, April 23, 1894.

TO THE COUNTY CLERK—Dear Sir: The Board of Railroad Assessors met, according to law, on the third Monday in this (April) month, organized and adjourned until the 22d of May, for the purpose of giving railroad companies time to send in the rest of their returns, and also give the Secretary of the board time to procure what information could be gathered from the County Clerks as to the assessment.

This year real estate is valued and the board desires to know whether there will be any material change from two years ago on real estate, and if personal property will vary from last year. We have heard from some counties where the valuations have been reduced. The general revenue fund of 85-10 mills, and interest fund of 2-10 mill are fixed by law, and the Board of Equalization can not change them. The Board of Equalization last year reduced the current university fund from 2-10 to 1-10 mill, making a total levy of 3 8-10 mills. The law says property must be assessed at its actual cash value, but no penalty is attached, hence it is never done; and if it was, we would have a large amount of money taken from the tax-payers and piled up in the treasury not needed. The Legislature must take some action before assessments can be made at actual cash value without doing the people an injustice. Please give me what information you possess, and oblige,

Yours truly, VAN B. PRATHER,
Auditor of State and Secretary of Board of Railroad Assessors.

A CHAT.

The KANSAS FARMER receives very many chatty letters which would interest its readers if space were to spare for their publication. These deal in a great variety of subjects, contain crop news, observations as to matters of thrift and getting along and almost invariably a good word for the "Old Reliable." Sometimes the suggestions contained are exceedingly valuable to the publishers in shaping their business; sometimes the editor receives ideas which find expression sooner or later in the paper, and always the letters are carefully read and enjoyed. The following is so suggestive that it is given in full:

EDITOR KANSAS FARMER:—We received "Handy Cobbler" and are much pleased with it. More convenient than anything we ever had in that line. Will save many dimes during the year or during its life of usefulness.

Times are not what they ought to be. No money to spend, but good managers, who are out of debt and who were fortunate enough to have wheat and not forced to sell, have butter and eggs that can be exchanged for groceries and dry goods, although the price is low, it is something. Many did not have wheat. They are in bad plight—no grain for their teams and cannot work all the time on grass, particularly when it was not high enough to bite, and not one dollar to buy corn to feed. I have been told it by several. The inducement to mortgage team for a small sum of money at high figures is very great and some will do it, no doubt; but it is not the way to get a sure living.

I wish I could live to see the day or time when debts could not be collected, then people could not get credit. They would then be able to keep what they had accumulated—not lose it by foreclosure.

Splendid rain on the 12th of April. Some of the wheat which the cold weather did not kill, is starved or stunted. Did not stool. Oats look well at present. If we get another rain soon the outlook will be improved. A large acreage is and will be listed to corn.

We get much useful information from the KANSAS FARMER. M. A. REYNOLDS.
Hazelton, Barber Co., April 27.

Fallacious Estimates of the Cost of Growing Wheat.

EDITOR KANSAS FARMER:—In the FARMER of April 25, appears what, to me, seems a most mischievous and misleading estimate of the cost of growing wheat and returns per acre, that are denominated profits, that is said to have been made by Mr. Joseph Le Clerc. This estimate is defective, inasmuch as it omits some of the most important items of cost and places others too low. Just such errors or omissions occur in nearly every estimate coming under my observation, and being the statements of farmers have a very injurious effect.

Wheat cannot be grown without the use of land, and land implies capital, as does farm equipment, yet Mr. Le Clerc makes no account of the capital involved in the production of an acre of wheat. He may be able to secure land rent free and have his taxes and insurance paid by some kind neighbor, but the most of us are not so favorably situated for the production of wheat at low cost, nor can we get our buildings insured without the payment of a premium, nor yet secure our wheat transported from the farm to the station for nothing. Aside from this, in my thirty years in Kansas I have never been able to get wheat threshed for 5 cents a bushel. It costs us nearer 8 cents by the time it is safely housed in the granary. In Sedgwick county, we have been unable to secure anything like 58 cents a bushel for the last crop. Indeed, many having low-grade wheat have sold for 30 and 31 cents.

I admit that if the farmer's time is of no value and he don't spend too much time under the box elders, he may grow wheat on rent and tax-free land for 34 cents a bushel, but on our farm, that is quite as good as the average of Kansas lands, we have been unable to grow 34-cent wheat at a profit; but then we make up our costs of production very much as does the producer of other commodities, by charging for all the labor performed, no matter by whom, at the market rates; charging interest at the current rate on the land actually employed in production; proportioning the taxes on land and teams to the land employed to grow all crops as we do the insurance on farm buildings, and making a reasonable charge for superintendence, and also making a charge for marketing the grain, which consumes time both of teams and men. Basing an estimate on these items, as well as those embraced in Mr. Le Clerc's estimate, and drawing our data from accurately kept accounts, we find that on our farm it costs \$7.80 to grow a crop of fifteen bushels an acre and cart it to the nearest station, the various elements of cost being as follows:

Plowing.....	\$1 00
Harrowing.....	15
Drilling.....	20
Seed, one and one-half bushels at market price.....	55
Cutting and stacking.....	1 00
Threshing.....	1 05
Carting fifteen bushels to station.....	60
Rent of land, worth \$30, at 7 per cent.....	2 10
Interest on farm equipment.....	10
Taxes.....	20
Insurance.....	10
Wear and depreciation of equipment.....	25
Superintendence.....	50

Total cost of an acre of wheat..... \$7 80
Cost per bushel of wheat at station, 52 cents.

This is no fancy sketch, but the actual cost of wheat on a farm of as good land as there is in this part of Kansas, and where the wheat is grown with hired labor, and an accurate account kept of all expenditures. Where any item of cost was not wholly chargeable to the wheat land it has been proportioned as nearly as possible, due regard being had as to the value of the land in wheat as related to the rest of the farm, including the waste land.

While our crops have averaged about fifteen bushels an acre, it has cost us an average of 52 cents a bushel. Of course, we have grown crops of large yield that have cost less, while the wheat grown last year cost \$1 a bushel and sold for 34 to 38 cents, or an average of 36 cents, while some was so poor that it was not offered for sale.

Counting his own time and that of his team as valueless and giving the use of his farm and equipment without charge, the farmer may grow wheat at low cost, but if he counts the cost, as does every other producer, he cannot

produce wheat in Kansas for a succession of years at less than 50 cents a bushel, unless he has better land than I have ever seen or is a better manager than those farmers whom I happen to know. The making of such partial estimates do a vast amount of harm, as they give the uncritical an idea that the farmer has no reason to desire better prices and is grumbling without cause.
C. WOOD DAVIS.
Peotone, Kas., April 28, 1894.

Le Clerc's Wheat Figures Again.

EDITOR KANSAS FARMER:—I see on page 8 of your April 25 FARMER, some figures on wheat-raising. If such figures are of any use it is to generalize with them, which privilege I claim. Here are the figures:

Joseph Le Clerc, a thoroughgoing 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

And here's to generalize: Take sixteen acres as a basis. With gang plow I can plow it in three days, harrow in one-half day, drill in one day, harvest in one day; total, five and one-half days work. On sixteen acres at \$2.83 clear profit per acre, makes \$45.28. Per day for one hand \$8.23 3-11 (nothing like being precise). Three hundred days at \$8.23 3-11 per day makes \$2,469.81 per year, clear profit, mind you. When I am making these wages I don't stop for little things.

Now, as the one set of these figures areas true and fair as the other, I commend them to Labor Commissioner Todd and his army of grumbling, uninformed Kansas farmers of whom I have been one for the past seventeen years.
D. J. FRASER.

In Butler County.

A correspondent at Whitewater writes of the crops and prospects, appending some rather gloomy predictions as to the season. He says:

"I have been over the western portion of this (Butler) county in the last three days. Will say grass is sufficient to run stock, while water is becoming shorter each day. Oats are in bad shape as a rule. Wheat has suffered much in the last few days, cutting off three to five bushels per acre. Gardens look worse than any year since 1880. Apples, cherries, plums and gooseberries thus far are safe and promise well for big crops. Corn has never shown up so well in stand and color since I have been in the State—eighteen years.

"Well, I can only say that our subsoil is ruinously dry, with no rains but local showers. The present conditions are just such as I have seen for the fourth time in life, and each year proved to be one of wide extended and ruinous drought, especially to corn. Never has there been a more propitious spring than the present one since I have been here, if our subsoil had the usual amount of moisture. Hence our light showers will not carry us over. And again, it is a general drought year, also one of hot winds, which will visit every land wherever they have been felt. In reference to this matter, I will say that the publishers of the 'American Meteorological Weather Service,' Chairman Hatch, of the Committee on Agriculture (M. C.), the editor of St. Louis Republic, Hicks, Foster and a few others, have my statements in hand, if they have filed them as requested, which will fully show who is correct. But when all is past not one will have the welfare of the country at heart enough to cause them to speak of such a matter. And your journal has had the opportunity to have done more than any other in this matter, but you ignored the clear proof of my statements, as can be shown as published in back volumes, if you wished to look up the same.

"The present year will fully open the eyes of all who are honest seekers of truth, so far as F. H. Snow's chinch bug theory is concerned.

"You will please bear all I have said in mind for ninety days and then offer

remarks if you wish. But no word until then must appear over my signature."

The World's Gold and Silver.

The production of gold for the whole world is, of course, not accurately known, but the Director of the United States Mint is accustomed to estimate it each year from the best statistics and information possible. So, also, with silver. The total products of gold and silver for ten years back from 1891, inclusive, are given in round numbers:

	Gold.	Silver.
1882.....	\$102,000,000	\$113,000,000
1883.....	95,000,000	115,000,000
1884.....	102,000,000	105,000,000
1885.....	108,000,000	118,000,000
1886.....	108,000,000	120,000,000
1887.....	105,000,000	124,000,000
1888.....	110,000,000	141,000,000
1889.....	123,000,000	163,000,000
1890.....	120,000,000	174,000,000
1891.....	126,000,000	186,000,000

It is interesting to know the countries which are the chief contributors of metallic wealth. In 1891, at the head of the gold producers stood the United States, with \$33,000,000. Second was Australia, with \$31,000,000. Third came Russia, whose mines in the Ural mountains have always furnished a considerable tribute, with \$24,000,000. Fourth is Africa, with \$14,000,000. Fifth is China, with \$5,000,000. Sixth is the South American Republic of Colombia, with \$3,400,000. British India comes next, with \$2,400,000. All the other countries are small contributors.

Of silver countries the United States stands at the head, with \$75,000,000. Second is Mexico, with \$53,000,000. Bolivia is third, with \$15,000,000. Austria is fourth, with \$13,000,000. There are no other large producers. Germany mines silver in the Hartz mountains, celebrated in the European literary demonology, and stands fifth, with \$8,000,000. Chili produces \$3,000,000. Austria-Hungary, Spain and France each take out something more than \$2,000,000 annually, as do the combined Central American States. Russia, which is rich in gold and platinum, is credited with a pittance of \$500,000 of silver, while Mexico, which is one of the greatest silver producers, turns out only about \$1,000,000 in gold. All the Central American States in 1891 produced only \$150,000 in gold. The Argentine Republic, in South America, would, from its name, be taken for a rich silver state, but it is only credited with \$600,000 of silver and little or no gold.

The gold and silver States of our Union are given as follows:

Gold—California, \$12,600,000; Colorado, \$4,600,000; South Dakota, \$3,500,000; Montana, \$2,900,000; Nevada, \$2,000,000; Oregon, \$1,600,000; Idaho, \$1,600,000; Arizona, \$950,000; New Mexico, \$905,000; Alaska, \$900,000; Utah, \$650,000. Some gold is mined in the South Atlantic States. South Carolina heads them all with \$125,000. North Carolina had \$85,000 and Georgia \$80,000.

In silver Colorado is first, with \$27,000,000; Montana next, with \$21,000,000; Utah third, with \$11,000,000; Idaho fourth, with \$5,000,000; Nevada fifth, with \$4,500,000; Arizona sixth, with \$1,900,000; New Mexico seventh, with \$1,700,000; California is eighth, with \$1,000,000, and Texas ninth, with \$484,000. All the South Atlantic States furnish a little silver.—New Orleans Picayune.

B. F. Smith, proprietor of Highland small fruit farm, Lawrence, writes that the prospect for strawberries is good but raspberries and blackberries were injured by the Easter storm. Pears, plums and cherries promise a good crop, notwithstanding the scare. A good crop of apples is also expected.

Horse Markets Reviewed.

KANSAS CITY.

W. S. Tough & Son, managers of the Kansas City stock yards horse and mule department, report the market as showing an improvement, both in the number of buyers and the quality of stock offered. Prices were strong at quotations. The Southern trade is letting up somewhat. Anything in the way of a smooth driver, chunk or carriage horse is eagerly sought for at present. A great many of the dealers are holding out their fancy stuff for the combination sale in May. Prospects for the coming week are very fair.

The mule market is quite active. Anything with quality and finish sold fully up to quotations.

Kansas City Stock Markets.

Our correspondent at Kansas City writes under date April 26:

"Our receipts this week 21,400 cattle, 43,000 hogs, 18,600 sheep, against 29,500 cattle, 57,800 hogs and 21,100 sheep the previous week; and 23,000 cattle, 44,000 hogs and 14,600 sheep same week a year ago.

"Our receipts to-day, 3,111 cattle, 7,438 hogs and 1,828 sheep.

"There has been but little change in cattle since our last. Heavy steers about the same price as a week ago, light and medium weight tidy fat steers 10 cents higher, good cows and heifers 10 to 15 cents higher this week, good style stock steers and feeders 10 cents higher, all bulls 10 cents higher except coarse, heavy ones; calves 50 cents higher.

"We will put you on your guard in regard to cows with calf; all those seven months gone are thrown out, and in some cases if not so far gone and paunchy are cut out and sell much lower; even if fat sell 2 to 2½ cents as springers, and if spoiled bag will sell below 2 cents and hard to find buyers. Government will have inspectors at scales after May 1 to inspect cows with calf, so you cannot be too particular about shipping this kind. Good milk cows with calves in good demand and some higher.

"Hogs have sold some lower this week, but 10 cents higher to-day, making them same as a week ago.

"While receipts of sheep have been less this week than last week, prices are a little lower."

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 30, 1894, T. B. Jennings, observer:

The temperature has ranged above the normal, a large part of the week experiencing summer temperatures. The rainfall is above the average, generally, in the middle division, while over the rest of the State it is below normal, except in Elk and the extreme northern part of the western division, where large excesses occur; the greatest deficiency occurs in Cherokee, and amounts to over an inch.

The week, excepting some windy days, has been very favorable. In the western division barley, rye, oats, and the first alfalfa crop are in fine condition, winter wheat very spotted, spring wheat—in the northern part—is doing well; cherry and apple trees in full bloom, much corn and potato planting being done.

In the middle division, wheat that had a good stand has greatly improved, while the poorer stands have generally been plowed and put in corn, pastures well advanced, corn coming up, oats coming forward well, cherries, plums and apples in full bloom and promise a full crop, gardens improving, except in the extreme south.

In the eastern division wheat, pastures, apple and cherry trees have made the best showing this week. Flax is coming forward well, but oats are not making good promise and many fields have been or will be listed to corn. Corn planting is well forward, and some corn is coming up; in the extreme south much of it is up and being cultivated. Sunday's frost has apparently done no damage.

Novel Binder Transport.

When the self-binder was first made, it weighed something over a ton and its transportation from place to place was to the farmer what the elephant is to a traveling circus. Its full width of thirteen or fourteen feet monopolized the wide roads and made it impossible of transport over the narrow ones. This state of affairs led to the adoption of the binder truck, by means of which the machine was transported sideways. This invention was considered a great boon to farmers, but the task of lifting the heavy machine onto the truck was always severe and unpleasant, if not actually dangerous. But recently an invention has been patented which does away with the binder truck altogether.

This device solves the problem of binder transportation by jointing the platform near the inner end so that in a few minutes time the platform can be telescoped in such a way that the grain wheel is brought close to the foot of the elevators, and the machine runs on its own wheels. In this way the machine is narrowed so that it can go wherever a hay wagon could be driven—over narrow roads, narrow bridges and through gates. This by reduction in width also accomplishes a considerable saving of storage room.

This improvement, as far as we know, has been put out only by William Deering & Co., of Chicago. We understand they are protected by strong patents. If they were not, the evident utility of this device would certainly lead to its imitation by all makers of harvesters. We are credibly informed that critical examination of a large number of these platforms, which have been in use for three years or more, has shown that the joint is the strongest part of the platform, and that the tendency to sag, which was predicted by the incredulous, has steadily refused to show itself.

Horticulture.

HORTICULTURAL QUAESTIONS.

(Continued from last week.)

Question 27. What is meant by twig-blight on fruit trees?

A special fungus which attacks the current year's growth and kills it.

28. What are the yellows and rosette on the peach tree?

They are diseases of fungous growth which attack the fruit leaves, and finally twigs of peach trees, causes them to turn yellow and drop, and finally kill the trees.

29. What is the black knot on the cherry and plum trees?

It is a knot of fungous growth which comes on the branches of the trees and finally spreads to other branches until it destroys the tree.

30. What is a fungicide?

A copper solution which is used to prevent the fungi from growing on trees and plants. The best fungicide is the Bordeaux mixture.

31. Name the birds useful to the fruit-grower.

All birds, except the English sparrow, the blue-jay and cedar bird.

32. Name the methods of encouraging these helpers to man in fruit-growing.

Encouraging them by giving them protection and furnishing them food.

33. Give best soil, exposure and distance for planting peach orchard.

The highest, driest soils of our State, and the high lands in South Missouri are the best; the best exposure is the north side of the hills. Distance, sixteen and one-half feet by sixteen and one-half feet.

34. Give best soil, exposure and distance for planting apple orchards.

The timber soils and bluff lands are the best; any exposure will answer. Distance, twenty-five feet to thirty feet by twenty-five feet to thirty feet.

35. Give best soil, exposure and distance for planting cherry orchard.

Highest and driest soil; south slope; twenty feet by twenty feet.

36. Give best soil, exposure and distance for planting plum orchard.

Cool moist soil, alluvial flat land; fifteen feet by fifteen feet for foreign, twenty feet by twenty feet for native.

37. Give soil, exposure and distance for planting vineyard.

A high sandy loam; east slope: eight feet by eight feet.

38. Give best soil, exposure and distance for planting raspberries.

Same as 37, and three feet by eight feet.

39. Give best soil, exposure and distance for planting blackberries.

Same as 37, and four feet by eight feet.

40. Give best soil, exposure and distance for planting strawberries.

Same as 37, and one and one-half feet by four feet.

41. Give best soil, exposure and distance for planting gooseberries.

Same as 36, and six feet by eight feet.

42. Give best soil, exposure and distance for planting currants.

Same as 36, and four feet by eight feet.

43. Give best soil, exposure and distance for planting quinces.

Same as 36, and twelve feet by twelve feet.

44. With what kind of tools do you cultivate trees?

Plow, harrow, disc harrow, cultivator, hoe.

45. With what kind do you cultivate berries?

Same as above, only use hoe more.

46. Do you advise deep or shallow cultivation?

Shallow.

47. In what condition would you put the ground before applying fertilizers?

Sow or spread the fertilizers and plow them under.

48. What fertilizers are the best for the horticulturist?

Ashes, lime, salt, bone meal, dried blood.

49. When should the fertilizer be applied?

In the spring.

50. What crop can we grow in an orchard?

Corn, potatoes, melons, tomatoes or

any hoed crops until the trees begin to bear, and then no more crops should be grown.

51. What stock should be allowed to run in an orchard?

Fowls, at all times. Hogs and sheep while fruit is ripening, only.

52. Why do fruits turn red or assume other bright colors when ripe?

The colors of fruits are usually connected with the dissemination of their seeds by animals, which in most cases feed on them. The colors appear when the fruits are becoming ripe, because at this time the seeds are ready for distribution. The colors are usually due to the development of pigments dissolved in the sap of the cells which lie near the surface of the fruit. Yellow fruits usually owe their color to a yellow pigment contained in parts of the protoplasm of the cells, corresponding to the chlorophyll grains that give the green color to foliage and to green fruits. The formation of these colors is usually attended by a mellowing of the tissue and the disappearance of acids which rendered the green fruit sour, and their replacement by sugars.

53. What is a nursery?

In horticulture, a plantation of young trees and shrubs, which are removed frequently, so that their roots do not spread over too large a space, and in this way are kept in condition for transplanting, whenever needed, to the orchard or other place where they are to grow.

54. What is the science which treats of insects?

Entomology, derived from two Greek words, which signify a discourse on insects. Economic entomology is a practical application of a knowledge of the forms and habits of insects to the more thorough extermination of injurious species and the protection of those that are either directly or indirectly beneficial.

55. What is an insect?

An insect is an animal with its skeleton on the outside divided into thirteen more or less distinct rings or joints, held together by elastic membrane, having in its perfect state the body divided into three regions—head, thorax and abdomen—and having always six jointed legs and usually two or four wings.

56. Why do insects infest plants?

Because the fruit affords them a congenial place where they may live, develop and propagate their species.

57. What insects are directly beneficial to the horticulturist and florist?

Bees, wasps and many sorts of flies. Butterflies and moths are useful in conveying the pollen from the stamens of one flower to the pistils of another, thus securing perfect fertilization and desirable cross-fertilization.

58. What are some other beneficial insects?

Some of the ground beetles which feed upon the larvæ of the curculio, and upon other grubs, as well as cut-worms, after they have entered the ground to change. Hundreds of species of large and small flies, also, are direct parasites, breeding in the bodies of and killing cut-worms and other caterpillars, borers, and all varieties of fruit worms. Other useful insects are the mantles or devil's horses, the lace-wing and syrphus flies, and the lady bird or lady-bug beetles, whose larvæ are the especial foes of plant lice and devour countless numbers of them.

59. What is the most remarkable peculiarity in the development of an insect?

Their transformation or metamorphosis. The life of every insect includes four distinct stages—the embryo contained in the egg; the larva, in the shape of a caterpillar, grub, maggot or worm, or of wingless bugs, grasshoppers and certain water insects. It is in the larva state that all true growth takes place. The next stage is that of a pupa or chrysalis, which in the great majority of insects is a period of quiescence, in which there is very little motion or appearance of life. The last stage is that of the imago, or perfect insect, in which it acquires its true antennæ or horns, its six jointed legs and its two or four wings. In this stage only can the sexes be distinguished.

60. In their relation to man, how do we classify insects?

Into useful or injurious species.

61. Which are the most numerous? Injurious insects.

62. In which stage of their existence do insects, as a rule, do the most damage to our crops?

In the larva or growing stage.

63. What are some of the larvæ most injurious to fruit and fruit trees?

Grubs in the trunk and branches, such as the round-headed and flat-headed borers; caterpillars on the leaves, such as the canker worm, web worm and tent caterpillar; and so-called worms in the fruit, such as the larvæ of the codling moth and the plum curculio. The white grub also, which is the young of the May beetle, is a very destructive larva which feeds upon the roots of strawberries and other herbaceous plants.

64. What insects are very destructive in their perfect as well as in their larva state?

All grasshoppers and locusts, all true bugs and many beetles.

(To be continued next week.)

Shall We Spray?

EDITOR KANSAS FARMER:—Now that we find our orchards giving a fair promise of fruit, we very naturally wish to afford the trees all possible aid for the production of a perfect crop.

Some begin to talk of spraying and are looking after their machines, while others say that it don't pay. Druggists are writing to us, giving prices on Paris green, London purple, blue vitriol, etc., and urging us to purchase in a hurry to avoid higher prices. This community is fairly well supplied with sprayers of several different patterns, and we can go to work at once if we wish, but will it pay? About four years ago a neighbor of mine sprayed his orchard thoroughly with London purple, using a Wellhouse sprayer, and thought that the expense was more than repaid. I visited his orchard myself and can say that his apples were much better than usual. Other neighbors tried the machine, but could not show much if any benefit.

The next season others bought sprayers, and I joined them with as good a machine as I could purchase, and we literally poisoned the atmosphere for weeks. Most of my orchard of 2,500 trees was sprayed three times, and we were careful to do the work as thoroughly as possible, but I state only a fact when I say that in my opinion it was only labor lost.

I tried both London purple and Paris green. A few trees in my orchard were left without any spraying whatever, while a few more were sprayed the fourth time, and yet the percentage of perfect fruit was just as large on the unsprayed trees as any.

Do we stand alone, or have other sections had a like experience? It is certainly the right time of the year to discuss this subject, and we are anxious to hear from others who have orchards and have tried the sprayer.

Lawrence, Kas. J. C. BANTA.

Legislation in Regard to Injurious Insects.

Farmers and fruit-growers are constantly reminded of the enormous loss which they sustain every year from the attacks of injurious insects, and are urged to make every effort to lessen the damage done, especially by the use of insecticides.

Prof. James Fletcher stated before the Association of Economic Entomologists, at Washington, D. C., that about one-tenth of the agricultural products of the United States is lost through the attacks of injurious insects, making altogether a sum of \$380,000,000.

The saving of some part of this vast amount has occupied and still occupies the attention of hundreds of economic entomologists. Great beneficial results have already been obtained by spraying, and the use in this way of kerosene emulsion and arsenical mixtures has been of untold value in holding in check the depredations of various injurious insects which infest our orchards and vineyards.

But the great difficulty to be overcome is the fact, so self-evident, that for every man who sprays his orchard there are a hundred men who give their orchards no attention. Many are

A Gentleman

Who formerly resided in Connecticut, but who now resides in Honolulu, writes: "For

20 years past, my wife and I have used Ayer's Hair Vigor, and we attribute to it the dark hair which she and I now have, while hundreds of our acquaintances, ten or a dozen years younger than we, are either gray-headed, white, or bald. When asked how our hair has retained its color and fullness, we reply, 'By the use of Ayer's Hair Vigor—nothing else.' " "In 1868, my affianced was nearly bald, and the hair kept falling out every day. I induced her to use

Ayer's Hair Vigor, and very soon, it not only checked any further loss of hair, but produced an entirely new growth, which has remained luxuriant and glossy to this day. I can recommend this preparation to all in need of a genuine hair-restorer. It is all that it is claimed to be."—Antonio Alarrun, Bastrop, Tex.

AYER'S HAIR VIGOR

too ignorant of the value of spraying, many others do not care, and the good done by the few who interest themselves in this subject counts for naught. It seems wrong that all the work and care given by one man shall be useless because of the negligence of his neighbor.

It has been proposed that legislation be called to aid in the extermination of some of the worst of the insect pests, but until more interest in such a work can be awakened little good in this way can be accomplished. If laws could be so framed that all would be compelled to exercise the same care, great benefit would result and millions of dollars be saved. In California, Massachusetts and New Jersey, laws for this purpose have been enacted and a penalty fixed for those who break them. California's legislation is for those who grow citrus fruits, Massachusetts legislates against the gypsy moth, while New Jersey's laws cover a still broader field, making it "the duty of every agriculturist, gardener, farmer and nurseryman, or other cultivator of the soil, to adopt and apply from time to time, in the proper seasons therefore, such methods for the destruction of insects injurious to growing crops and fruits of all kinds, as are, and may be prescribed in the reports and bulletins of the Agricultural experiment stations in this State." A fine of not less than \$25 or more than \$100 is provided for those who, when notified by the Commissioners (three men appointed by the State Board of Agriculture), do not within six days obey the directions given them.

With the enactment and strict enforcement of such a law in every State in the Union, we may well imagine the last larva of the codling moth dying of arsenical poisoning, and others of our most injurious insects so lessened in numbers that the injury and loss caused by their attacks will be as nothing compared with the harm done at present, while no one can doubt that for the extra care necessary to exterminate these pests every farmer will be well paid in better and larger quantities of fruit and grain.—Bertha Kimball, in Industrialist.

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. E. W. DIXON, (Successor to Dixon & Son.) NETAWAKA, KANSAS.

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In the Dairy.

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

The Queen's Dairy.

The royal dairy was built under the direction of the late prince consort. It is more like an apartment in fairyland than a dairy. The walls and ceilings are composed of exquisitely shaded Minton tiles, the dairy itself being about forty-five feet long and thirty wide. Long marble tables run right round the sides and up the center. On the tables are some ninety white earthenware pans, each of which contains about seven quarts of milk. The butter is sent to Osborne every day and averages about twenty pounds weight in winter and forty in summer. A small supply for the Queen's own breakfast table is also made in a special churn every morning.

Around the walls of the dairy are medallions of the royal family, with the monogram V. R. between. At each end of the dairy stands a beautiful fountain; there is also one at the side. The design is a stork supporting a lily leaf into which the water falls. The roof is supported by three pairs of arched pillars, and the windows are double, the inner set being stained with designs of Tudor roses, hawthorn, primroses, white marguerites, the rose, shamrock, thistle and Scotch harebell. The outer windows are plain glass. Beyond the glass is another window of wire gauze. The royal herd generally consists of about fifty cows, principally Short-horns and Jerseys.

The recesses in the dairy walls are filled with lovely old Crown Derby and Worcester, together with a few Oriental china plates and dishes. There is also a dish bearing the inscription "Chamberlain, Worcester, Manufacturer to His Royal Highness the Prince Regent." Close to the dairy stands an apartment devoted to churns and huge milk cans. Each milk can bears the inscription on the top: "Home Park, Windsor," surmounted by the royal arms, with V. R. on either side.

Dairy Notes.

Butter "increasers" are a fraud. Intelligent dairying and butter-making get all of the butter out of the milk that is in it, and no drug or other preparation can do better. Arithmetics give no rule for getting something from nothing.

A writer claims that the grand secret in butter-making is to find just the proper point of maturity for the cream, to get it always, and never to exceed it. If there is a rock to be avoided, it is not to make the cream too sour, for the butter takes and keeps the flavor of the cream whence it comes.

In its first stages, caked udder can be quickly relieved by copious applications of hot water—hot as the hands can stand. This is a simple little thing that is well to remember. It will also pay to remember that vaseline is a first-rate application for sore teats; sometimes the teats get badly scratched by briars and occasionally by the barbs on wire fencing.

The butter industry of the United States is of immense importance. In round numbers, there are from \$5,000,000 to \$15,000,000 worth sold annually in each State. In 1890 Illinois produced 95,000,000 pounds, worth about \$20,000,000; Wisconsin, 45,000,000 pounds worth \$9,000,000; Iowa, 100,000,000 pounds, worth \$21,000,000; Minnesota, 42,000,000 pounds, worth \$8,000,000; Michigan, 40,000,000 pounds, worth \$7,500,000.

Butter, as commonly made in the best creameries, is obtained in the maximum ratio of four pounds to every 100 pounds of milk, this proportion decreasing according to the quality of the milk and the manner of churning. Every 100 pounds of milk contains, in round numbers, eighty-seven pounds of water, four pounds each of butter, casein and sugar, and a pound of salt and other solids. By the common process of churning we get only the butter and lose the casein and sugar; in mak-

ing cream cheese we get the butter and casein and lose the sugar.

To retain an abundant head of hair of a natural color to a good old age, the hygiene of the scalp must be observed. Apply Hall's Hair Renewer.

The Poultry Yard.

Things to be Avoided—Practical Suggestions Worth Considering.

To imagine there is any profit in poultry half cared for or that which is fed damaged and cheap foods.

To trust to the hired man to care for and feed the flock, when it should be known that owner's interest only insures proper attention.

To lay mishaps or poor success to "bad luck," when there is no such thing as luck in poultry-raising, unless it is p-luck.

Not to carefully cull over the flocks early in the fall and sell all the surplus young roosters and the hens that are three years old.

To keep too large a flock for the accommodations afforded, and thereby endanger all to the ill effect of undue crowding.

To conclude cleaning the hen-houses out once a week is sufficient. This method compels the poultry to breathe the atmosphere odorous with their droppings for six days in the week.

To wait for the hens to become lousy before using any means to keep down vermin, when it is known that the keeping of the flock free from vermin is the price of almost constant vigilance.

To doctor fowls that are badly affected with roup, canker or any contagious diseases. Better kill at once rather than subject a fine flock to such diseases.

Not to study the causes that bring many ailments to the flock and adopt preventive methods so to avoid them.

To feed corn as a constant diet for weeks and then wonder why the hens lose their appetite, stop laying or lay soft-shelled eggs.

Not to know that the hens that have good, comfortable winter quarters do not require as much food as those poorly housed, and will probably yield some eggs during the winter.

Not to know that "poultry powders" are not required for flocks that are fed and cared for properly.

Not to have a good supply of leaves, road dust, crushed oyster shells and scratching material for sheds, for winter use.

Not to be as regular and have a stated time to feed the flock as you do in taking your own meals.

Not to understand the importance and value there is in having the poultry tame, and thereby realize how much more profitable they are than when wild.

To have high roosts, which cause cases of bumble-foot, accidents and places where mites become snugly enconced where they can not be easily dislodged. Have the roosts low and all on one level.—*Baltimore Sun.*

Breeding for Export.

There is little talk to-day about the poultry business being overdone. England alone last year imported from other lands upwards of \$20,000,000 worth of eggs and poultry, of which she obtained less than \$150,000 worth from her Uncle Sam. American hens, watched by American heads, can produce eggs as cheaply as any foreign bird that roosts, and there is no valid reason why they should not do a large business for our English cousins. This is not a question of low wages. The reason why our trade has heretofore been so small is because our home demand is always greater than the supply, and that demand increases faster than the supply. There is no industry offering greater opportunities for live, energetic, painstaking men and women than this of egg production. The possible profits are large, because the conditions are exacting.—*Maine Farmer.*

Bankers as Horse-Breeders.

"Yes, I thought my two barren mares would never breed," writes T. S. Moberly, banker, of Richmond, Ky., "but they got in foal by the use of the Perfect Impregnator."

IN paint the best is the cheapest.—Don't be misled by trying what is said to be "just as good," but when you paint insist upon having a genuine brand of

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It costs no more per gallon than cheap paints, and lasts many times as long. Look out for the brands of White Lead offered you; any of the following are sure:

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Leghorns.

EDITOR KANSAS FARMER:—In reply to P. H. Engel, in the FARMER, would say, think twice before disposing of those Leghorns for Wyandottes, or Plymouth Rocks either. Although not so large as either of the last mentioned birds, the Leghorn is the tenderest meat, and then, as an egg machine, they simply cannot be beat. I have 100 Leghorn hens, and on the fifth day of last March I gathered up seventy-two eggs from those hens. Adjoining farms, lives a neighbor who has fifty Plymouth Rocks on farm range, twenty-five Wyandottes and one dozen Brahmas. I asked how many eggs he got the day before. He replied "twelve." During the month of March I received 200 dozen, which netted quite a little sum, if eggs were only six cents. I think if all farmers had this class of fowls there would not be so much complaint of "hard times," and there would certainly be some eggs shipped out of Kansas City east, which was not done last year.

SUBSCRIBER.

Cross Breeding.

The best crosses for table, laying and general-purpose fowls are named by the *Fanciers' Journal* as follows:

For table fowls—Indian game, Dorking; old English game, Dorking; Indian game, La Fleche; old English game, La Fleche.

For laying fowls—Minorcas, Black Hamburgs; Minorcas, Leghorns; Minorcas, Houdans; Leghorns, Black Hamburgs; Leghorns, Houdans; Leghorns, Scotch Grays.

For general-purpose fowls—Langshans, Leghorns; Langshans, Minorcas; Plymouth Rocks, Langshans; Plymouth Rocks, Wyandottes.

One cock with ten hens and one drake with five ducks are the proper proportions.

A little chloride of lime and fine tobacco dust mixed in with the dust bath or scattered over the floors is a good disinfectant and bad for the insects.

If anything appears to be the matter with the chickens, either old or young, look for lice, find lice, destroy lice. In nine cases out of ten the chickens will be healthy if freed from lice. Kill all the lice and nits about the poultry-house. Remember that your greatest enemy is the army of lice, lice, lice.

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.

EVERGREENS! Shade and Ornamental trees, large varieties of Spruces, Pines and Arbor Vites, all sizes for Windbreaks, Hedges and Ornament, \$1 to \$30 per 100, \$4 to \$100 per 1000. Received highest award at the World's Fair. Illustrated Catalogue FREE. Local agents wanted. Evergreen Specialist, D. HILL, Dundee, Illinois.

FITS CURED

(From U. S. Journal of Medicine.)

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

MEN OF ALL AGES

may be cured. We...eat all sexual disorders of men. Four out of five who suffer nervousness, mental worry, attacks of "the blues," are but paying the penalty of early excesses. The dread alarm of Impotency, the exhaustion of Spermatorrhea, may be in strict confidence at moderate expense. Send for our free sealed book, "PERFECT MANKHOOD."

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The Family Doctor.

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

Surgical Emergencies.

(NUMBER 20.)

In "The Courtship of Miles Standish," Longfellow makes use of a lightning stroke in a very grand, strong simile, thus:

"All aghast at his words, surprised, embarrassed, bewildered,
Trying to mask his dismay by treating the subject with lightness,
Trying to smile, and yet feeling his heart stand still in his bosom,
Just as a time-piece stops in a house that is stricken by lightning."

Many a heart, as well as time-piece, suddenly stands still at a stroke of lightning, and whether the heart shall continue to stand still or shall resume its labor of pumping the ruddy current of life through the vital channels to irrigate the fields and gardens of the soul-tenant, depends often upon what is done by those bystanders who behold the sudden cessation of the pumps, the quick blanching of the face and the utter relaxation of all the muscles and sinews of the suddenly-shorn Samson. To see a strong man, in the full force of physical exertion, with all the powers of mind and body in full play, suddenly drop in a heap of limp sinews and loose joints and pallid face and sightless, glassy eyes, a mute tongue and a motionless chest, is truly a horrifying sight. But some such calamities may be reversed and the air pumps and the blood pumps and the voice pumps set going again by prompt, intelligent action on the part of those who look on. The lightning stroke is not always fatal. It often produces only temporary paralysis, but that temporary paralysis may, by the lack of the right thing being done at the right time, creep on into a permanent paralysis—into "that sleep that knows no waking."

If the thunderbolt actually passes into and through the body, then the undertaker may better be called, for the destruction of the life forces is swift and sure. But if the bolt has fallen near by and only produced an electric shock, then there is hope of restoration. In such cases the breathing and pulse-beats are suddenly arrested from shock, and these must be set going again. First start the breath by placing the patient on his back in an easy position, and taking the arms and raising them above the head and then bringing them down again simultaneously, at the side, with a quick compression of the chest, and then repeat the process with nearly the same frequency as you take in your own breath. Do not get rattled and jerk and jam the arms and chest erratically, but do it steadily and systematically, as you would turn the crank of a grindstone for an all-day's job. Then, have some one take hold of the angles of the lower jaw and lift the jaw upward and forward like a boy sticks his chin out in mockery, with the mouth open, and if the tongue falls in a heap in the throat it must be drawn forward and held there, so that the breath can pass easily into and out of the lungs. Then have some one suddenly dash a dipper of cold water on the chest, followed quickly, if possible, by a dash of water as hot as the hand can bear without burning. Repeat the alternation of hot and cold water for five to ten minutes. If no hot water is at hand, go on with the cold and get the hot as soon as possible. As soon as breathing begins, stop the cold water and wrap the body in warm blankets and apply heat all over the body, if possible, and rub the limbs upward toward the body, and never downward. The blood is all going upward on the surface and you must help and not hinder it. As soon as the patient can swallow, indicated by his working the tongue and muscles of the mouth and face, give a little strong black coffee, or a little brandy and water or whisky and water, for stimulation. If no reaction appears a battery should be procured, if possible, and a moderate current of electricity should be passed through the chest from breast to back, to stimulate the cardiac and respiratory nerves. In cases of prolonged paralysis patients have been restored by dipping them in a pool or creek of water for a short time and then following up with the treatment above indicated, and sometimes life has been restored by digging a pit in the soft ground and putting the patient in that and covering lightly with loose fresh earth, leaving the head out, of course. This quick burial enables the earth to restore the natural magnetic and electric currents to the body that were either extracted or too much concentrated by the shock.

These efforts should be made coolly, calmly, persistently, for at least two hours if not sooner effective. Great stress should be laid on artificial respiration, rubbing the surface in the direction of the blood currents and keeping up bodily warmth. These are the three most important points. The dashing of the body with cold and hot

water is probably next in importance as a nerve stimulant.

"How does one feel when stricken by lightning?" is a very interesting question, and, fortunately, the Family Doctor can answer the question from personal experience on two occasions. There are not many doctors who have been thus favored by providence or Indra, the Hindoo storm god. But the medical editor of the KANSAS FARMER is still here to tell the story of how it feels. Our readers will readily understand that if the bolts were really aimed at us the aim was faulty, for in one case the bolt hit a tree unpleasantly near by and in the other it fell upon the steel braces and tires of a carriage in disagreeable juxtaposition.

One summer evening, along in the fifties, a heavy thunder storm suddenly came up from the West, and the black mantle of night was gashed and seamed in all directions by the glittering blades of the lightning. Crash after crash resounded through the quivering air, while ours and the neighboring Wisconsin farms seemed to thrill with a tremor of animation that gave us new and thrilling sensations. My father and myself were out in the barn yard, milking, when the storm broke over us. Suddenly a great globe of fire seemed to be dashed right up in front of my eyes, and the next sensation was that of profound, awful weakness, prostration and helplessness. I could not move a finger or a lip, could not speak, and it was a tremendous task to even think. But gradually that feeling wore off and I came back to the normal mental condition, and some hours afterwards I could move. The weakness wore off in the course of the night and the next morning I could go out to see what had happened. I found an oak tree, about fifty feet from where I stood the night before, splintered and wilting. That told the whole story. But I never had any pain from the shock—simply the sense of indescribable weakness, which gradually faded out, and then I felt all right, and ever after I delighted in seeing a thunder storm go crashing by. There is something wildly, thrillingly delightful in it.

On another occasion, ten or twelve years ago, I started from Topeka to see a very sick man at Ridgeway, several miles southeast of the city. While on the prairie, about seven or eight miles out, one of those quick, startling thunder storms that occasionally lead night captive over the plains by day, and fling a cloak over the face of the sun, came hurrying up from the southwest, like a Sheriff in pursuit of a fleeing fugitive, presenting one of the grandest sights a mortal ever saw. As far as the eye could reach the ground seemed to be dotted with hillocks from ten to fifty feet in altitude and from one to forty acres in extent, and as the storm swept over, the thunderbolts could be seen dropping from the clouds to these hillocks, followed by a small funnel-shaped rain spout, for the rain was not yet falling evenly all over the prairie. When a bolt would fall, then a streak of rain, seemingly fifty to one hundred feet wide, would follow down from the cloud upon the hillock where the bolt had fallen. Seeing that this grand display was coming almost directly over my head, I stopped and got out to put up the storm curtains on my buggy, while the young man who came for me sat in his saddle in front of the team. I had got the curtains up on one side and was just unfolding one for the other side when, without any poetic similitude, quick as a flash there was a ring of fire in front of my eyes, and when I got up there was a fresh hole in the ground, where the buggy had stood, as large as a man's leg, and my team was streaking it over the prairie towards the city and the young man's horse was heading for Ridgeway at a 2:04 gait, while we stood there and gazed and gazed, scarce knowing they were gone. The drenching rain soon woke us up and the young man, who was farther away than I, and came to first, told me that all three of the horses and myself were down when he came to, that the animals soon struggled to their feet and started homeward, and that he came and helped me up, after several trials. The drenching rain soon brought me back to motion and I started after the team. After running till they got tired, and possibly feeling weak from the shock, they quieted down about a mile away, where a farmer stopped them. But when I undertook to climb into the buggy to come on home, I found my right arm paralyzed so that I had to drive home with one hand. In about three days the paralysis went out and I was all right again. In this second instance I was much closer to the bolt than in the first one, and yet was far less profoundly shocked by it. The bolt may have been lighter or the strong metallic conduction of the steel bows and tires on the buggy may have conveyed away to the earth more of the electric current. The braces and rim of the wheel were scorched by the current, and that is probably what saved me. But in this instance, as in the other, the only discomfort experienced was a sense of intense light, in one a ball and in the other a ring of fire before the eyes, and when coming to, a profound weakness from the temporary paralysis.

Tumor or Dropsy?

A good many people in Stafford county are very much interested in the case of Mrs. Joe Copeland, of St. John. And since the case has given rise to so much speculation among the inhabitants of that part of the State and so much contention among the medical fraternity, a little sketch of the case may interest all our readers. It gives a fresh demonstration of the old adage, that "doctors will disagree." And, pray, why should they not disagree? Lawyers disagree and always get on opposite sides of a case. Who ever saw a case in court with all the lawyers on one side? They are eternally disagreeing. Then the preachers, they disagree, too, and they used to kill each other, as well as many of their followers, on account of their disagreements. And to-day, on account of that very disagreement, there are more sects in religion and theology than in medicine. Politicians disagree most bitterly. Who ever knew Republicans, and Democrats, and Populists, and monometallists, and bimetalists, and Greenbackers, and goldbugs, and free traders and protectionists to do anything on earth but disagree and claw at and slander each other? Who ever saw all the merchants and tradesmen in any town agreeing? Are they not always backbiting and "doing up" each other? I heard a traveling man for a mercantile house say only last week that "the golden rule of trade is to do up the other fellow before he does you up." Think you, then, that the doctors are of such superior stuff that they can always agree? Why, John Milton tells us that the angels once at least had a tremendous falling out and some of them were sent to hell on account of their inability to agree with the small majority remaining.

So this case only proves the humanity and the angelicity of the doctors. Dr. Hoaglin pronounced the case one of ovarian tumor, and advised an operation. And then the scramble began. He was not of Dr. Smith's set in medicine, and of course he must be suppressed and his lack of diagnostic skill exposed. So Dr. Smith, whose opinion was asked, said at once it was dropsy, and to make sure of it he called in Doctors Dykes and Scott, of Stafford, and Dr. Belmont, a peripatetic and itinerant Esculapian, and they, all being of the same set, said, "Certainly it is dropsy. Anybody ought to know that." That settled it for the time being, and Dr. Hoaglin was left to ruminate over his blunder. "A course of medicine" being the stereotyped procedure of Dr. Smith's set for dropsy, the lady was abundantly dosed and drenched and drugged. "But still the wonder grew," and so did the patient, until, at last, becoming disgusted with promises of a cure which evidently could not be realized by drugging, the lady went back to her first doctor and brought him along up to the capital, and directed him to procure the opinions of the front rank men in both medical sets up here. Dr. Sheldon, Dr. Alexander, Dr. McClintock and Dr. Roby were all visited and opinions solicited. But, unlike the warring sets in Stafford and St. John, as far as they gave any opinion at all, all concurred in naming the mystery a tumor. And then, to make dead sure of the matter, the lady went out to Christ's hospital and called in Dr. Roby and the County Coroner, along with Dr. Hoaglin, to test the matter, and in thirty minutes Dr. Roby, aided by the others, had a thirty-pound tumor on the floor and the cut sewed up and the woman in bed. That all happened on the 5th of April, and now the lady, in her own proper size and shape, is daily asking the doctor, "What day can I go home?" The coroner's official services were not needed. And after seeing what was on the inside the doctors all agree. Just as other folks do when they all really know just what they are talking about, for doctors, like other people, only disagree while they are merely speculating about something with an undetermined outcome. Doctors are as much disposed to "Get right with God" and the facts in his wonderful world as anybody else. But they often have to penetrate far deeper mysteries to do it. And they ought not to be too much blamed when their hindsight turns out to be better than their foresight. So the fellows with dropsy on the brain may still take courage, but they will not be so dead sure of dropsy the next time they see a very large abdomen.

Publishers' Paragraphs.

The Russell Art Publishing Co., of 928 Arch street, Philadelphia, desires the names and addresses of a few people in every town who are interested in works of art, and to secure them they offer to send free, "Cupid Guides the Boat," a superbly executed water color picture, size 10x13 inches, suitable for framing, and sixteen other pictures about same size, in colors, to any one sending them at once the names and addresses of ten persons (admirers of fine pictures), together with six 2-cent stamps to cover expense of mailing, etc. The regular price of these pictures is \$1, but they can all be secured free by any person forwarding the names and stamps promptly. The editor of this paper has already received copies of above pictures and they are gems of art.

The Apiary.

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

Comb Foundation.

The question of comb foundation is of vital importance to every practical beekeeper, and I think can be classed under three heads—the man that works exclusively for extracted honey; the man that works for section honey, and the man that works for an increase of bees.

We will take the man who works for extracted honey first. We will suppose that he has all the bees he wants, and does not wish any increase. In this case he will use full sheets of foundation and a ten-frame hive; and we will suppose that his hives are all two stories high and filled with combs. Well, you say, what does he want with foundation? Just this: At the first appearance of the June honey flow, he will provide himself with an extra upper story for each colony, and fill every frame with full sheets of foundation. Then he will want a queen-excluding zinc for each colony. Then place the full sheets of foundation in the lower story, all but two or three, and be sure the queen is in the lower story; then place the zinc on the lower story so the queen cannot possibly get up; then put the brood on top of that, and the empty combs, if there is any on, in the third story, and if the two top stories are full of brood, so much the better. There will be enough stay with the queen and what brood was left below, to keep her busy, and as fast as they draw out the foundation, she will fill it with eggs; and as fast as the brood hatches in the upper stories, the bees will fill it up with honey; and if the honey flow is sufficient, in twenty one days there will be no brood above the zinc, but there will be eighty pounds of honey, all sealed over, which can be extracted and returned to the hive. If the flow continues, they will fill them again in ten days, and you are not bothered with brood when you are extracting.

In the second place, the man who works for comb honey positively must have foundation in his sections to insure straight combs, as he can't handle the sections when they are filled. Then he must have foundation in the brood chamber to have straight combs there, so he can handle the bees. Bees worked for comb honey will swarm if they get any surplus honey. He wants a one-inch starter in the brood chamber to have the prime swarms on, with half-sheets in the section case, or better, take the case off the parent colony and put it on the swarm with the empty one under it, and place the swarm on the old stand, moving the old colony to a new place.

Then the man who wants to increase his bees, if he has three or more good strong colonies, must have foundation. Then when the weather gets warm—say the first of May—make all the hives two stories high, if they are not, and when the combs below are all filled with brood, remove half of them to the upper story and fill their places with full sheets of foundation, and when they are drawn out and filled with eggs, remove and put above, and fill their places with full sheets of foundation, till both stories are full of combs and brood. Then he can begin to increase. He can take two frames from each hive, at dusk, and put them in a new hive with all adhering bees, and close the entrance with screen wire and set in a cool place till the next evening, when he can give them a queen, and he has a good average colony, ready for business. By replacing where he took them from, with full sheets of foundation, he can make a colony twice a week while the honey flow lasts, or through the month of June, if he has queens for them; and queens are so cheap now that he can buy them cheaper than he can raise them, unless he is pretty well versed in queen rearing.—J. C. Balch, at the Kansas State Bee-Keepers' Association.

When writing our advertisers please mention the KANSAS FARMER.

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.

WEAK ANKLE IN YOUNG COLT.—I have a young colt, a week old, that tips forward on his pastern joint on one leg; the cords seem to be contracted.

POLL-EVIL.—I have a four-year-old horse that has a slight swelling on top of his head just back of his ears; it is growing a little tender.

LOSS OF APPETITE.—I have a sow, 2 years old, that had pigs in March and did not eat well afterward.

CLOUDY URINE.—My son has a team of horses whose kidneys are not right. A yellowish substance settles in their urine.

MARE AILING.—I have a mare 8 years old, that has been ailing for the last ten months. The trouble seems to be in the region of her kidneys.

Horse Owners!—Try GOMBAULT'S Caustic Balsam. The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action.

Answer.—It is not at all likely there is anything wrong with your mare's kidneys; but she has some disease of the uterus which will require an examination by a veterinarian in person.

Answer.—As your sow has six lively pigs she evidently must be eating something. Let her continue to run on the rye pasture and feed her a little corn and will every day if she will eat them.

Answer.—Give each one of the horses one ounce of Barbadoes aloes dissolved in one pint of warm water as a drench; then give each one an ounce of hypsulphite of soda morning and night for a week.

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MARKET REPORTS.

LIVE STOCK MARKETS.

Kansas City. April 30, 1894. CATTLE—Receipts, 2,450 steers; 63 calves. Top prices for dressed beef steers \$4, which is 3 1/2 cents lower than a week ago.

Chicago. April 30, 1894. CATTLE—Receipts, 19,000. Texans steady. Beef steers, \$3 00@4 35; stockers and feeders, \$2 35@3 50; bulls, \$1 65@2 25; cows, \$1 50@3 25.

St. Louis. April 30, 1894. CATTLE—Receipts, 1,500. Some fed Texans at \$3 65. Native steers, common to best, \$3@3 90.

GRAIN AND PRODUCE MARKETS.

Kansas City. April 30, 1894. In store: Wheat, 371,288 bushels; corn, 9,587 bushels; oats, 20,920 bushels, and rye, 9,030 bushels.

WHEAT—Receipts for forty-eight hours, 24,600 bushels; last year, 33,000 bushels. There was a little more life and a firmer tone to the market under the influence of a big decrease in the visible supply.

CORN—Receipts for forty-eight hours, 94,800 bushels; last year, 34,200 bushels. More on sale than for some time and market slow and lower.

OATS—Receipts for forty-eight hours, 14,000 bushels; last year, 18,000 bushels. More on sale than for some days and market slow in consequence, but holders refusing to yield concessions.

RYE—Receipts for forty-eight hours, 600 bushels; last year, 1,800 bushels. Very little doing in this grain, but prices steady. By sample on track, on the basis of the Mississippi river: No. 2, 51@52c; No. 3, 48@50c.

MILLET—Demand fair and prices steady. Per 100 pounds German 55@57c, common, 50@55c. BRAN—Dull but unchanged. Bulk at 55c and sacked at 62@63c per cwt.

FLAXSEED—Active and further advanced, at \$1 14 per bushel upon the basis of pure. HAY—Receipts for forty-eight hours, 330 tons. Dull and weak. Fancy barn, prairie, \$5 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—The market still slow and dairy in liberal supply and values weak. Store-packed lower, and going only to packers. Creamery, highest grade separator, 20c per pound; finest gathered cream, 18c; fine fresh, good flavor, 18c; fair to good, 17c.

POULTRY—Receipts light and hens are weak, selling slowly at quotations. Demand for ducks not so brisk and market 1/4c off. Turkeys were quiet and offerings fair. Hens, per pound, 6c; roosters, old and young, 15c each; broilers, per pound, 15@18c; turkeys, hens, per pound, 7 1/2c; gobblers, 6c; ducks, full-feathered, 6c 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—Market steady and demand fair, with quality of stock nothing extra. New goods are quiet. Colorado red, per bushel, 85@95c; Colorado white, 85@99c; Northern, choice, 75@85c; Northern, fair, 75c; Idaho, 75@85c; native, choice, 75@80c; native, good, 60@70c; native, common, 50c. Potatoes, sweet, \$1.

STRAWBERRIES—Shippers who send goods for Saturday evening arrival must not expect to get much out of them, as the chances are that they will be in bad shape, as was the case to-day. The receipts of Hitchcock berries were light and quality very poor, selling at \$2 and \$3. The Arkansas stock was in good supply and quality rather mixed. Early in the morning a few sales were made at \$5 for good stock, but they soon dropped off and sales were made at a decline of 25c with nearly every half hour, until \$3 was the ruling price and even \$2 75 was reached. Poor stock went lower. Territory stock brought \$3 00@3 50.

WOOL DOES WOOL GROWING PAY?



REFERENCES: Metropolitan National Bank, Chicago, and this Paper.

That depends upon how you sell your Wool. If you ship it direct to market and to the right house, "It does Pay." It is no experiment. Our shippers testify to it unanimously.

SUMMERS, MORRISON & CO., Commission Merchants, 174 So. Water Street, Chicago.

do. 2 1/2@3c; common, do., 1 1/2@2c; crooked, half price. Dwarf, 2 1/2@3 1/2c. GROUND LINSEED CAKE—We quote car lots sacked at \$25 per ton; 2,000 pounds at \$28; 1,000 at \$14; less quantities \$1 50 per 100 pounds.

Wool—Market was steady but quiet. Missouri and similar—Fine, 10@12c; fine medium, 11@13c; medium, 24@18c; combing, 14@16c; coarse, 12@14c.

Table showing market prices for various commodities like Wheat, Corn, Oats, Pork, Lard, and S. Ribs. Columns include High-est, Low-est, Closed Apl. 23, and Closed Apl. 30.

WHEAT—Cash—No. 2 red, 58c; No. 3 red, 53@55c; No. 2 hard, 56c; No. 3 hard, 53@54c. COBN—Cash—No. 2, 37 1/2c; No. 3, 37@37 1/2c; No. 2 white, 37 1/2c; No. 3 white, 37 1/2c.

WHEAT—Receipts, 2,000 bushels; shipments, 5,000 bushels. The market opened at 1/4@1/2c off, but reacted and advanced 1/4@1/2c; the close, however, was only 1/4@1/2c above Saturday.

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Sweet Potato Plants! I will have 500,000 sweet potato plants ready for sale by May 10. All leading varieties. Correspondence solicited. Address B. F. JACOBS, P. O. Box 122, Wamego, Kas.

BEES! If you keep BEES, subscribe for the Progressive Bee Keeper, a journal devoted to Bees and Honey. 50 cents per year. Sample copy free. Also illustrated Catalogue of Bee Keepers' Supplies. Address LEAHY & CO., Higginsville, Mo. Mention FARMER.

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Ham, Beefsteak and Sausage. YOUR HOME IS INCOMPLETE WITHOUT THE MORGAN BROILER.



It is odorless, and saves all the gravy, and makes tough meats juicy and tender. Will be sent, charges paid, to any subscriber of the KANSAS FARMER for 75 cents, or to any new subscriber, with the paper one year, for \$1.50, or to any person for three subscriptions and \$3.00.

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This farm has located on it the townsite of Halsey, in Thomas county, Nebraska, with all the railroad improvements, including depot, etc. Whoever purchases this farm can lay out a city on his farm and sell lots enough in a short time to pay for it several times over and then have enough left for a good-sized farm, which will surround the town. If you want to be the father of a good town, now is your chance. If you want to make a fortune, now is your best opportunity.

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This farm must be sold, and some one will get a great bargain. It has been held at \$5,000, but a large discount will be made for all cash. Look this up before it is too late. This is clear. I might arrange to take another clear farm for first payment and take mortgage back for the balance, with privilege of releasing lots when sold. Write just what you can do and what you would like to do in your first letter and save time.

I have several fine lots near the Methodist college at University Place, Lincoln, Neb., for sale cheap, or will exchange them for farm lands.

Farms for Sale.

I have several farms in central Nebraska for sale cheap, and some I might exchange for property near Omaha. Write what you want.

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If you are looking for a large body of land at about HALF ITS VALUE write to me. I have it in Lincoln county, Nebraska. Don't fail to investigate this, for it is sure to increase rapidly in value.

Farms for Sale.

If you are thinking of buying a farm don't fail to write for my catalogue. I have improved farms with about half now in growing wheat in Rooks county, Kansas, the best grain and stock country to be found anywhere. Am selling very low. If you want one don't lose any time in selecting it, as they will go fast at \$5 to \$10 an acre. I sell some for only one-tenth down and a tenth yearly, but prefer a larger payment down. I give long time and easy terms. Write just what you want and how much you can pay down, in your first letter, so as to save time. The whole country has been thoroughly soaked with moisture and a big crop is assured. There never was a better time. Don't pay rent any longer but own your own farm. Send for Catalogue.

B. J. KENDALL,
507 Brown Block, OMAHA, NEB.

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Your name and address should go in the Farmers' Directory. Seedsmen, publishers and merchants will send sample goods in abundance to you. It is the only DIRECTORY of its kind. Ten cents in silver will put your name in it. Try it, and see the results. Address **G. E. WALSH, P.O. Box 1189, New York City.**

Money, Money! BETTER THAN A GOLD MINE.

Five Dollars will secure a \$175 lot in Chicago. For full information address at once **PATTERSON, SHEPPARD & CO.,** 79 Dearborn St., Chicago, Ill.

Farms, Cheap!

I have some of the greatest bargains in farms to be found anywhere in the United States and in the best wheat and stock country in the world. One first-class stock and grain farm of 1,440 acres, highly and extensively improved, in Rooks county, Kansas, with stock and implements, and 3,480 acres in Lincoln county, Nebraska, unimproved, which would make a good ranch. These farms are going to be sold at a price that will allow purchaser to make a fortune on them. Would take some other good property as first payment. I have a large number of small farms of 160 acres, bought some time ago at a very low price, and they will be sold way down and on most satisfactory terms. If you want to buy a farm, don't fail to investigate and send for a catalogue. Write to **B. J. KENDALL,** Room 507 Brown Block, Omaha, Neb.

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For Sale at Low Prices 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

SOUTHERN ILLINOIS.

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.

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

	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts, 1893.....	1,746,828	1,948,373	569,517	35,097	99,755
Slaughtered in Kansas City.....	956,792	1,427,763	872,385		
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	

C. F. MORSE, E. E. RICHARDSON, H. P. CHILD, E. RUST,
General Manager. Secretary and Treasurer. Assistant Gen. Manager. Superintendent.

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Mountains, Rivers, Lakes, Forests, Waterfalls, Shores, Canyons, Valleys,

And other Picturesque Features of our country delineated by pen and pencil.

We have made arrangements with the great publishing house of **D. APPLETON & CO.**

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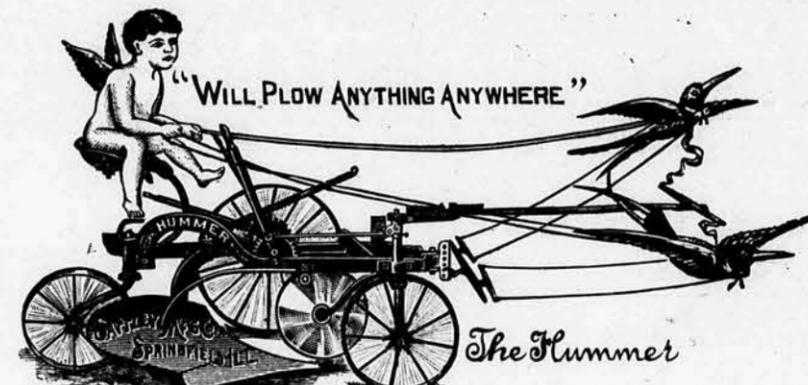
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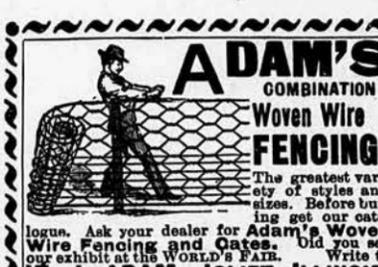
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FOR WEEK ENDING APRIL 18, 1894. Cherokee county—P. M. Humphrey, clerk. COLT—Taken up by Jas. Stone, in Mineral tp., April 1, 1894, one buckskin-colored horse colt, about 1 year old, white strip in face, white hind feet, had on halter; valued at \$7.

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, 8 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 5, 1894, one dark brown mare, about 4 years old, fourteen and one-half hands high.

FOR WEEK ENDING MAY 2, 1894. Sumner county—Chas. Sadler, clerk. COW AND CALF—Taken up by John W. Sud-darth, in Wellington tp., P. O. Wellington, April 19, 1894, one dark brown cow, weight about 600 pounds, with young calf; valued at \$15. Pawnee county—James F. Whitney, clerk. HORSE—Taken up by William Arnold, in Grant tp., P. O. Rosel, April 5, 1894, one iron-gray horse, 14 1/2 hands high, scar on back; valued at \$25. MARE—By same, one iron-gray mare, 14 hands high, harness marks; valued at \$25. Cherokee county—P. M. Humphrey, clerk. HORSE—Taken up by Edward Humphries, in Mineral tp., April 21, 1894, one bay horse, about 9 years old, four feet eight inches high, branded J. E. on left hip, marked in right ear; valued at \$8.

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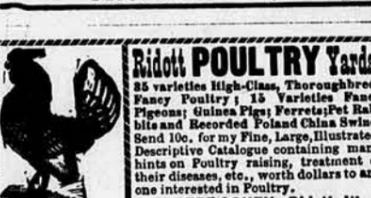


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