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Registered stock. Send for 44-page catalogue, prices and history, containing much other useful information to young breeders. Will be sent on receipt of stamp and address. J. M. STONEBRAKER, Paola, Ill.

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Exclusively.
Young stock at all times. Satisfaction guaranteed.

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Anglo-American Horse and Cattle Food, Hog Food, or Poultry Food, do just what is claimed for them. The best conditioners and blood purifiers ever fed to stock. Our Hog Food is positively a worm-killer. All goods warranted as represented or money refunded. A trial will convince you of their merits. Mention this paper. For full particulars address The Anglo-American Stock Food Co., 113 Adams St., Chicago, Ill.

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Notice of Publication.

(No. 18268.)

To Willis C. Johnston: You are hereby notified that you have been sued in the District court of Shawnee county, Kansas, in the case of Cora May Johnston vs. Willis C. Johnston, and that you must answer the petition before October 7, 1896, or the petition will be taken as true and judgment will be rendered against you granting the plaintiff a divorce from you and for the care, custody and education of Fay Edna Johnston, minor child of yourself and plaintiff.

W. J. REEKS, Attorney for Plaintiff.

Attest: E. M. COCKRELL, Clerk District Court.

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Ear or Shell Oats, Wheat, Rye and Barley Fine Enough for any Purpose.
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Agricultural Matters.

SOIL FERMENTS IMPORTANT IN AGRICULTURE.

By H. W. Wiley, Chief of the Division of Chemistry, United States Department of Agriculture, from the Yearbook of the United States Department of Agriculture for 1895.

(Continued from last week.)

REPRESENTATION OF THE DATA OBTAINED.

In the actual work which has been done in this department to follow the progress of nitrification in culture solutions it has been found convenient to determine the rate of the fermentative change by the determination of the nitrous and nitric acids produced. It is evident that in the process of fermentation three cases may arise. In the first place, the nitrous fermentation may occur first, and after its completion the nitric may follow it. This is a condition which evidently would rarely arise, and could only occur when the nitrous ferment was present in such a predominating quantity as to subdue and restrain the vitality of the nitric ferment. In the second place, the two fermentations could go on synchronously, and in this case the solution when tested would never contain more than the merest trace of nitrous acid. This condition of affairs would only occur when the two ferments were present in about equal numbers and endowed with equal vitality. In the third place, and this is the one which commonly occurs, the two fermentations go on synchronously, but at first the nitrous fermentation is more vigorous, so that there may be a considerable accumulation of nitrous acid in the solution. After a few weeks the nitric fermentation begins to gain vitality by reason of the fact that the raw material on which the nitrous ferment worked has become nearly exhausted. The quantity of nitrous acid, therefore, which was at first formed would gradually begin to disappear, and finally, if the examination be continued long enough, be reduced to zero at or before the time when the total amount of nitrogen present would be converted into nitric acid.

[Here follows an illustrated description of an experiment in nitrification in a sample of soil taken at a depth of fifteen inches below the surface, April 27, 1895, at the Canebrake Station, in Alabama. The culture solution was seeded with a sample of this soil May 3 and the process of nitrification noted. No action took place during the first two weeks after seeding. During the third week there was a vigorous evolution of nitrous acid, with only a trace of nitric acid. During the fourth week, attending a depression of temperature, the bacterial action was less effective. During the fifth week, both the nitrous and nitric organism were active, attending a considerable rise of temperature. At the end of the fifth week, there were present nearly four parts of nitric acid per million. After the fifth week, the nitrous acid began rapidly to disappear, being converted into nitric acid. No additional nitrous acid was formed from the ammonia during the sixth week. During the seventh week there was no activity, either of the nitrous or nitric ferment. During the eighth and ninth weeks, both ferments were again active, the nitrous acid being converted into nitric as soon as formed. There was in general quite a marked agreement between the rate of nitrification and the degree of temperature.—EDITOR KANSAS FARMER.]

It is evident that many conditions beyond the control of the operator may serve to render the observations upon the rate of nitrification somewhat unreliable, but in general the data of nitrification properly ascertained will give an unerring insight into the character of a soil as affecting its ability to furnish nitrogen to the growing plant, and hence to that extent to the degree of its fertility.

PREPARATION OF PURE CULTURES.

It is evident from an inspection of the processes mentioned above that the ferments which are obtained in the culture solutions are not confined to the nitrous and nitric organisms. All the ferments which the sample of soil may have contained of every descrip-

tion suited to grow in the culture solution employed will be developed. The solution, therefore, after the nitrification is complete, contains not only the nitrous and nitric micro-organisms, but also all the other bacteria contained in the original sample capable of growing in the environment provided. It is probable that in different parts of the country and at different latitudes the species of nitrifying ferment may vary, and therefore it is of great importance to continue the examination of these bacteria until pure cultures are obtained. The methods of securing these are so technical and of so purely a bacteriological nature as to exclude them from description here. It will be sufficient to say that these pure cultures are obtained by seeding new cultures directly from the solutions obtained in the nitrifications produced by the soils as described. This work is continued until all the disturbing bacteria are eliminated, and there are left only those which will produce under favorable circumstances the nitrous and nitric fermentations alone.

SUMMARY.

1. Conclusions which are easily derived from the above data are that the soil is not merely dead, inert matter, but, on the contrary, in the highest degree a living organism. It contains numerous ferments which in their activity either favor or restrain the growth of crops. It is the part of scientific agriculture to determine, in so far as possible, the laws which govern the evolution of both of these forms of bacteria for the purpose of securing the greatest activity of the beneficial organisms and the least activity of the inimical ones.

2. The bacteria which provides nitrogenous food for plants are of three great classes. One of these exerts its activity only on organic nitrogen or the nitrogen contained in the humus of the soil. The second class is developed symbiotically with the growing plants, herding in colonies upon their rootlets, and securing in their vital activity an oxidation of the free nitrogen of the atmosphere. The third class of organisms and the one least known appears to have the ability, in an independent form of life and without the aid of plant vitality, to secure the oxidation of atmospheric nitrogen. The first of the classes mentioned above is itself separated into three divisions comprising the organisms which produce ammonia, nitrous and nitric acids, respectively.

3. Many crops, such as the cereals, have no ability in themselves to increase the stores of nitrogen in the soil. Such crops may be grown for many years upon the same field, in which case the nitrogenous supply of the field will at first be rapidly diminished, with a corresponding decrease in the crop itself. Finally a time will come when a certain minimum crop will be produced apparently for an indefinite time, varying only under seasonal influences.

4. Other vegetables, especially leguminous plants, favor the development of the organisms which are capable of oxidizing free nitrogen and thereby tend to increase the supply of available nitrogenous matter. These crops, however, together with certain root crops, cannot be grown successfully without rotation, and all crops are benefited by a judicious succession. [Alfalfa appears to be an exception, and in favorable conditions improves in growth for many years, possibly indefinitely. So, also, the locust tree, another leguminous plant, is known to greatly improve the soil and is not known to impair its environment. Dr. Wiley's assertion here and in the next paragraph is based on too limited observation to be made so general.—EDITOR KANSAS FARMER.]

5. The summer fallowing of land is highly injudicious, and especially if the field be left bare through the winter. The nitrates which are formed by the activity of the nitrifying organisms in such cases are easily washed out by heavy rains and lost to agricultural uses perhaps for thousands of years.

6. Late autumnal plowing, after the activity of the nitrifying organisms has practically ceased, may prove beneficial, especially to some crops, by ex-

posing the soil to the decomposing effects of the frosts of winter.

7. In past geological ages vast quantities of nitrogenous matter have been oxidized and stored, in the form of nitrates, and these stores are now available for the uses of agriculture.

Nitric acid, in the form of nitrates, should be employed only as a temporary fertilizer in order to improve the fertility of the soil to such an extent as to make profitable the growing of leguminous crops. The continued use of nitrates for fertilizing purposes deprives the nitrifying organisms of their functional activity, and hence tends to diminish their numbers and to enfeeble their work. Nitrates should only be applied in small quantities at a time, sufficient to meet the immediate demands of the crop. It is better to apply the dressing of nitrates at two or three different times during the growth of the crop, rather than to use it all at once.

8. The use of sewage for fertilizing purposes is not to be commended because of the danger of contaminating the soil with pathogenic ferments, which may subsequently infect the health of man and beast. These ferments may attach themselves to vegetables and thus enter the animal organism, or they may remain with a suspended vitality for an indefinite period in the soil and awaken to pernicious activity when a favorable environment is secured.

9. The study of the nitrifying organisms in the soil and their culture [and isolation will in the end prove of great benefit to practical agriculture by showing the method in which favoring organisms can be fostered and the activity of the inimical organisms reduced to a minimum.

Fall Pastures.

EDITOR KANSAS FARMER:—The well-known dairymen, Evans Bros., of Fairview dairy, Fort Scott, Kas., write as follows: "Which is the most profitable for fall and winter pasture for cows, wheat or rye? Do you know anything of mammoth rye, and of its value as fall and winter pasture?"

I am unacquainted with any mammoth rye. Can any reader of the FARMER tell us anything of it? The Colorado Giant rye is a large variety for spring sowing, that has a grain five times as large as common rye, but is not used for fall sowing.

Without doubt, rye is superior to wheat for fall and winter pasture, and should be sown in August, at the rate of one to one and a half bushels per acre, and the tillage given the land should be of the very best. Rye does best on a rich sandy soil, and, where a press drill can be had, should be put in with it. A severe rolling of the soil will be of advantage, but should there be danger of the wind blowing the soil off the harrow should follow the roller.

Many farmers go to their local mill and buy cheat, that contains more or less of pinched wheat, for 25 cents per two bushel sack full, and sow this for fall pasture. Cheat is almost impossible to kill out and hence is regarded as a valuable pasture. Many fields called English blue grass are nothing more nor less than cheat, and their owners seem to not know the difference, an illustration of the old proverb, "Where ignorance is bliss, 'tis folly to be wise." Oats make good fall feed, and at the present price of 7 to 8 cents per bushel a sowing of them is not an expensive luxury.

Oats, wheat, cheat, rye, millet, corn and sorghum mixed make a variety of feed that is valuable for fall feed for milch cows.

Crimson clover is also choice feed, but extra care must be observed in accustoming the stock to it, or death by bloating is sure to follow. When sowing crimson clover be sure to sow oats with it and the oats will afford sufficient protection to prevent winter-killing of the clover, that is so prevalent in our climate.

F. Barteldes & Co. have this to say of Turf or Winter oats: "For fall sowing. They are rust-proof, and are adapted to light and heavy soils, and will stand the coldest freezing. When sown early their roots strike down from ten to twelve inches deep, which insures them from winter-killing and

Sick Headache Permanently Cured

"I was troubled, a long time, with sick headache. It was usually accompanied with severe pains in the temples and sickness at the stomach. I tried a good many remedies recommended for this complaint; but it was not until I began taking



AYER'S

Pills that I received anything like permanent benefit. A single box of these pills did the work for me, and I am now a well man." C. H. HUTCHINGS, East Auburn, Me.

For the rapid cure of Constipation, Dyspepsia, Bilioussness, Nausea, and all disorders of Stomach, Liver, and Bowels, take

AYER'S Cathartic Pills

Medal and Diploma at World's Fair.

Ask your druggist for Ayer's Sarsaparilla.

ready in the spring to grow off, while spring oats are not sown on account of wet weather. Their deep rooting and stooling properties enable them to afford more fall and winter grazing than any other known plant. They also produce more straw and grain than any other oat."

I believe our experiment station has tried winter oats, and, if I remember correctly, did not report favorably of them. However, as a fall feed oats are very valuable and should be largely grown.

I always have sown English blue grass with my mammoth clover and it has always proved valuable as a fall feed. When properly put in it is a great grass and should be more generally grown. It is not too late to drill in or broadcast in corn, and if the stock be allowed on it gradually at first, makes a rich food, but is much more valuable if oats are sown with the corn.

CLARENCE J. NORTON.

If You Would Keep Cool

take the "Twin City Special" any evening from Kansas City, Leavenworth or St. Joseph, on the Chicago Great Western Railway (Maple Leaf Route), and spend a few days at the beautiful Minnesota lakes. Summer excursion rates now in effect. Through sleepers, free chair cars and cafe dining cars. Full information as to desirable resorts in the Northwest will be cheerfully furnished by G. W. Lincoln, Traveling Passenger Agent of the Chicago Great Western Railway, 7 West Ninth street, Kansas City, or F. H. Lord, G. P. & T. A., Chicago.

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Ask your nearest agent for tickets via this route. E. L. LOMAX, 42 Gen. Pass. and Ticket Agent.

A Look Through South Missouri for Four Cents.

The Kansas City, Fort Scott & Memphis Railroad Company has just issued a magnificent book of sixty or more photo-engraved views of varied scenery in south Missouri. From these views an accurate knowledge can be obtained as to the productions and general topography of that highly-favored section that is now attracting the attention of home-seekers and investors the country over.

The title of the book is "Snap Shots in South Missouri." It will be mailed upon receipt of postage, 4 cents. Address J. E. LOCKWOOD, Kansas City, Mo.

The Stock Interest.

THOROUGHbred STOCK SALES.

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

SEPTEMBER 10—W. E. Gresham and L. Nation, Poland-Chinas, Hutchinson, Kas.
 SEPTEMBER 17—W. H. Wren, Poland-Chinas, St. Joseph, Mo.
 OCTOBER 1—E. E. Axline, Poland-Chinas, Oak Grove, Jackson Co., Mo.
 OCTOBER 23—Gudgell & Simpson and J. A. Funkhouser, Herefords, Independence, Mo.
 OCTOBER 30—J. R. Killough & Sons, Poland-Chinas, Richmond, Kas.

CORN STALK DISEASE.

From Bulletin No. 58 (June, 1896) by N. S. Mayo, M. S., D. V. S., Professor of Physiology and Veterinary Science, Kansas Experiment Station.
 (Continued from last week.)

On January 5 Mr. Fred Koster, of Miltonvale, Kas., wired me that he had lost fifteen steers in the stalk fields, and asking me to come and examine them. I was unable to go, however, and wrote, asking him for particulars. Mr. Koster has much experience in handling cattle, extending over many years. This year he was pasturing in stalk fields three herds of 370 each, Texas steers. Under date of January 14, 1896, Mr. Koster wrote as follows:

"Your letter of January 6 forwarded from Clay Center. I have been pasturing stalks with large herds for the past ten years and have never met with so heavy a loss as this winter.

"On December 13, 14 and 15 we lost five steers out of a herd of 368 four-year-old Texas steers. They were on Peach creek, about one mile from Republican river, near Morganville. The creek is very sluggish here, being so close to the river, with heavy walnut timber on its banks, and when the cattle would go into the water and stir it up there was a very bad smell from the water and it was quite black from walnuts and leaves falling in it, there having been no rains this fall to wash it out.

"After losing these five steers we took the cattle to the river for one week and dammed the creek up, and since then the water is of sufficient depth so they do not go in it and stir it up. I concluded that they would not drink the offensive water in sufficient quantities to keep them alive on stalks. They are apparently doing all right since the creek was dammed.

"The next herd was located between Morganville and Clay Center, about four miles from each town, on the Republican river. We lost eleven head on January 3, 4 and 5; seven head on the 8d and two head on each day following for two days.

"We drove these cattle to water noon and night; they were in a fenced stalk field of 300 acres, but after watering at night they were put in a fenced prairie pasture over night, where they could get no water. The cattle had been in the 300 acres of stalks but four days when they commenced to die. I attributed this loss to the fact that there was no water in the pasture where we kept them over night. We then made a corral by the water and have lost none since. We had not salted these cattle for about thirty days until about three days before they commenced to die, when we gave them one bushel of salt. Many think salt causes their cattle to die when on the stalk fields and do not give salt. The herd in which we lost the five head had not had any salt for thirty days but we began to salt them after the five died and continued until the eleven head died in the second herd (eighteen days) and then quit.

"In the third herd we lost one steer on December 24, three days after salting. They were on the river in a seventy-acre field of stalks and were driven to the water noon and night. The water was right in this stalk field and the cattle could go to the water whenever they chose. The cattle were kept in the field night and day.

"You will see that my cattle died when they were salted and died when not salted. There are so many farmers that think it is death to cattle to salt when on the stalk fields that I have quit. Yet I have doubts whether salt has anything to do with it.

"The first symptoms of sickness is that we find the steer lying down in the herd while the others are grazing. If he is driven up he will walk a short distance, smell of the stalks, but not eat. Sometimes he will look at his sides, twist his tail and soon lie down again. When well advanced in sickness he will stagger and act crazy and if you attempt to drive him will plunge at you and fall down.

"We discovered several years ago that to run the steer, on the first symptoms of sickness, until he was thoroughly heated up and scoured out would cure them. Until we made this discovery we lost every one that was sick. But since then we have saved a good many and have seldom lost one if he is noticed before the disease is too far advanced. The most of the steers we lost of late we were not able to run when noticed and not a few were found dead in the field or corral in the morning. We have never

saved a steer by drenching with oil or anything else. * * * I thought it best to give you my experience and conclusions, whether right or wrong, and perhaps you can give me some light if I am wrong.

"We invariably find the small stomach (abomasum or manfolds) dry and the food packed like yeast cakes, the lining coming off with the food. My theory is that the indigestible corn stalks pack in the stomach, fever sets in and destroys the lining of the stomach."

The latter part of December, 1890, 300 head of New Mexico three- and four-year-old cattle that had been pastured on stalk fields along Brush creek, Pottawatomie county, were driven some eight miles to a stalk field on the river bottom just south of the Kansas river. The second day they commenced to die, and thirty-three head died before noon. Dr. Brady, a qualified veterinarian who was called, reports that the first symptoms noticed, the animal would be standing apart by itself with head elevated and licking its nose or a tree, often for one-half hour at a time. They were easily frightened at imaginary objects. One especially ran about 300 yards into the stalk field, turned suddenly and ran directly back, fell down an incline, became comatose (unconscious), and died in a short time.

Some of the sick steers were caught and treated by giving active purgatives, but no action from the purgatives was obtained. Autopsies revealed congestion of the brain and moderate impaction of omasum. These cattle were taken off the stalks and fed straw for two days, and given a mixture of two parts of salt, sulphur and hyposulphate of soda, which they licked greedily. They were then turned back into the field. No more loss occurred.

Dr. J. B. Minturn, of Colwich, Sedgewick county, Kansas, who is a well qualified physician and a stockman of much experience, writes as follows regarding corn stalk disease:

"One year I lost three fine steers in the feed lot, on corn and hay, with identically the same symptoms and pathological conditions as the so-called 'corn stalk disease,' caused by an indiscreet man putting them on full feed too soon. One of the steers in his insanity came nearly killing me. I was in the feed lot looking over the cattle, as is my custom. I had noticed nothing wrong with the steer, when he made a dash at me. I caught a glimpse of his action and jumped one side. The steer fell and never tried to rise. I studied his dying struggles and finally took a knife and bled him to death. I made a post-mortem examination, and his condition will describe the condition of every one that I have examined that have died from 'corn stalk disease,' except that one found down and dying recently was badly bloated.

"There was intense inflammation of the stomachs. The mucous membrane in places would strip off by a slight effort. The liver was congested to a marked degree and the spleen and brain congested to a like extent. Contents of stomachs natural and moist.

"My diagnosis in these cases is acute gastritis, inflammation of the stomach from feeding dry indigestible corn stover, with metastasis to the brain through reflex nervous action. All die with brain symptoms.

"The first that is noticed is that the animals are down and dying, or dead. I have made inquiry of many of my neighbors since I received your letter, and it is the same story with all. The loss is about 10 per cent. There is no recovery, as the disease is not recognized in time.

"We have the same disease and the same brain complications in the human. You have the same brain complications in puerperal apoplexy in animals and man. You may have it in any acute inflammation of any large organ of the body. It is easy for me to understand and believe that 10 per cent. of cattle may have weak digestion, and when turned into a stalk field, the sudden change of feed, the amount of corn they may find, want of water, etc., may account for the loss. The remedy is to cut the corn in due time and run it through a husker and shredder, as I shall do in the future."

(To be continued.)

It is reported from England that a great demand for pure-bred live stock has sprung up in South America. Breeders in the Argentine Republic are buying largely of Short-horn, Hereford and Angus cattle, and also of Lincoln sheep. The Short-horns seem to be most popular, and great numbers of first-class bulls are being sent to use on the vast herds of native cattle that roam over the South American pampas. While there has always been more or

less of a demand from this quarter, this year it is greater than ever, and the chances are that, within a few years, the exports of good beef from Argentine will be greatly increased.—Rural New Yorker.

To Swine Breeders.

EDITOR KANSAS FARMER:—For some time past a movement has been on foot looking to the establishing of a "Swine Record Company," or a "Swine Registry Association," as those forming same are pleased to call it. As Secretary of the Kansas State Breeders' Association, I am called upon to answer many letters and furnish information to those interested, to such an extent that it requires more time than I have at my command. I accordingly request the publication of this short explanatory letter in reference to a new record.

The establishing of such a record was first advocated by some members of the Kansas State Breeders' Association, who, together with local associations in this State, as well as in Nebraska and Oklahoma, felt the need of such an institution nearer home. The object, then, in forming this new company is not in any way to antagonize or decry either or any of the record companies now doing business, but rather to work in harmony with them, and at the same time permit the numerous new breeders in the territory named, particularly, to become stockholders in this new record company at the first cost or minimum charge of \$10 per share, which would give to them a rate of 50 cents per head for recording. Most record companies now doing business placed their stock on the market at \$10 per share and made the fee to shareholders 50 cents per head (with one exception), and to non-shareholders the fee for recording is \$1 per head. These stock companies have been doing a lucrative business, and their assets have grown to such an extent that the price per share of stock has been doubled and trebled in some cases, so that to-day to become a member of a record company, to secure a moderate recording fee, or half the fee charged non-shareholders (\$1), one has to pay double or treble the original price of shares of stock, because the record companies cannot afford to sell shares for less, having run their business so successfully that their assets make stock thus valuable. Now, then, in order to give the thousands, yes, many thousand, new breeders the same opportunity that their brother breeders have had, i. e., getting in on the "ground floor" of a record company, this new company will be organized. It will conform in every particular with the established rules of registration adopted by other reputable companies, and charges for recording will remain the same as charged by most companies, except possibly some changes may be made as to making out "transfer blanks" and "certificate of sale" blanks as now required by the American Berkshire Association, which can and should be simplified, as the fact of the sale is enough evidence of transfer; however, such questions are to be yet discussed and agreed upon, and it is hoped at the semi-annual meeting of the Kansas Swine Breeders, to be held at Wichita, Kas., Thursday, September 24, that the members will come prepared to consider and act upon the project. This association will record any breed of pure-bred swine—(under the present recognized rules of other associations) and conduct its business generally in conformity with the rules and regulations of record companies now doing business, and while this new company will be formed because of the needs of breeders in the territory named, yet all breeders, in any section of the country whatever, will be invited to become shareholders. The question of confusion of numbers has been thoroughly canvassed and it is believed can be regulated by the letter "K" as other associations now guard their numbers by letters.

O. P. UPDEGRAFF, Secretary.
 Topeka, Kas., September 1, 1896.

If the hair has been made to grow a natural color on bald heads in thousands of cases by using Hall's Hair Renewer, why will it not in your case?

Woman's Work

Is never done, and it is especially wearing and wearisome to those whose blood is impure and unfit properly to tone, sustain and renew the wasting of nerve, muscle and tissue. The only remedy for tired, weak, nervous women is in building up by taking a good nerve tonic, blood purifier and vitalizer like Hood's Sarsaparilla. For troubles Peculiar to Women at change of season, climate or life, great cures are made by

Hood's Sarsaparilla

The One True Blood Purifier. All druggists. \$1. Prepared only by C. I. Hood & Co., Lowell, Mass.

Hood's Pills do not cause pain or gripe. All druggists. 25c.

To Make Sheep Profitable.

Secretary Coburn, of the Kansas State Board of Agriculture, has received the following letter from W. E. Gowdy, of Chicago, a man who did a large business with Kansas sheepmen several years ago:

"There is no more profitable business to-day than in growing wool and mutton. But to do it, it is necessary to fix for it, as in every other business. The day has gone by when a man can go to Kansas or elsewhere, buy 160 acres of land, with range adjacent, also 1,000 head of sheep, pony and dog, and hire a man to take charge of the sheep, and sit down in town to await returns, etc. Were I to start to-day, say, with wild land, I should, in the spring, break fifty or eighty acres out of the 160 and put the whole thing into German millet, and I should expect at least two and one-half tons to the acre. In the fall, as soon as possible after cutting the millet, I should plow this land from one to two inches deeper, after putting on what fertilizer I could get together, then harrow thoroughly and sow to rye, which I should pasture during the winter and in the early spring. As soon as possible, one-half of this ground should be plowed in the spring and subsoiled and sown with scarlet clover and alfalfa. This would give me, say, out of the eighty acres, forty of each. Now I have pasture for ten to fifteen sheep per acre, or 800 to 1,200 sheep on eighty acres, with eighty acres of corn or other land.

"Say, with 800 ewes at \$3 per head, = \$2,400. Lamb crop—75 per cent.—300 lambs, at six months forty-eight to seventy pounds (price yesterday from \$3 to \$5.60, average weight fifty-nine pounds, average price \$4.30), returns from lambs alone, \$1,522. Eight hundred ewes, shear seven pounds per head, 5,600 pounds of wool, at 10 cents per pound=\$560. Alfalfa turned in at the end of three years is said to be worth, at the lowest value per acre as a fertilizer, \$57 per acre. This divided by three equals \$19 per annum—forty acres, \$760—(Prof. Georgeson)—\$2,842, less 75 cents per head as cost, or \$1, as many say—(I tried for four years to learn the cost per head and it ranged from 50 cents to \$1.25)—\$800, leaving \$1,600 profit on \$2,400 first investment. Another item of profit is the droppings as fertilizer, which should be credited to sheep and charged to corn crop. Now, of course, this is only a simple estimate, as is usually practiced, but I know it is possible. A Mr. Swift, of Minnesota, is keeping sixteen head of sheep to the acre. Sixteen sheep to one acre raise, say, twelve lambs per annum; 112 pounds of wool at 10 cents, \$11.20; 12 lambs, sixty pounds, 720 pounds, at 4 cents, \$28.80—\$11.20=\$40 per acre. But this figuring is a diversion.

"Go back to my machine (the land) Manufacturers generally charge off each year 10 per cent. for deterioration. I can add increased value or a credit instead of a "Dr." At the end of three years I have any quantity of nitrogen, phosphoric acid and protein and potash to turn in, and by subsoiling I can for two years pretty surely bank on a corn crop of 100 bushels per acre, then put it back into pasture again.

"As to stock, I should buy half-

blood Shropshire and Merino ewes. I have seen these in Oregon, Montana, Wyoming and Utah, and also in Texas, Missouri and Michigan. They are very hardy, good mothers, prolific, good shearers, early in maturing, and bring the best price as mutton and lambs and the highest-priced wool. It is not 10-cent wool, by any means, and every ewe should shear twelve pounds per head.

"I said I had yet to find the man who could tell me the cost of keeping sheep or the net, or even the gross, profit. They should, say, charge up the interest on the cost of the land. Say land worth \$30 per acre, at 7 per cent = 21 cents per acre. [Seven per cent. on \$30 = \$2.10.—EDITOR.] Cost of pasture in summer, with salt, tar, interest on cost of sheep, interest on cost of rams, hay, feed of all kinds, shearing, cartage and cost of selling and loss, and credit with price or money from lambs sold, and wool and manure. They would know, then, just what they were doing, and not until then. Another thing I wish you would induce some prominent grower to do—keep a record of the lambs born, died, male and female, also of the number sold and retained. This is a question of some importance."

Irrigation.

CULTIVATION AND WINTER IRRIGATION.

Of all the sciences to-day, none is more vital to us as a nation, or to the general prosperity of our people, than that of agriculture, and among the various branches of this science there is none so important as that of soil tillage; for upon the proper manipulation of this depends the quantity and quality of the product of our soil, and upon that depends the prosperity of the farmer. No matter what may be the product he is endeavoring to prepare for the market, whether it be stock, dairy products, grain, fruit or vegetables, the profits of any and all are gauged by the cost per pound of what he harvests from the soil. It certainly does not take an expert mathematician to figure out that there is more clean profit in growing seventy bushels of corn on one acre with an outlay of \$5 per acre in labor, than there is in growing sixty bushels on three acres at a cost of \$3 per acre. There is not only the difference in the figures above given, but to the former is added the rent of only one acre of land and to the latter that of three acres, besides a possible difference of one or two grades in the quality of the grain. Now, while at first glance the contrast may seem too great, yet it is too true, and the vast difference in the yield may be attributed to simple soil tillage scientifically applied, or against the too common slipshod, haphazard plan.

Cultivation and Irrigation.—A visit to the fields of the more successful irrigationists discloses the fact that the cultivator is frequently brought face to face with the truth that the simple application of water will not do. This to the average man (who has heard and talked of the grand results from irrigation and yet knows practically nothing of its science) may seem strange, and he at once asks, "Why?" Our reply bluntly given to this question would be, "It is contrary to nature. Now let us substantiate this with a little history, then follow with scientific reasoning."

From a little history of English agriculture we learn that in 1728 one Jethro Tull, an English landlord, educated for the bar, visited Italy and the south of France in order to regain his health. In these countries he learned that many successive crops were taken from the land without any apparent diminution of yield. From what he had seen and learned during his visits he conceived the following propositions: First, that interculture among the growing crops is a necessary preparation in well-conducted farming. Second, that adequate tillage is not only an economic substitute for manure, but, third, thorough tillage is also competent, without the aid of manure, to secure the profitable growth of any

given species of cultivated plants, year after year, in succession.

Up to the time of his death, in 1741, he had grown thirteen unmanured wheat crops without intermission and without decrease in the yield on the same ground.

After Tull's death Rev. Samuel Smith adopted his plan with some improvements and modifications at Lotham, Northamptonshire. He was extremely successful. Smith succeeded in growing twelve successive crops of wheat without the application to the soil of any manure whatsoever, and he claimed that no degeneration or diminution of quality ensued.

Experiments were begun in 1874 in the Cornell University, Ithaca, N. Y. The previous year the land had raised a crop of oats without manure. The land, after removing the oat crop of 1873, was in a bad, lumpy condition. However, the ground was well fitted, and frequent shallow cultivation given the growing crop each year without any fertilizer whatever.

The results of four successive crops were as follows: First year, 15 bushels per acre; second year, 35½ bushels; third year, 67½ bushels; fourth year, 66 bushels. We mention the above to show that thorough tillage has been found very remunerative for many years. We could give many more similar illustrations. We have similar lessons before us almost every year. Now let us carefully consider why these frequent cultivations are indicative of these results. Too much water is just as injurious to plant growth as too little.

Now, notice a few facts and see how nicely nature will carry out the work if man will but do his part. First, he plows the ground for the purpose of a complete rearrangement of the particles and breaking up the old cell or column formation; then comes the importance of firming this soil as evenly and completely as possible. This is accomplished by heavy rains, which dissolve and settle the particles close together, or by artificially soaking and packing by irrigation or by mechanical work. This firming results in increasing capillary attraction. By this we are able to draw the rains from above more quickly into the soil; following with frequent shallow cultivation a blanket is formed of loose, dry soil, which prevents the rise of moisture to the surface, where it would be immediately transformed into vapor and lost. In sections of the country where the rainfall is less than fifteen inches it is generally deemed necessary to irrigate. To do this water is turned onto the field until it is thoroughly saturated to three or four feet below the surface. The most successful results are obtained by fall soaking, followed by surface cultivation to prevent loss by evaporation. Without irrigation fall plowing with mechanical packing is desirable, each fall of water to be followed by surface cultivation to form the dust blanket. This method, carefully followed will retain a very large per cent. of the rainfall, storing it in the soil the same as water artificially applied. With a soil saturated or full of water there can be no air, therefore no decomposition, a very important condition for rapid, prolific growth of the plant, and here nature again comes to the rescue by allowing all water to pass down by gravity until each little particle of soil is enveloped in a thin, close film of water, thus admitting air. Then the little micro-organism performs its work of perfect decomposition, producing the most valuable plant food. Nature has further provided for the loss of moisture required for plant growth, which is taken in by the little feeders and passed on up the stock and evaporated from the leaf, thereby producing growth of plant and grain by causing water to rise by capillary attraction to the roots in sufficient quantities, provided there is no loss of moisture by evaporation from the surface, which is sure to take place without frequent cultivation or stirring of the surface to keep it dry and loose. The more perfect the mulch the more perfect the preservation of moisture, which means a perfectly dry, loose blanket of soil.

This is where the great advantage of frequent cultivation after fall or winter soaking is shown in comparison with frequent summer soaking. By the fall soaking there is no danger of serious results from over-soaking and allowing evaporation to go on unrestricted, thereby bringing a large amount of alkalies, magnesia, etc., to the surface, which causes a very serious condition of non-productiveness. With the surface tillage the plant is fed regularly, surface evaporation stopped, thereby enabling capillary attraction to bring water up to the roots sufficiently fast to meet the requirements of the plant in a critical time from the water stored in the subsoil by either artificial or natural sources.—H. W. Campbell, in *Wind and Water*.

Work of Windmill.

Prof. E. C. Murphy, of the Kansas State University, who is engaged during the summer vacation upon some investigations for the United States Geological Survey, has made the following statement of the lifting power of windmills, as found from some measurements he is making. The investigation reported is as to the performance of a twelve-foot steel mill, working a ten-inch reciprocating piston pump in an open well:

"The velocity of the wind is measured with a Robinson cup anemometer placed on a pole some distance from the wheel at the height of its axis. Each mile of wind is recorded electrically on a revolving cylinder. Each 100 strokes of the pump is recorded on this cylinder in the same way. Thus the diagram gives the number of strokes of pump per mile of wind for different wind velocities. The discharge of the pump per stroke is measured, also the lift or distance from surface of water in well to center of water column as it flows out of discharge pipe.

"This pump, which is known here as the 'Stone pump,' has its cylinder the same diameter as the discharge pipe, ten inches. The supply pipe is eight inches in diameter, length of stroke twelve inches. The check valve is of the single flap variety and the plunger valve is of the double flap variety.

"The tower is thirty feet high to axis of wheel. The wind exposure is good. The discharge per stroke of pump is fourteen and three-fourths quarts and the lift is thirteen and three-fourths feet.

"The cost of the plant, including a reservoir 75x80 feet and two feet deep, was \$157.

"The number of gallons pumped per hour in wind velocities from eight to thirty miles per hour is as follows:

8 miles.	12 miles.	16 miles.
1,593.	3,097.	4,248.

20 miles.	25 miles.	30 miles.
5,226.	6,084.	6,887.

"The useful work per minute in foot pounds in wind velocities from eight to thirty miles per hour is as follows:

8 miles.	12 miles.	16 miles.
3,042.	5,912.	8,113.

20 miles.	25 miles.	30 miles.
10,003.	11,619.	13,155.

Kansas Viewed From Pennsylvania.

EDITOR KANSAS FARMER:—I was much gratified to note your editorial in this week's edition, commenting on the large increase in the Kafir corn acreage. This is a most hopeful sign, as all will admit who, like the writer, have studied climatic conditions in central Kansas for twenty years, and a general recognition of the fact that corn is uncertain as a feed crop, and the introduction of drought-resisting crops to tide the people over in off years when corn fails is of paramount importance.

The settlement of the financial question, either in the success of the single gold standard men under McKinley, or of the bimetalists under Bryan, will not benefit the man who produces nothing to sell, but to the man who has products for sale the settlement of these economic questions, such as tariff and currency, are of importance. Liquidation has nearly run its course. The importations of gold, while credited to the syndicate organized to prevent the issue of bonds pending the election, is, in the writer's opinion, coming into the country in a legitimate manner and in accordance with the natural laws of trade. The restoration of



When death's hand is on your shoulder, don't stop!—don't hesitate! Shake it off! When you begin to lose flesh and vitality—when you feel the ghostly fingers dragging away your health and vigor, do not waste time. Take prompt measures to regain your life. Take Dr. Pierce's Golden Medical Discovery—the most marvelously efficient tonic and blood builder ever discovered. Its effect is almost immediate. Renewed strength follows it just as surely as sunrise follows night. It makes sound, healthy, solid flesh, and not flabby fat like cod liver oil. It goes right to the root of the trouble and cures the cause. It makes the digestive organs do their proper work. Helps to digest the food, and adds to it the purifying, strengthening, vitalizing properties needed by the impoverished blood and the overworked nerves. Do not let an unscrupulous druggist impose on you with "something just as good." It's a matter of life and death with you. Get what you ask for.

"I have been afflicted with rheumatism and kidney trouble which bothered me so that I suffered untold pain," writes Mr. C. B. White, of Grove, Geauga Co., Ohio. "I was afraid I would lose my mind. At times was almost entirely helpless. There had not been a night for three years that I could rest in any position. Had tried almost everything but obtained no relief until I tried the 'Golden Medical Discovery.' I have used three bottles of it and think I am well of both diseases. I feel to-day as well as I ever did in all my life. I cannot say too much for Dr. Pierce's Golden Medical Discovery."

Neglected constipation means headache, heartburn, sour stomach, foul taste in the mouth, biliousness, pimples, and palpitation of the heart. All or any of these are good things not to have. Constipation is promptly cured by Dr. Pierce's Pleasant Pellets. One for mild cases, otherwise two. Druggists sell them.

silver to its natural place as one of the two precious metals, which the common consent of mankind, from the earliest dawn of authentic history, and even far beyond, into the misty twilight of the first traditions of the race, has regarded as one of the standards of value, cannot be long delayed. Jackson's standard money—gold and silver—might be overthrown if they were based on Jackson's judgment alone, but the precious metals, ordained by Almighty God as such, will never be dethroned permanently by any combination, no matter how powerful, from the position they have held in all ages as the natural money of mankind. So, while the farmer of Kansas votes as his conscience dictates, let him consider first how he can best make the elements which surround him minister to his wants, and how he can best subdue the land which God, in His providence, permits him to possess.

McKinley and Bryan are, as men, *sans peur et sans reproche*. No men with purer lives ever appealed for the suffrages of their countrymen for the highest civil position in the world. Let us hope that whoever wins will prove equal to the high trust to which he has been appointed.

Dawson, Pa. JNO. H. WURTZ.

Very low rates will be made by the Missouri, Kansas & Texas railway, for excursions of August 18, September 1, 15 and 29, to the South, for Home-seekers and Harvesters. For particulars, apply to the nearest local agent, or address G. A. McNutt, 1044 Union Ave., Kansas City, Mo.

Homes for the Homeless.

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

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

Jack Needs a Vacation.

All work makes Jack a dull boy. He should leave the office a while this summer, take Jill along, and go to Colorado.

An illustrated book describing summer tourist resorts in the Rocky mountains of Colorado, will be mailed free on application to G. T. Nicholson, G. P. A., A., T. & S. F. railroad, Chicago.

Tourist tickets now on sale at reduced rates to Pueblo, Colorado Springs, Manitou and Denver, over the picturesque line, Santa Fe Route.

Gossip About Stock.

C. F. Stone, of Peabody, recently purchased a very fine Holstein-Friesian cow of Sunny Slope farm, Emporia, which completes his show herd, which promises to be a great prize-winning herd.

J. T. Cooper, of Altoona, Wilson county, Kansas, a successful breeder and exhibitor of Poland-China swine in southeastern Kansas, will soon announce in these columns a public sale. Mr. Cooper is a good breeder and proposes to make a toppy sale.

S. T. Fyffe, breeder of Duroc-Jersey swine at Chanute, Neosho county, Kansas, has been doing a large business with his favorite breed, having sold 108 head this season at very satisfactory prices. He expects soon, on account of his increased herd, to do missionary work in behalf of Duroc-Jerseys all over the State, by having a card in the KANSAS FARMER "Breeders' Directory."

Especial attention is called to the notable public sales of pure-bred swine in this issue. There has never before been such grand offerings as these sales afford, and every one interested in pure-bred swine should endeavor to make these sales a success, because so much will depend on the result for the future welfare of swine breeders. The stock offered is as good as may be found anywhere, and as they will be sold regardless of price, every one interested should make it a special order to be present.

The last call is made this week for the Gresham & Nation grand combination sale of Poland-China swine, to be held, as per advertisement, at Hutchinson, Kas., on next Thursday, September 10, 1896. This sale offers a grand opportunity for farmers and breeders to get some of the finest of the breed at their own prices, as will be seen by referring to an extended notice of these herds in the FARMER of August 13 and 20. It is the duty of every Poland-China breeder to attend every sale of their fellow breeders whenever it is possible. The interests of the breed and breeder are at stake.

One of the strongest sales of registered Poland-China swine announced so far this year in the West is that of Mr. W. H. Wren, the central Kansas breeder, of Marion. Feeling justified that the individuality and breeding of his offerings merited a more extended acquaintance among the Western breeders, he concluded to hold his next sale at St. Joseph, Mo., on Thursday, September 17, 1896. Our live stock field man reports that the thirty young sows that will be offered are both strong in individuality and fashionably bred. A major portion are safe in pig to four harem masters whose equal is hard to beat anywhere. The young boars and gilts are first-class. Send for a copy of the free sale catalogue, and govern yourselves accordingly.

Those of our readers interested in Poland-China swine will find on looking through the sale catalogue announcing the annual sale by the successful Atchison county breeder, Mr. M. C. Vansell, of Muscotah, that he will offer on Tuesday, September 8, 1896, seventy-five head, consisting of about twenty matured bred sows, fall gilts and sixty youngsters. Our live stock field man reports the offerings in excellent condition and among the best that he has looked over this year. The catalogue is a very complete one and gives a detailed exposition of the breeding of the herd. Two matured boars, Kansas Chip 15083 O. and Young Competition 15082 S., a consignment by J. E. Hoagland, proprietor of Lawn Ridge stock farm, will also be sold. Write Mr. Vansell for a free copy of his catalogue.

SUNNY SLOPE FARM.—A FARMER representative stopped over one train at Emporia, last week, and drove out to C. S. Cross' Sunny Slope farm, thinking our readers would be interested in knowing the "white-face" situation there, as but little has been heard from that quarter since their great closing-out sale of Poland-Chinas. H. L. Leibfried, the manager, is as active and enthusiastic over Herefords as he was with swine, and is certainly a very skillful breeder and handler of this famous beef breed. Sunny Slope farm now has twenty-four head of bulls and heifers that are extremely fine. The head of the herd, Wild Tom, is in extra fine condition. He is one of the best sons of the late Beau Real and has proven himself a sire probably much younger than Beau Real did, which will be seen from the great bull, Gladiolus, and the two yearling heifers, Miss Hillhurst 2d and Idalla 2d. Another herd bull, Archibald V., has probably more prize-winners to his credit than any bull in America for his age. He is of the low-down, beefy and thick-flesh kind, and weighs, in breeding condition, 2,000 pounds. He is the sire of the undefeated sweepstakes calf under 1 year, Archibald VI., who is now in very fine condition and is ready to step into the show ring at any time. Sunny Slope farm offers this animal for sale. We also saw Miss Wellington 5th, a half sister to Archibald VI., and

sired by Archibald V. She probably has the best show record of any heifer in America. She took first in class and sweepstakes over all beef breeds of any age when she was but 12 months and 10 days old, which is a remarkable record. This will give the readers some idea of the remarkable breeding qualities of Archibald V. Their sweepstakes bull, Climax, is very long in the body, very low down and a handsome bull, showing a great deal of quality and has proven himself to be a breeder, as shown by two or three fine calves sired by him. They are but a few weeks old. Sunny Slope farm has some extra fine yearling bulls for sale and several ready to go in the show ring and show in the hottest competition. They also have some extra fine heifers. As they do not expect to show this year it would be advisable for any one that is short a calf, yearling or two-year-old to show, to visit Sunny Slope farm. They are prepared to furnish anything in the Hereford line out of their immense herd. They have fifty bulls, from 8 months to 2 years old, and their prices are as reasonable as any responsible breeder. There is also at Sunny Slope farm the great yearling Poland-China boar, Harry Faultless. He is now being fitted to be shown at the Kansas State fair this year. This great boar is owned by Irwin & Duncan, of the Elm Beach stock farm, Wichita, Kas. Mr. Irwin bought this hog at their sale, and, according to contract, he is being fed and fitted for the show ring by Sunny Slope farm. This is the reason he is still there. He is a hog with a great deal of quality, with extra head, typical ear, bright eye, fine, arching crest, shoulder and back that cannot be criticised. He is very deep up and down the chest, with extra hams, and shows an extra amount of finish and is in fine condition. This pig should be watched by breeders, as no doubt he will be heard from this fall.

Publishers' Paragraphs.

Many of KANSAS FARMER readers are familiar with the New York Tribune, the paper upon which Horace Greely expended the best labors of a lifetime. We have perfected arrangements by which we can furnish one year's subscription to KANSAS FARMER and New York Weekly Tribune for \$1.25, received at this office.

The enterprising publishers, S. W. Straub & Co., Auditorium building, Chicago, have put into one volume two of their most popular Sunday school singing books, "Beautiful Songs" and "Living Fountain," making a work twice the usual size. The price is the same as that of ordinary books, 35 cents. The publishers will mail one sample copy for examination upon receipt of only 20 cents. Mr. Straub's books have always been regarded as very excellent, and this combined book, with its double amount of the richest music and its extremely low price, will be quickly appreciated by Sunday school workers.

CHANCE FOR YOUNG FOLKS.—Whether 16 to 1 or the gold standard will carry this fall is a matter of great interest to our patrons; but how to make a salary of \$4 per day may interest our young readers, who at this season of the year are on the alert for a paying position. The Star Hame Fastener, which is regularly advertised in another column of our paper, is a most useful and practical device for doing away with hame straps and will last for a life-time. They should be used by every farmer and horseman. Send 25 cents to the Star Hame Fastening Co., 80 Dearborn street, Chicago, and get a sample, and the agency of your town.

THE NEGLECTED ALTAR.—Believing that much of the increasing neglect of family worship is due to the difficulty encountered in hastily selecting passages of Scripture of a suitable devotional character, Sylvanus Stall, D. D., a careful Bible student and the author of several valuable books, has prepared a volume of 365 selections from the Bible for daily devotions, and the Funk & Wagnalls company, of New York, will publish the same in a few days in a neat dollar volume. The selections are also for use in the chapel services of colleges, the opening devotions in the public schools, and for the daily use of Christian Endeavorers and members of other societies of young people.

Theodore Roosevelt contributes to the September Review of Reviews a characteristic study of "The Three Vice Presidential Candidates and What They Represent." The time is peculiarly opportune for a re-examination of the Vice Presidential office, and Mr. Roosevelt offers some pertinent suggestions as to the proper status of the Vice President in our scheme of government. He believes that the Vice President should represent the principles on which the President was chosen to office, that he should have a seat in the Cabinet, and that his official power should be increased in several directions. Mr. Roosevelt's comments on the personalities of the three candidates now conspicuously before the country are direct, pointed and decidedly Rooseveltian.

September Notes.

Push the corn-cutting.
Push the grass-seeding.
Better cut a surplus of fodder than not enough.

Be ready to sow wheat by the middle of the month.

In weaning put the dams on dry feed for a few days.

This month is one of the best for fattening old cows.

Fatten all old sheep; it is of no advantage to winter them.

All stock selected out for market should be pushed now.

Accustom all young stock to eating well before weaning.

Put the hogs for early market on a full fattening ration.

As the pastures fall supply feed in some form to the stock.

Store up the feed in convenient places for feeding out this winter.

Animals to be wintered over should be kept in a good condition now.

Be prepared to shelter the stock as soon as the nights begin to get cold.

It is of no advantage at this time to allow stock to remain out exposed to cold rains.

Digging the sweet potatoes is the first part of the work in storing away the vegetable crop.

Let the Irish potatoes be well dried out before they are stored away either in the cellar or pits.

Push the fattening of the earliest hatched turkeys and get them ready for market in good season.

See that no fruit is allowed to go to waste. What is not used in other ways can always be fed to stock.

Better have everything a little ahead of a cold storm than to be caught even a little behind and have the stock exposed.

It is a good plan at this time to have the fowls intended for market in good condition so that they can be sold at any time.

Save all of the small beets, turnips, apples, potatoes and cabbage that have not headed to feed the poultry during the winter.

Proportion the number of stock to be sold by the amount of shelter and the amount of feed. Sell all that cannot be well fed and made comfortable.

Better haul in and rick up the greater part of the corn fodder convenient to the feed lots than to let remain out in the fields exposed to all kinds of weather.

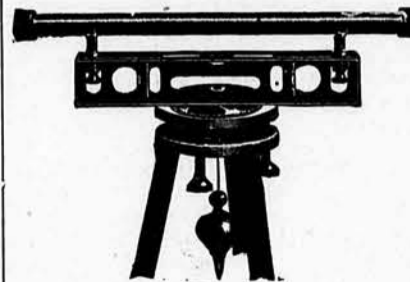
Where trees are to be set out in the fall it is a good plan to plow the ground and get it fully ready to receive the trees, that should be set out as soon as the leaves have fallen.

In many cases where the trees are making a good growth it will be found a good plan to remove the mulch in order to give the late growth of wood plenty of time to harden.

When the conditions are favorable in nearly all cases it will be found advisable to sow both wheat and grass seed reasonably early, so that a good start to grow can be secured before cold, freezing weather sets in.

Leveling Instrument.

In laying off land for irrigation, a matter of first importance is to determine the levels. The KANSAS FARMER has desired to offer its patrons a reliable, low-priced instrument for this purpose, and has finally secured the one herewith illustrated. It is



manufactured by L. S. Starrett, a well-known and reliable manufacturer of fine mechanical tools at Athol, Mass., who warrants it to be true in every respect.

The price of the instrument is \$12.50 at the factory. By a special arrangement we are able to furnish it to subscribers, together with a year's subscription to the KANSAS FARMER, delivered at any express office in Kansas, charges prepaid, at the manufacturer's price. Send orders with money to KANSAS FARMER Co., Topeka, Kas.

KENDALL'S SPAVIN CURE

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DR. B. J. KENDALL CO.

Sirs:—I have used your Kendall's Spavin Cure with good success for curbs on two horses and it is the best Liniment I have ever used.

Yours truly, AUGUST FREDRICK.

For Sale by all Druggists, or address
Dr. B. J. KENDALL COMPANY,
ENOSBURGH FALLS, VT.

FARMERS

DO YOU WANT TO BETTER YOUR CONDITION? If you do, call on or address: The Pacific Northwest Immigration Board, Portland, Oregon.

Send \$1.35 to KANSAS FARMER office for one year's subscription to KANSAS FARMER and Chicago Weekly Inter-Ocean.

We can furnish you KANSAS FARMER and Peterson's Magazine, each one year, for \$1.75. Or KANSAS FARMER and Arthur's Home Magazine for \$1.65. Send to this office amounts above named.

"Dairying for Profit, or the Poor Man's Cow," is practical, was written by a woman who knows what she is talking about, and is cheap—only 10 cents for a 25-cent book, to subscribers for the KANSAS FARMER. Send to this office.

If You Would Keep Cool

take the "Twin City Special" any evening from Kansas City, Leavenworth or St. Joseph, on the Chicago Great Western Railway (Maple Leaf Route), and spend a few days at the beautiful Minnesota lakes. Summer excursion rates now in effect. Through sleepers, free chair cars and cafe dining cars. Full information as to desirable resorts in the Northwest will be cheerfully furnished by G. W. Lincoln, Traveling Passenger Agent of the Chicago Great Western Railway, 7 West Ninth street, Kansas City, or F. H. Lord, G. P. & T. A., Chicago.

List of Kansas Fairs for 1896.

Following is a list of fairs to be held in Kansas during the present year, their dates, locations and Secretaries, as reported to the State Board of Agriculture and furnished by Secretary F. D. Coburn:

Allen County Agricultural Society—H. L. Henderson, Secretary, Iola; September 8-12.
Brown County Exposition Association—E. H. Hoyer, Secretary, Hiawatha; September 15-19.
Chase County Agricultural Association—H. F. Gillett, Secretary, Cottonwood Falls; September 15-18.
Cloud County—Concordia Fair Association—Homer Kennett, Secretary, Concordia; September 29-October 2.
Coffey County Fair Association—J. E. Woodford, Secretary, Burlington; September 15-19.
Douglas County—Sibley Agricultural Association—Wm. Bowman, Secretary, Sibley; September 10-18.
Finney County Agricultural Society—D. A. Mims, Secretary, Garden City; October 6-9.
Franklin County Agricultural Society—Chas. H. Ridgway, Secretary, Ottawa; September 22-26.
Greeley County Horticultural and Fair Association—I. B. Newman, Secretary, Tribune; September 8-9.
Jackson County Agricultural and Fair Association—S. B. McGrew, Secretary, Holton; September 14-18.
Johnson County Co-operative Fair Association—C. M. Dickson, Secretary, Edgerton; September 15-18.
Linn County Fair Association—Ed. R. Smith, Secretary, Mound City; October 6-10.
Miami County Agricultural and Mechanical Association—Geo. P. Leavitt, Secretary, Paola; September 29-October 3.
Montgomery County—Southeast Kansas District Fair Association—D. W. Kingsley, Secretary, Independence; October 13-16.
Morris County Exposition Company—E. J. Dill, Secretary, Council Grove; September 22-25.
Nemaha Fair Association—John Stowell, Secretary, Seneca; September 8-11.
Neosho County Agricultural Society—H. Lodge, Secretary, Erie; September 8-11.
Ness County Fair Association—Sam G. Sheaffer, Secretary, Ness City; September 17-19.
Osborne County Fair Association—F. P. Wells, Secretary, Osborne; September 15-18.
Riley County Agricultural Society—R. C. Chappell, Secretary, Riley; September 15-18.
Rooks County Fair Association—David B. Smyth, Secretary, Stockton; September 8-11.
Saline County Agricultural, Horticultural and Mechanical Association—H. B. Wallace, Secretary, Salina; October 7, 8, 9.
Sedgewick County—Kansas "State Fair"—C. S. Smith, Secretary, Wichita; September 22-26.

The Home Circle.

WHAT IS LIFE?

Ah, what is life? 'Tis but a dream
Within the silent hours of night,
A changeable, uncertain scene,
That vanishes at morning light;
Or like some lonely bark that's seen,
Drove onward by the boisterous wind,
Till sinks beneath some flowing stream,
Nor leaves a single trace behind.

'Tis like the flowers that clothe the field,
So fair and lovely to the sight;
At morn they all their fragrance yield,
But droop and fade away at night;
Or like some tender bud that's seen
Flung from its own dear parent spray,
To-day in all its beauty seen,
To-morrow pluck'd or blown away.

'Tis like a bird, that sits to sing
Its matin on some well-known spray;
Some hunter views the little thing,
And joys to take its life away.
He points his gun, the trigger's press'd,
The shot with lightning speed has fled,
It strikes the victim in its breast,
It strives—its sufferings cease—'tis dead.

Such, then, is life—uncertain thing—
And such its short, uncertain stay;
To-day our lives are on the wing,
To-morrow death may call away;
For, like the bird, e'en so are we,
Oft joyful in our youthful bloom,
Till from the bow death's arrows flee,
And bear us onward to the tomb.
—D. H. Marshall.

Written for KANSAS FARMER.

TO THE GIRL WHO GOES AWAY TO SCHOOL THIS FALL.

In our magazines and papers we have so much advice to girls for one thing and another, but not for a long time have I seen one to you.

Not all of you will need a word from me, because you have mammas, aunts, sisters and cousins who are getting everything in order for you, and all you will have to do when September 15 arrives will be to put on the pretty new traveling suit, and a fond papa or a devoted uncle will accompany you and put you safely into the arms of the stately matron of the seminary.

Some are not so fortunate. Possibly one has been teaching her first school in the country and saved all her salary, so that, by faithfully economizing, she can get through a year at college. Another may have that article, a step-mamma, who is planning to get her away, and yet not making the path very plain or strewing it with roses.

When I think of the first time I went away from home—of those dreadful first seven weeks, the nights I cried with homesickness till no more tears would come, nothing but little sobs and gasps—I think I must tell you a few little things that will make it easier for you.

The feeling will come, in spite of everything, that you don't want an education; all you want is to be tucked up in your own little bed at home. But you must make up your mind to this, and promise yourself that, if you still feel the same after you have been there a month, that you will write for money to go home on. This will help you lots.

All the catalogues will tell you what you must bring. It is always safe to take your own towels and soap. They take up so little room. And down in the bottom of your trunk be sure and fold a couple of woolen blankets. Even if the sun is hot in September, it will soon be cool, and in those large dormitories they seldom start up the heating apparatus till very late. A nice little soft pillow, too, should be put in one end of your trunk. Often we find very hard places to lay our heads when away from home. These may comfort you much more than some fine clothes, costing double the money.

The subject of clothes is a serious one. Some are so sensitive and others very independent. You should have one brand splinter new woolen dress for winter, for church wear and society nights. Several shirt waists for the fall months; these you can get laundered easily. Be careful not to select too light colors. The linen shades and blue chambrays seem to stay fresh longest. Have two dark skirts and pretty flannel or plaid waists for later on. A dark blue calico to slip into to "red up" your room in, some slippers to rest your feet. Your underwear—I can but say it is difficult to get too much. One should send to the wash as often as once in three weeks. Your hats ought to be simple ones that you can tie down with a thick veil, in order to protect your complexion. Therein lies woman's greatest beauty.

The crochet needle and a bit of lace begun must not be left behind. Any little bit of drawn work that you have been interested in at home you may be sure will help out some lonesome hour here.

Every girl should take one newspaper of her very own, at home or at school. No matter if there is a reading-room, you must begin an independent life, and the home paper will be welcome, indeed, when the usual weekly letter has been delayed.

About your room-mate. Of course she will be a stranger, and you must not be cranky, but remember, she has never been away from home, either. Don't take a dis-

like to her until you have pretty good cause. If she should happen to put her cold feet against yours in bed, don't get up and fuss about it, but take an extra quilt, fold carefully first, then roll in a nice, long, hard roll and pin with safety-pins and put between you. She will not be offended. Tell her that's the way you do when your cousins visit you.

The dining-room was the most embarrassing ordeal for me. If your seat is appointed, or if you select one yourself, be sure and keep the same one. Be on time when the gong sounds. It will attract less attention than to be late.

Do not wait till you get to the college to decide what branches you wish to pursue. Have that matter looked up definitely beforehand. Do not be over-persuaded by some disinterested party after you get there that you will study French, when it has always been your ambition to study higher mathematics when an opportunity offered. Be not in too great haste about anything, but be firm and sure about what you do want.

The first few days will drag dreadfully, and it will be so tiresome seeing so many others greet their friends who have been separated all summer and hear them recall the good times they had the spring term, but don't lay it up against the poor things. Just think what an effort you will make next fall (if you get to come back) to make the new girl comfortable and show her where to find the different class-rooms, and where the hydrant is, and how you will take her into chapel, so she won't be so lonesome as you are now.

I have little to say in conclusion, only be very respectful and very polite to the matron. She will help you more than any one. Try to see all the good points in your room-mate, for possibly you may not live up to her ideal, and you may need some charity from her. Don't borrow; rather go without. Don't neglect to write home; you may not realize how much they miss you.

If you have made a definite arrangement beforehand (which you should by all means do) your room has been engaged and you will have in your hands a letter from the general manager, stating the number of your room and perhaps the name of the young lady you are to room with; then there will be no necessity for you to go till the evening school opens, for you will want to go to work as soon as possible.
Wellington, Kas. A. A. C.

Remedy for Blackheads.

The simplest and surest remedy for blackheads is the bathing of one's face every night with very hot water, drying it with a soft towel, and then rubbing in very gently some cold cream, perfumed or not as you fancy. In the morning wash your face well with hot water and soap, and then give it a bath in tepid water, so that all the soapsuds may be removed.

Proper Adjustment of Sashes.

The deep sash of ribbon is much worn by fashionable women. It is slightly pointed in front and is fully a quarter of a yard high. It is, in fact, one of the recent borrowings from the Marie Antoinette period. Skillfully adjusted it is pretty and becoming, but put on by one who doesn't know how it is stiff and ugly to the last degree. It should have the look of easily swathing and suggesting the lines of the figure.

The Latest Health Fad.

The latest health fad is paper pillows. The paper is torn into very small pieces and then put into a pillow sack of drilling or light ticking. The pillows are very cooling in hot weather, and are said to be superior to feather ones. Newspapers are not nice to use, as they have a disagreeable odor of printer's ink, but brown or white paper and old letters and envelopes are the best. The finer the paper is cut or torn the lighter it makes the pillow.

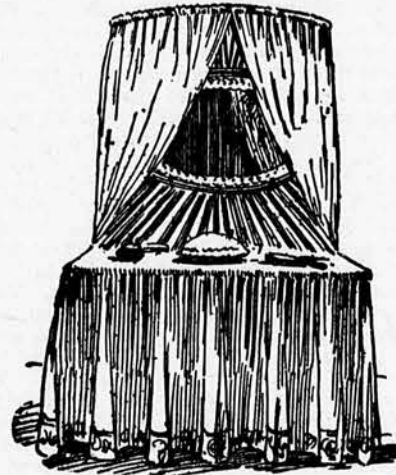
Mackerel a la Hollandaise.

Clean the fish, as may be required, according to size; wash and dry them, remove the backbone, rub the inside with salt and set them aside. Put into a saucepan a few small shallots, mushrooms and parsley, all well chopped; toss them into butter till tender, and in the meantime prepare a stuffing with cold remains of fish or veal, etc., pounded sardines, a couple of anchovies, the roe and liver of the fish, all mixed with a little butter, and if necessary slightly moistened with a tablespoonful of stock; fill the fish with this paste, after having well mixed it in a mortar with the chopped shallots, etc. Tie the fish in buttered paper dipped in olive oil, and grill over a brisk fire. Serve, after having taken off the paper, with a tomato sauce.

NICE DRESSING TABLE.

Made by an Ingenious Woman at a Cost of Six Dollars.

This dressing-table I call a veritable work of art, and yet the clever woman who made it shows you a little bill with it which is astonishingly low, for it is strictly homemade. I am not generally enthusiastic over packing-box furniture, and this belongs to that class of goods, only you would never guess it. It is "upholstered" with pale blue cambric under white dotted muslin, to which the tiny edge of lace adds a dainty finish. Two boxes of generous dimensions are the foundation. One



PRETTY DRESSING TABLE.

underneath is used by the housekeeper for her linen, which is laid away neatly in little piles upon the white oilcloth-covered shelves. The box is lined with small brass-headed tacks. In front fall the double curtains of muslin and cambric. Overhead an iron rod is bent into a half circle, painted white, and then attached to the headboard, and on this is run the curtains that fall over the front. The back of the dressing-table, which is also in blue and white, has a mirror in the center—"the only expensive thing about it," confesses its owner, "for it cost six dollars. But one might use simply a piece of mirror plate, if they wished, with the muslin drawn or puffed around it. I bought this handsome glass with its white and gold frame because I felt that when I wished I might use it anywhere."
Orange Judd Farmer.

DIMPLES TO ORDER.

Women May Get the Most Fascinating of Them for a Price.

You can now get a coquettish dimple on your face for \$300. It is a high price, and lots of pain must be suffered; but women will have them, no matter at what cost. London surgeons manufacture a fascinating dimple for the sum named. But it is considered a good investment by plain women who are getting fearful about their chances of marrying.

And the woman who desires to rid herself of wrinkles, crow's feet, and generally to improve the condition of her facial cuticle, can retreat from the world for a time, enter the abode where beauty, skin deep, is manufactured, and submit to a course of treatment, which, as a mere cure for disease, would seem appalling—for it literally means being flayed alive by acids and electricity. When she emerges with a faultless skin of babyish texture she will begin the study of her features, and, if not found satisfactory, they, too, in turn, must be doctored. The nose may be straightened by wearing a metal mask, the mouth made the proper artistic size by a surgical operation, and the eyebrows arched to a symmetrical curve.

The two great difficulties encountered in remodeling personal appearance are the reduction of surplus flesh for fat women, and the creation of adipose tissues for the lean woman. The stout woman who wishes to become graceful and sylphlike must practice a diet-sheet and undergo a series of daily exercises that will prove a pain as well as a weariness to the flesh. While the substitution of Venus-like proportions for an emaciated figure is even a more tedious and difficult task, involving the complete building up of the nervous system and digestive organs.

Enamel is rarely used nowadays by the most enthusiastic devotee of beauty. Arsenic has also lost its prestige, and the use of varnish as a cosmetic has vanished into limbo. The woman who loves beauty, but has not

Keystone Woven Wire Fence
IS THE BEST FOR FARM USE.
25 and 28-inch for hog lots. 46, 55 and 58-inch for general use.
Send for illustrated catalogue.
KEYSTONE WOVEN WIRE FENCE CO.,
12 Rush St., PEORIA, ILL.

the courage of her convictions to the extent of suffering for the cause, "goes in" for the best possible substitutes—plenty of out-door exercise, the rule of "early to bed," and a generally normal existence that leaves her nerves uninjured and her disposition unruffled.—Chicago Chronicle.

Vest Pocket Soda Water.

A curious apparatus for making soda water at home is being shown by an English concern. The method comprises the compression of the liquid carbonic acid at 60 atmospheres into small steel pear-shaped cartridges about five-eighths of an inch in diameter at the largest part. Such a cartridge is placed in the mouthpiece attached to a soda water bottle, and a cap is closed over it. In completing the closure a tiny ebonite plug in one end of the cartridge or "gas drop" is punctured, and the gas escapes into the bottle, dissolving into the water. Twelve of these drops weigh three ounces.—New Ideas.

After You Have Eaten Onions.

Take a small cup of black coffee as soon after eating onions as convenient, and, if you are at home, use a mouth wash and gargle of a glass of water in which has been put a few drops each of camphor and myrrh. If you are away from home take the precaution to slip into your pocket a bit of orris root. A little of this will do something towards destroying the offensive onion fumes.

FREE TO ALL WOMEN.

I have learned of a very simple home treatment which will readily cure all female disorders. It is nature's own remedy and I will gladly send it free to every suffering woman. Address
MABEL E. RUSH, Joliet, Ill.

AGENTS To sell cigars to dealers; \$18 weekly, experience not required. Samples free. Reply with 2c stamp. National Consolidated Co., Chicago, Ill.

FREE! A DRESS. Every woman who reads this can get a dress FREE by writing at once to L. N. Cushman & Co., Boston, Mass.

FREE! Cut this out and send to-day for free catalogue. \$2.75 boys natural fish Baby Carriage with plated steel wheels, axle, springs, one piece bent handle, 3 years guarantee. Carriages sent on 10 days FREE TRIAL. BY TRUCK FACTORY & BAYE DEALERS. PROVIDENCE, OXFORD BROS. CO., 340 Wabash Ave., CHICAGO.

ORGANS FREE on trial. High-grade, popular priced Organs, such as never were offered before. Unequalled for sweetness of tone and beauty of design. We have a large assortment at lowest prices. Send for Our Mammoth Catalogue. **H. R. EAGLE & CO.,** 68 and 70 Wabash Ave., Chicago, Ill.

RHEUMATISM

Results from a Bad Liver and can be Cured by Using

Dr. J. H. McLEAN'S LIVER AND KIDNEY BALM

A Certain Remedy for Diseases of the Liver, Kidneys and Urinary Organs

At Druggists. Price, \$1.00 Per Bottle

THE DR. J. H. McLEAN MEDICINE CO. ST. LOUIS, MO.

The Young Folks.

"MOTHER'S ROOM."

I'm awfully sorry for poor Jack Roe; He's the boy that lives with his aunt, you know; And he says the house is filled with gloom Because it has got no "mother's room." I tell you what, it is fine enough To talk of "boudoirs" and such fancy stuff, But the room of rooms that seems best to me, The room where I'd always rather be, Is mother's room, where a fellow can rest, And talk of the things his heart loves best.

What if I do get dirt about, And sometimes startle my aunt with a shout? It is mother's room, and, if she don't mind, To the hints of others I'm always blind, Maybe I lose my things—what then? In mother's room I find them again, And I've never denied that I litter the floor With marbles and tops and many things more; But I tell you for boys with a tired head It is jolly to rest it on mother's bed.

Now poor Jack Roe, when he visits me, I take him to mother's room, you see, Because it's the nicest place to go When a fellow's spirits are getting low; And mother she's always kind and sweet, And there's always a smile poor Jack to greet, And somehow the sunbeams seem to glow More brightly in mother's room, I know, Than anywhere else, and you'll never find gloom Or any old shadow in mother's room. *Harper's Young People.*

THE PROFESSOR'S RIDE.

It Wasn't as Much Fun for the Boys as They Thought It Would Be.

The late Prof. W. H. Harrison, who for many years was at the head of a popular boys' school in Amelia county, Va., was much loved and respected by his many pupils, and had a rare faculty for managing them. "He wasn't forever nagging us, but, as some of us learned by experience, he let the punishment fit the crime." So said one of his former pupils, now a prominent lawyer in Richmond; and then he related the following story:

The professor was accustomed to take a drive every sunny afternoon in a heavy, old-fashioned coach drawn by a large gray horse. One day, shortly after he had returned from his drive, half a dozen of the boys espied a coach standing in the driveway, where it had been left temporarily, and were seized with the idea that it would be great sport to secrete it.

Chuckling softly among themselves, they stole near to make sure that the colored driver was busied with the



THE PROFESSOR LOOKED OUT.

horses inside the stable. Then they took hold of the thills, three on one side and three on the other, and drew the coach out of the grounds and down a long hill into a pine grove.

"Won't the 'Old Goat' be puzzled to know where his coach is?" said one fellow, with a laugh in which the others joined.

"Old Goat" was a term of affectionate familiarity which the boys applied to the professor behind his back, and which really savored nothing of disrespect.

The roguish youths indulged in jokes and merriment as they tugged the coach into a position out of which it would be difficult to remove it. This they had just accomplished when, to their consternation, Prof. Harrison put his head out of the coach window, his eyes twinkling, and said, in his dignified, slow way:

"Well, boys, you've had the fun of hauling me down here, and now I must request you to haul me back again." Smiles fled, faces grew long, and the boys stood aghast.

"All—right—sir," stammered one. The professor settled back on the cushions, resumed the book which he had been quietly reading when the "fun" began, and the boys proceeded to drag the coach back to the grounds.

How they worked! The hill was never before half so long nor half so steep, but after almost an hour of

puffing and perspiration the job was done.

Then Prof. Harrison opened the coach door, and, descending, said, with marked courtesy: "I thank you for my ride; I hope you have enjoyed it as much as I have."

"Yes, sir," answered one of the boys who knew not what else to say, and felt that some response was called for.

There the matter ended, so far as the professor was concerned, for he never alluded to it again. The culprits on their part resolved never to mention it, but it was too good a story to keep.—*Youth's Companion.*

FISH EATING GRASS.

Oregon Farmer Claims That Carp Are Denuding His Meadows.

A rancher whose place is on the bottom along the Willamette slough, below Holbrook Station, was in the city the other day to find out whether he had recourse to the United States fish commission for the introduction of carp into the rivers of this section.

He says these fish are destroying his meadows by eating his grass and grubbing up the roots. As the water overflows his meadow the carp follow it up in thousands, the small ones weighing about three pounds pushing their way up where the water is only three inches or so in depth and clearing off all vegetation, so that when the water recedes he will have mud flats in place of meadows.

He says that while looking at the fish eating his grass he got so mad that he took off his shoes and stockings and went out into the shallow water and attacked them with a hoe. He slashed a lot of them in two, but when the drove became alarmed and made for deep water they bumped their noses against his shins and came near knocking him off his feet, and his ankles are black and blue from the thumping he got. As for driving the carp away, he says he might as well have tried to sweep back the rise of the Columbia with a broom.—*Portland Oregonian.*

Spoke to the Wrong Man.

A millionaire railway king has a brother who is hard of hearing, while he himself is remarkable as having a very prominent nose. One evening the railway man dined at a friend's house and was seated between two ladies, who talked to him very loudly, rather to his annoyance, but he said nothing. Finally one of them shouted a commonplace remark and then said, in an ordinary tone, to the other: "Did you ever see such a nose in your life?" "Pardon me, ladies," said the railway man, "it is my brother who is deaf." Imagine the horror of the lady.

Carried His Plety Too Far.

The late Sir Richard Burton was at one time exploring Afghanistan in the disguise of a Mohammedan holy man. He played his part to perfection and was enjoying his success, when one of the holy men of the village came to him and advised him to leave without delay. "What!" exclaimed Burton, in some alarm. "Do not the people like me?" "They like you so well," replied the holy man, "that they are discussing the advisability of keeping you here for life, so that they may possess your tomb." Sir Richard left that particular village in a great hurry, and afterward took pains to be not quite so pious.

The Little Pianist's Plaint.

One—two—three—four—
Practicing is such a bore!
How my little finger aches!
Wish I didn't make mistakes!
One—two—three—four—
Guess that's Bessie at the door;
Yes, she's teasing Tommy's pup;
Wish my quarter-hour was up
One—two—three—four—
Practicing is such a bore
One—two—three—four—
Oh, it rains. It's going to pour!
And my kitty's out at play;
I must fetch her right away!
One—two—three—four—
Practicing is such a bore!
—Emma C. Dowd.

To Put an Egg in a Bottle.

An egg in a bottle is a great curiosity to the uninitiated. Soak an egg in strong cider vinegar till the shell softens, and it will bear sufficient pressure to be gently forced lengthwise into a wide-mouthed bottle. Pour cold water over the egg repeatedly and it will resume its natural shape and color.

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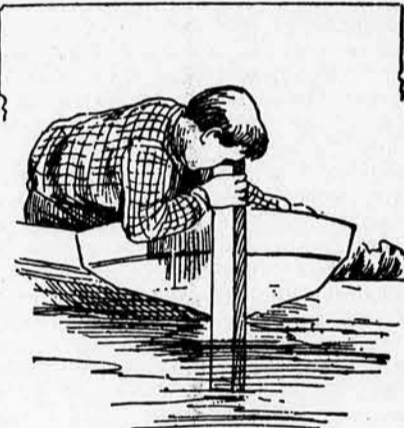
WHERE FISHES SWIM.

This Tells How Any Bright Boy Can Make a Waterscope.

If you go to the lakes or to the seashore this summer you should take a waterscope along with you.

A waterscope is a device which will enable you to peer down to the bottom of a lake or stream and see the seaweeds, with the fish resting among them. Any boy can make one of them very easily, and he can have no end of fun using it.

The waterscope consists of a long, narrow box, covered at one end with glass—ordinary window glass. To make it get four pieces of smooth, straight-grained pine wood, one-quarter of an inch in thickness, 20 or 24 inches long and 2½ inches wide. Have these pieces made true and exact in measurement. Carefully tack them together with brads in the form of a long box. It may be well before joining them to daub on a little white lead paint, so as to make the joints watertight. Now cut a piece of glass the size of one end of the long box. You can readily cut glass with an old pair of shears by holding it under water. Fasten this piece of glass to the end of the tube by means of a few small tacks driven close to its edges. Then putty it carefully round, and, when the putty is thoroughly dry, paint the box



WATCHING THE FISH.

and putty, taking pains to fill all the cracks. This is necessary to make the box watertight.

In a day or two your waterscope will be dry enough for use. On some bright sunny afternoon push your boat out on the lake or stream where you wish to experiment. Thrust the glass end of the waterscope well under the surface of the water and place your eye at the other end. You will find that you can see through the water with great distinctness, often to the hiding places of fish among those forests of the lake bottoms, the seaweeds. The object of the waterscope is to cut through the disturbed surface of the lake where your boat stands, and also to protect your eyes from the reflection of the sun on the water. Of course it does not act like a telescope, and you cannot see to the bottom where the water is very muddy or where it is very deep.

But you will be astonished at what a fairyland of beauty the waterscope will reveal along the edges of some of our clear lakes on a sunny day. Often you can see a big clam, with his mouth wide open, waiting for his dinner to drop into it, or a lazy pickerel or a sunfish resting near the bottom, and sometimes you will see lost objects of

various kinds, including trolling hooks and lines and other things of a similar nature. The writer once knew a man who found a watch he had dropped into the lake by means of a waterscope.—*Chicago Record.*

ALAS.

Where did it come from—all the grace
Of the merry smile which made its place
With a shine and gleam,
Like a bright sunbeam,
On Dorothy Mabel's dear little face?
The eyes of blue—
They were in it, too,
For they had been dancing all the while.
The dimples had spread,
And the lips so red—
All made up that beautiful smile.

Where did it go to? Ah—well! well!
What a sorrowful tale to tell!
The beauty and grace
Of the sweet, sweet face
All gone out with the cloud which fell
O'er the shining eyes—
What a sad surprise!
Lowering, gloomy as darkest skies.
The dimples fled,
And the lips so red
Pouted and curled, with the corners down.
Alas, to see
That a smile could be
Chased away by an ugly frown!
—*Sydney Dayre, in N. Y. Independent.*

Facts About Blue-Eyed Cats.

It is a curious fact that blue-eyed cats are invariably deaf. Mr. J. Harrison Weir, a great authority on the cat, once bought a big, white, blue-eyed beauty, which seemed to be every inch a good cat, except that its vocal organ was of such robust power that her cries drove the household frantic. After some strange experiences the problem was solved by this voiceful specimen being taken home by a kind old lady, who was herself stone deaf.

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

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

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

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

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

An exchange contains notices of ninety-one breweries and brewing companies in various parts of the country, but not one of them is in Kansas.

Secretary Coburn will embody in his next report more about dairying than has heretofore been known in Kansas. It is to be hoped that he will be permitted to print a liberal edition, so as to widely disseminate the useful information.

The *Industrialist* mentions that E. A. Popenoe, professor of entomology at the State Agricultural college, has gone to some of the insect-infested portions of the State. It is to be hoped that he will soon issue a bulletin of valuable information as to practical methods of fighting the numerous pests, whose numbers as well as appetites are greatly on the increase in the western part of Kansas.

Agriculture furnishes, of the exports from the United States, varying proportions of the total, ranging, since 1860, from 69.73 to 83.25 per cent. of the total. Agricultural exports have in this time varied in valuation from \$256,560,972 to \$799,328,232. The year of greatest exportation of farm products was ending June 30, 1892, when the immense wheat crop of 1891 met a brisk demand at good prices, on account of the great Russian famine.

The fourteenth volume of "Transactions of the Kansas Academy of Science" is a valuable volume and interesting to those capable of following the researches. It is not all technical. Indeed there are several papers of popular interest. One of these is a paper by the librarian, Mr. B. B. Smyth, in which is an estimate that the time which must have elapsed since the boulders were dropped in the morain which occurs in several counties along the Kansas river amounts to 110,000 to 125,000 years.

BROOMCORN DAMAGED.

A vast amount of broomcorn in the vicinity of Arcola, Ill., was ruined by the severe August storms. Dispatches state that "the broomcorn is now in such a condition it is almost impossible to handle the crop. The tonnage yield will fall far short of the crop of last year. Farmers in large numbers were in the city this morning offering any price for men to assist in harvesting the crop, but were unable to secure them. The scarcity of men to cut the corn, even in the present condition of the crop, virtually means an increase of loss to farmers. The hail completely ruined field after field of both Indian and broomcorn, and it will be several days before anything like an accurate estimate of the loss can be obtained."

The region above described is the great rival of the Kansas crop and their misfortune is likely to prove beneficial to the Kansas raisers, as the product of these two States usually regulate the market

GENERAL OR SPECIAL FARMING--WHICH?

When a writer for the press describes the plans of a Kansas farmer who has made such a signal success as to attract great attention, in almost every case he writes of a man who has devoted his chief energy and most of his capital to some specialty in farming. It may be cattle or hogs, or hogs and cattle, or dairying; it may have been horses; it may be wheat or corn or potatoes; or fruit, or some particular kind of fruit, as apples or grapes; but in nearly every case investigation shows that the money was made from a specialty.

An English agricultural paper has recently published accounts of the operations of a considerable number of the larger farmers of that country. Diversification is there the rule and specialization the exception. Whether the English farmer tills 200 or 2,000 acres, he generally grows a variety of field crops and cattle, sheep, hogs and horses, also chickens, turkeys and geese. He usually has a dairy, and not infrequently produces, in addition, vegetables and fruits for the market. It should be remembered that this English farmer is usually a renter and that the payments annually made to his landlord have heretofore been as much per acre as would buy as much land in many parts of Kansas and other of the newer States. He has usually kept large numbers of stock and frequently the tenant farmer's investment in stock, buildings and appliances has been equal to the value of the land. Thus there has been a division of the investment and the rent paid has usually been not more than a moderate interest on the valuation of the land. But the rent has constituted a fixed charge to be met punctually, and the English farmer has seldom dared to risk all on a specialty. He has had to be master of every part of his business, and on account of the great reductions which have recently occurred in prices he has been obliged to ask for reductions of rents, and even after securing these is complaining that foreign competition is ruining him. His complaint is forcibly illustrated by the reported recent abandonment of farms in portions of that country which, were every acre made to produce to the limit of its capacity, could not still produce food enough for its people.

In view of these facts, what is the part of wisdom for the Kansas farmer? Should he stick to a specialty, or should he diversify his farming?

There is another view of the case which has heretofore attracted little attention in Kansas, but which must become more prominent as the years go by. Maintenance of fertility is easier under diversified than under specialized farming, unless the specialty be some kind of live stock. But improved methods of farming depend, for their economies, very much on the use of modern machinery. The investment in the special machinery necessary for the economical production of any crop is so great, and its depreciation is so rapid, that it cannot be afforded except for operations sufficiently large to give it work to near its full capacity. Unless, then, the farm is a very large one, the crop for which the farmer has provided the necessary machinery will occupy most of its area. Thus, if a farmer provide himself with the necessary drill—plows and harrows he must have for any crop—and harvesting machinery for the cheapest possible production of wheat, he will have prepared himself for wheat-growing to the extent of a considerable farm. To invest in appliances for the production of some other crop on the average farm is to overinvest in machinery and to invite loss for interest and depreciation. To undertake to raise a crop without the best machinery is to enter the competition at a disadvantage. Except, then, for the farmer of very large areas the effect of the introduction of improved machinery makes specialization almost a necessity. While the farmer whose operations are sufficiently extensive to justify him in providing the very best means for cheap production in several lines is the only one who can afford to be other than a specialist, it

is nevertheless true that this same very large farmer is more likely than his neighbor to be a specialist and is, indeed, not unlikely to duplicate his machinery. He is apt to have an abhorrence of "too many irons in the fire," and, instead of raising all crops, all fruits and all kinds of stock, will select some one or two specialties and "make or break" on these.

It is doubtless true that production in this and other new world countries at prices which almost drive the English farmer from his own market, is made possible only by the use of improved machinery, and that the influence of machinery is now and is to be in the future in the direction of specialization in farming.

Some have gone so far in this direction as to doubt whether the cattle farmer should produce wheat for his own bread or potatoes for his own table; whether he may not profitably buy his butter and eggs and leave the production of apples to Judge Wellhouse and of grapes to some one willing to deliver them at a cent and a half per pound. The time is already here when not a few are acting on this plan, though possibly condemning it. This branch of the subject is worthy of careful consideration and discussion before all the old ideals of farm life and practice, with their accompanying independence, shall become obsolete.

LESSON OF A GREAT FAILURE.

One of the business failures of last week deserves a passing notice. A good many years ago an Irishman established a mercantile house in New York city, which, in its immensity and success, brought to its founder, A. T. Stewart, the appellation of "merchant prince." It was built up during days more propitious than the present, but the success was achieved only by the closest attention to business, and the profits were increased by the observance and enforcement of the most rigid economies. It was told of him that if he saw a clerk use more string than was necessary in tying up a bundle, he took an early opportunity to show that clerk how to make as good a bundle with less string. No detail of his business escaped his personal attention. After his death the business was continued and the house has been regarded as one of the permanent institutions of New York city. An assignment was made last week, because it was found "more than difficult" to raise sufficient money to meet pressing obligations.

It has been said that the close times are weeding out the weaker concerns in business; but here is one of the multi-millionaire houses going to the wall. Probably, if times had continued easy, the house would not have failed. Doubtless if the efficient care and the economies of A. T. Stewart had prevailed, as when the business was built up, it would not have gone down.

The lessons of economy and of attention to business should be the better learned on account of the life and death history of the house of A. T. Stewart. In the almost boundless West we have the reputation of attending less to details of economy than people do in the older portion of the country. This may have resulted from the great abundance of the land, as well as from the prodigality of production. But as the days and the years come in which margins of profit are small, it is found that only those who practice economy can keep even. A valuable lesson may be learned from the great packing-houses. It is said that if the hair and the fertilizer were thrown away the profits in the packing business would be nil. So, also, if other economies were disregarded losses would result instead of gains.

It is probably necessary in all occupations to attend more to details than formerly and to observe frugalities such as have been regarded with contempt. The foundations of many of the great fortunes of this country, as well as of the more modest competencies enjoyed by the well-to-do, have been laid in frugality as well as industry. Possibly the ability to make a living in the future will depend upon the same elements.

THE MONEY QUESTION.

Go where you will, in any city, and knots of men—sometimes the knots swell to crowds—are earnestly discussing the money question. It is silver vs. gold. On street corners, in the middle of blocks, in hotel corridors, in business houses, in offices, in street cars, at the public or at the social gathering, on the way to business, going to and from church, everywhere, anywhere, the one all-absorbing topic, the theme to be talked about, the subject to be read about, to be considered with the greatest earnestness and honesty, is the money question. At first, participants were derided as "vagabond agitators," "street corner loafers," "professional wind bags," and in other uncomplimentary terms. But the interest deepens day by day; the business man is numerous in the crowd; the professional man is sometimes one of the speakers. In the smaller towns, along the country roads, in the fields and in the homes of the people, everywhere, the same subject is under consideration. When public meetings are held the reports are nearly always of the same import, viz., that the room, or hall, or pavilion, or other place of meeting, was too small for the crowd. When, in any of the great cities, a speaker of national reputation speaks, the report is that for blocks away the streets were packed with people anxious to hear.

No ill can come of such earnest consideration and discussion of the important public question now up for settlement before the tribunal of last resort, the people of the United States. The money question, like all other great questions, will never be settled in this country until it is settled right. In the present contest party lines appear to be down; people are not controlled by names or by nominations; and the ambition for political spoils seems to have less influence than ever before. It is greatly to be hoped that a settlement will be made at the coming election, and made by such overwhelming majorities as to allow adjustment of industry and business on plans which will not soon have to be changed.

A WELL-ATTENDED FAIR.

A representative of the *FARMER* spent a part of a day at the Wilson County fair, at Fredonia, last week. It was a success, so far as attendance was concerned, as over two thousand tickets were sold on Thursday. The races were fair but few in number. There was only a limited display in any department. Evidently but little inducement was offered exhibitors, however there was a creditable showing of Poland-China swine and Hereford and Short-horn cattle. H. M. Hill, of LaFontaine, had a strong exhibit of Herefords and Short-horns, and Philip Close, of Roper, had an exhibit of Hereford cattle. There were three exhibits of Poland-China swine, made by E. E. Wait, Altoona; A. R. Meade, Altoona, and Frank Sprague, of Fredonia. Mr. Wait had the largest exhibit, filling all the classes, and took most of the first prizes.

Last year the grounds were flooded by reason of heavy rains, which so crippled the association that they could not offer the usual inducements, hence the scarcity of exhibits this year. However, the loyalty of Wilson county people to their home fair is so far unsurpassed in Kansas and should result in their having the best county fair in Kansas.

The *New York Journal*, which claims to be the only New York daily for the Democratic national ticket, offers a rate which enables us to furnish the *KANSAS FARMER* one year and the *New York Sunday Journal* three months, both for \$1.25.

The Shawnee Mills, of Topeka, shipped five cars of flour to London, last Monday. It was billed over the Santa Fe, by way of New York. The flour was placed in sacks, each containing 140 pounds.

KANSAS FARMER and *Semi-Weekly World* (N. Y.), you can have for \$1.65 one year.

SUCCESSFUL CREAMERIES.

The Secretary of the State Board of Agriculture has returned from a visit to the new butter and ice factory at Burlingame, Osage county, which began operations July 1. This institution is owned by Messrs. Brandt & Essley, who are successfully conducting extensive creameries at Canton and Moundridge, in McPherson county, with tributary cream-gathering or "skim stations" at McPherson, Little River, Conway, Elyria, Lehigh, Roxbury, Turkey Creek and Spring Valley.

The capacity of the Burlingame plant is 3,000 pounds of butter and five tons of ice per twenty-four hours, although as yet the supply of milk is but about 5,000 pounds per day, representing 100 patrons and 500 cows; this will be increased as farmers become better acquainted with the advantages of having their milk handled at a central factory and the cash for it paid them in a lump sum at the end of each month.

Each patron's milk is tested separately and paid for on the basis of the butter fat it contains, as shown by the Babcock test. The general average of cream in all milk delivered in July was 3.64 pounds of butter fat for each 100 pounds of milk, and the highest average test for any one herd was 4.08. The July price paid for butter fat was 12½ cents per pound.

The owners of these creameries sell all their butter on orders, at prices quoted by themselves, "on track," and the bulk of it is sold south and west. For example, 5,000 pounds per week go to Cripple Creek; 2,000 each to Pueblo and Colorado Springs, and 1,000 to Trinidad, Colo. These shipments are of one-pound prints, sent in boxes by refrigerator cars. To Galveston, Tex., about 5,000 pounds go weekly, packed in various sized tubs, and 2,000 pounds per week to Kansas City, in sixty-pound tubs.

Mr. Brandt, of this concern, is President of the Kansas State Dairy Association. He says the reputation of these Kansas factory-made dairy goods is such that his firm has orders every day which it is unable to fill, while the ordinary country store butter by very force of circumstances is everywhere a drug, and sold at prices which can leave no appreciable margin of profit to maker or dealer.

A NEW SWINE REGISTER.

A communication, "To Swine Breeders," in this week's KANSAS FARMER, by the Secretary of the Kansas Swine Breeders' Association, will attract considerable attention from Western breeders of pure-bred swine. The article is timely, in view of the large number of breeders who are not at present connected with the Poland-China Record Associations, and in these times of contracted values it works a hardship on such breeders to do business with the already established associations. The members of the Kansas Improved Stock Breeders' Association are heavy patrons of the other associations, and by co-operating with kindred associations in Kansas and adjoining States could undoubtedly support a new record association.

To give some idea of the business of an established record association, and one largely patronized by Kansas breeders, we quote the following from the statement of the condition of the Standard Poland-China Record Association, published at Maryville, Mo. This statement covers a period of sixteen months, ending January 15, 1896, and is as follows:

Receipts.....	\$6,411.27
Disbursements.....	3,966.65
Resources—Cash on hand.....	\$2,444.62
Books.....	2,263.25
Bills receivable.....	500.00

Resources for period.....\$5,207.87

This association has paid in dividends to stockholders since its organization the neat sum of \$6,365. The officers, Executive committee and Board of Directors are all residents of Missouri, with the exception of a Vice President for each of the following States: Kansas, Iowa, Nebraska, Illinois, Ohio, Colorado, South Dakota, Indiana, Texas, Kentucky, California, New York, Oregon and Wyoming.

Kansas improved stock breeders are

more thoroughly organized than those of any other Western State except Iowa, and on this account are entitled to either "long haul" rates or a new association, whichever seems most advantageous. The matter will come before the Kansas Swine Breeders' semi-annual meeting, to be held at Wichita during the Kansas State fair.

Kansas breeders should carefully consider the question of a new record, on its merits, and express their views either in person at the Wichita meeting or by letter to Secretary Updegraff.

Weekly Weather-Crop Bulletin.

Weekly Weather-Crop Bulletin of the Kansas Weather Service, for week ending August 31, 1896, prepared by T. B. Jennings, Section Director:

GENERAL CONDITIONS.

Fair weather and smoky atmosphere have prevailed during the week, with the temperature ranging from normal to 4° below the normal. The rainfall was confined to the middle and eastern divisions and came as quiet local showers, amounting to over an inch in McPherson, Mitchell, the northwestern portion of Clay and southwestern part of Washington, the southeastern part of Pottawatomie and northeastward across Jackson, and in the extreme southern part of Labette.

RESULTS.

EASTERN DIVISION.

A good week for all farm work except plowing in the southern counties, where the ground is dry and hard. Haying and corn-cutting have continued, and in Woodson some meadows are furnishing a second crop. Pastures, generally, have improved. Much fall plowing is being done. Reports of fruit are not generally favorable.

Allen county.—Much plowing being done; a good week for cutting corn; haying nearly over; a large surplus of feed of all kinds, and pastures and meadows were never better; late potatoes a short crop.

Brown.—Corn doing well; plowing for wheat progressing nicely; wheat acreage will be largely increased.

Chautauqua.—Though cooler than the past three weeks, the effects of the dry weather are still here; stock water scarce in places; corn is ready for the crib; late corn a light crop, while the early is good.

Cherokee.—Good week for all crops and pastures, with heavy dews and smoky atmosphere; the corn yield of the county will be about an average.

Coffey.—Haying and pressing in order; pastures good; stock doing well; fall plowing progressing, with ground in fine condition.

Douglas.—A good corn crop, and much of it being cut up; pastures are good.

Johnson.—Favorable for late corn and fall plowing.

Labette.—Good week for plowing; corn drying up fast, a great many chinch bugs on some pieces; most of the plowing for wheat is done; fruit rotting on the trees badly.

Leavenworth.—Cool week; corn-cutting in progress.

Marshall.—Good week for haying and the crop will be large and of good quality; corn maturing in excellent condition, will be out of the reach of frost in ten days.

Miami.—Good week for farm work; hay crop good; pastures improving.

Montgomery.—A cooler week, with more cloudy, hazy, smoky atmosphere; the light rain freshened up green things generally; corn generally matured, some being cut; rain needed for seeding, pastures and stock water.

Morris.—Splendid week for haying and harvesting cane, of both of which we have a heavy crop.

Osage.—Good week for plowing, haying and vegetation; much corn being cut; pastures becoming green; forage crops in good condition and plentiful.

Pottawatomie.—Three smoky days; pastures good; corn maturing and about out of way of frost, it is a good crop; Kaffir corn splendid; farmers haying, fall plowing and digging potatoes.

Riley.—Corn has matured nicely during the week, the crop will be larger than last year's and much of it

better; haying and corn-cutting the order of the day.

Shawnee.—A fine, cool week, and everything doing first-rate; peaches very nice and plentiful; hay mostly in stack.

Wilson.—Better hay weather than when the sun shone so hot; ground dry and hard, rain needed to fit it for plowing; apples have dropped badly; peaches small and wormy.

Woodson.—Corn rapidly drying up; grass still making good hay, some second-growth grass being cut; corn-cutting about over.

MIDDLE DIVISION.

This has been a good haying week, a good week for all work, though getting dry for plowing, which has been stopped in some parts of the division because ground is too hard. Forage crops are in good condition and are maturing south. Fruit is dropping from the trees.

Barber.—Another hot, dry week; corn-gathering in progress; ground too dry to plow; range and stock in good condition.

Barton.—Good week for haying, most of which is up in good shape; upland pasture getting dry, bottom pastures good yet; plowing almost finished; seeding will not begin till late, on account of the grasshoppers.

Butler.—Corn maturing and majority good; the showers revived pastures some; much fine hay being put up; Kaffir corn fine.

Clay.—Corn now safe from frost; haying is progressing, the crop is abundant and of superior quality.

Cloud.—Everything in fine condition; fruit and melons in abundance.

Cowley.—Dry, and hard plowing; hay is being put up in good condition.

Dickinson.—Corn is ripe, the hot dry weather has made it light weight and shrunken on the cob, but we will have a good crop all over the county; sorghum and Kaffir corn the only growing crops now; ground getting too dry for plowing.

McPherson.—Plowing progressing since the rain; hay crop large and being put up; late corn cut up for fodder; forage large yield.

Mitchell.—Favorable for maturing crops; plowing well along; peaches in great abundance; plums a light crop; apples nearly all falling off; hay, alfalfa and other forage crops plentiful; potatoes a fair crop.

Ottawa.—Meadows and pastures look well; cane and Kaffir corn growing nicely; peaches plenty but of poor quality.

Phillips.—Fine weather for haying and threshing; millet the only good crop, seed turning out fine; stock doing fine.

Republic.—Cooler; smoky atmosphere; farmers still haying; millet mostly spoiled, owing to excessive rain; early corn almost past danger of frost.

Saline.—A pleasant week, fair for all kinds of work, but very dry; smoke obscured the sun on the 26th, 27th and 28th; fall plowing progressing.

Sedgwick.—Five weeks of drought have cut short pasture, hay, late forage crops and peaches, but the week ends showery, and the drought appears to be broken; but .04 inch rain from July 24 to August 29.

Stafford.—Sorghum and Kaffir corn matured and a good week for harvesting; good weather for curing feed and stacking.

Sumner.—Good weather for haying; ground so hard plowing has stopped; pastures drying up; fruit dropping from the trees.

Washington.—Corn in fine condition and nearly out of the way of frost; haying delayed on account of high winds; apples good; late peaches being marketed; everything in a flourishing condition.

WESTERN DIVISION.

Fine weather for putting up hay and the work has been pushed; it is especially fine for the alfalfa, but forage crops need more rain to seed well.

Decatur.—Cool, pleasant week, favorable for all work.

Ford.—Alfalfa seed crop good; the hay crop has been very good; most of the corn is being cut, the crop is exceptionally good; fall plowing delayed somewhat by drought.

Hamilton.—Hay-making going on lively and the crop far better than expected, considering the dry season.

Kearney.—An excellent week for

threshing and curing the alfalfa hay crop; the season has been a discouraging one for the farmer, and all crops are below the average.

Morton.—Cooler weather, but the drought still on; the 22d was the first cloudy day of the month.

Thomas.—A week without any rain; the rains of the previous week have revived the corn not yet dead; smoky weather on 25th and 26th.

Trego.—Prime hay weather; late fodder crops need rain to seed well.

"Filled Cheese" Law.

Mr. Miller, Commissioner of Internal Revenue, with the approval of the Secretary of the Treasury, has issued a series of regulations for the enforcement of the provisions of the act defining cheese and also imposing a tax upon and regulating the manufacture, sale, importation and exportation of "filled cheese."

The regulations prescribe that on the day when the act goes into effect, viz., September 4, 1896, all filled cheese in the hands of dealers must be in wooden packages of not less than ten pounds each, and every dealer must make, under oath, a written inventory (which may be sworn to before a collector or deputy collector of internal revenue) of all packages on hand on that date containing ten pounds or more of filled cheese. Such inventory shall show the quantity and date in the case of each package and the dealer must mark each package accordingly. The name of the person holding the package September 4 must also be marked thereon immediately following the date.

The regulations further prescribe as follows, among other things:

"The dealer will also procure from the Collector of Internal Revenue and affix to each package the proper tax-paid stamp. The dealer will then cancel the stamp by stenciling or drawing five fine parallel wave lines across the face thereof, so that the lines will extend over on to the wood at each end of the stamp. In the cancellation the words and figures on the stamp must not be defaced.

"On the 4th of September, 1896, or as soon thereafter as practicable, the internal revenue officers will travel over their respective districts, report the stock in the hands of dealers and seize all that is not found duly marked, branded, stamped.

"The inventory above required must be at once delivered or forwarded by the dealer to the Collector of Internal Revenue, but the dealer should retain a copy of such inventory for his own information and protection.

"The Collector will keep a record on book No. 92 of all filled cheese produced in his district and of the quantity received from the manufactories for consumption or sale. He will also render to the Commissioner of Internal Revenue a monthly return of production, withdrawals and stock on hand, such return to be made on form 394."

Horticultural News.

On Wednesday, August 26, William H. Barnes, of the State Horticultural Society, organized the Horticultural Society of Sabetha, at Sabetha, Nemaha county. There was a large audience (many ladies) and much enthusiasm. There was a night session, also, music, etc. There was an elegant display of fruit. Following are the officers: President, Henry Iseley, Fairview; Vice President, A. C. Hogbin, Sabetha; Secretary, J. L. Mowder, Sabetha; Treasurer, T. J. Pace, Sabetha; Prompter, D. A. Lichty, Sabetha. This society starts off very strong and with a large and enthusiastic membership, many of whom are ladies. They will hold a "horticultural show" this fall in the Grand Army hall in Sabetha, and it will be well worth attending.

On the 27th Mr. Barnes organized, at Hiawatha, the Brown County Horticultural Society, holding a morning and an afternoon session. The following are the officers elected: President, Samuel Detwiler; Vice President, R. C. Chase; Secretary, C. E. Chase; Treasurer, H. E. Penny; Prompter, C. W. Johnson, all of Hiawatha. Brown county has a good crop of fruit, and through the efforts of this new society they are determined to get fair prices for it.

Horticulture.

TO APPLE-GROWERS.

EDITOR KANSAS FARMER:—The National Apple Shippers' Association desires to acquaint apple-growers of the country with the aims of the association and to ask their aid in the reforms proposed. Dealers, shippers and growers must prosper together or not at all. In this view of mutual interest the following suggestions are submitted to orchardists, representing the result of careful thought and discussion.

(1) It will be to the advantage of all interested in apples—growers, dealers and consumers—if there is a recognized size and quality of package as well as for size and quality of fruit, both in what is now known as No. 1 and No. 2 apples. A good size of package is easily suggested, one that has been in use for several years by the best class of Western dealers and larger orchardists. A full-size flour barrel, that is a barrel with 17½ inch diameter of head and 28½ inch length of stave will meet all requirements, giving a good, generous-looking barrel, and, when well shaken down and pressed, holding three bushels of apples. In some sections of the West the barrel now in use is smaller than this in size, but these barrels are invariably discriminated against in price by the better class of traders. In fact, they are generally spoken of as "the snide barrels." In a good apple year the difference of a peck of apples in a barrel will mean to the grower not more than 5 cents in the orchard, but when the apple comes to sell in the market the small barrel will bring on an average at least 25 cents less. Besides, the trade is so generally convinced that a package "snide" in size generally contains fruit "snide" in quality that they avoid it as far as possible, even at a fair difference in price, and, as a consequence, in times of over-supply they are the ones neglected while the more honest looking, if not really more honest package, are given more prominence and consequently better sale.

(2) It is not so easy to arrive at a proper standard for size and quality of fruit, for the reason that sizes and qualities of the same varieties vary considerably in different sections and in different seasons. The standard adopted by the association will come as near to properly covering the ground as is possible, without naming all varieties of apples, and it is recommended to your favorable attention: "That the grade No. 1 shall be divided into two classes, A and B. That the standard size for class A shall be not less than two and one-half inches in diameter, and shall include such varieties as Ben Davis, Willow Twig, Baldwin, Greening and other varieties kindred in size. That the standard for class B shall be not less than two inches in diameter, and shall include such varieties as Romanite, Russets, Winesap, Jonathan, Missouri Pippin and other varieties kindred in size. And further, that No. 1 apples shall be at time of packing practically free from the action of worms, or defacement of surface or breaking of skin, and shall be hand-picked from the tree.

This standard does not prevent any grower who may have good apples below the standard of size in either class from marketing them for what they are. Occasionally some really choice fruit might run below this standard, but the exceptions are so rare that there can be little objection to the standard as fixed.

These suggestions are to the interest of every intelligent, capable apple-grower. It may not suit his shiftless neighbor when he finds that his neglected fruit will not grade as No. 1. But that class has no legitimate place in the industry. To increase the consumption of apples the consumer must be pleased, and nothing will tend to that end so much as to furnish him with a better rather than a poorer apple than he expected when he made his purchase. Let the barrel branded No. 1 be not only No. 1, but *fine*; and let the purchaser find the barrel branded No. 2 not cider apples, but good fruit. Each barrel sold under

this plan will make a customer for two more, and a crop of apples cannot be raised in this country too large to sell at fair prices, and that without going to Europe for a market for the surplus.

It may be too much to hope that all that is outlined can be accomplished this year, but by co-operation a long step can be made toward it. One thing is sure in any big crop year. The grower who most closely follows the suggestions will be the man best satisfied with the results of his year's work.

The association is especially anxious to have growers understand that the prosperity of both growers and legitimate dealers are bound up together. Anything advancing the interests of one is for the benefit of the other, and for that reason it urges hearty co-operation between the two interests, to the end that the apple trade may be further extended upon a sound basis with a reasonable profit to all concerned. The apple is the king of fruits and its use can be greatly enlarged by honesty in all dealings and intelligent organized effort upon the part of growers and dealers.

NATIONAL APPLE SHIPPERS' ASSOCIATION.

Root Pruning.

From Bulletin No. 20, Oklahoma Experiment Station:

"Many expedients have been tried with unfavorable results, to retard the flow of the sap. Straw mulching has proved detrimental in many cases by inducing shallow rooting, which gives the sun undue advantage. The process of laying down the trees has usually given no direct beneficial results. The buds on the trees laid down, when uncovered, usually show a more advanced stage of development than those on trees in natural position.

"The writer has tested a system with encouraging results. The process is that of cutting a ditch around the tree—with a plow if the orchards are large; otherwise with a spade. The ditch should be about ten inches deep, cutting off the terminals of the lateral roots, which have a two-fold office; one to stay the tree, the other to furnish a conduit for sap water. The dirt from the ditch should be thrown from the tree on the south, east and west sides of the trees; on the north side it may be thrown to the tree, the better to construct an embankment to prevent the sun's rays reaching the bottom of the ditch. Thus we have a reservoir for the storage of the winter's storm waters, and gathering snow, sleet and ice. Should the weather become sufficiently severe to freeze the earth, a little straw mulching placed over the ditch would retain the frost longer. Should there not be sufficient freezing weather, the storm waters will have far checked the flow of water to the extent of roots pruned. The ditch should be left open until late spring. This system benefits the tree, by causing the growth of more fibrous roots and inducing a deeper penetration into the subsoil. If continued a few years, simply cutting the terminals of the lateral roots, the roots will be beyond the reach of the early warmth that often operates so disastrously to many fruit growers. It is also claimed that the longevity of the trees will be increased by root pruning.

"Four apricot trees in the station orchard were treated by this system. The trees apparently most exposed to climatic influences were selected. Two were ditched with a plow on the four sides. In this case the dirt was thrown from the trees. At the four corners or angles the roots were not cut. A portion of the branches on the ditched trees bloomed with others on trees not treated, while some of the branches bloomed later, showing nearly two weeks difference between the extreme early and extreme late. The two trees treated saved some fruit; trees not treated lost all by the frost. Two other apricot trees with equal exposure were laid down the year before, with tops pointing to the north. The only difference reported the following spring was the more advanced condition of the buds. The south and central portions of the roots being quite thoroughly root pruned entered deeper into the subsoil. The conduct of these trees were quite

similar to that of the two ditched trees, the fruit showing on the south and central portion of the trees. A little scattering fruit was found on the north side of one tree. High horticultural authority admits that, with trees in normal condition, the water furnished by given roots more or less definitely passes up the side of the tree on which it started. This was borne out by the fact that trees with part of the roots pruned showed the earliest bloom on the side on which were no pruned roots. "The trees which were laid down have apparently made a more thrifty growth than trees not treated. A treatment which will save apricots should protect early peaches as well. Fruit-growers who have heretofore been having only failures, may well give the system a thorough trial. Do not hesitate to cut the roots."

A Study in Fruit Buds.

From Report of Missouri Horticultural Society:

"How are fruit buds formed upon trees preparing to grow their first crop? For a study of this subject an apple tree twig from a tree that has been set in an orchard four or five years will show the general method upon our common fruit trees.

"At the axil of each leaf—that is, just above the base of each leaf stalk—there is a bud. These buds appear to be nourished each by its own leaf, for the development of each bud seems to correspond in size, vigor and character to that of its leaf—good leaves producing good buds and poor leaves poor buds.

"It is the function of leaves to perform their part in storing the buds and terminal twigs with starch and surplus plant food with which the end growth of trees should be gorged in the fall. If the foliage is poor this store of material is deficient, and since the buds that expand each spring depend upon this surplus store to give size and vigor to the first foliage produced, only such buds can develop into fruit spurs and fruit buds as were sufficiently strong to do so, and only those fruit buds well nourished this season can expand into good bloom next season.

"Subsequent growth modifies the fruiting method, and there are some differences in varieties about producing fruit buds, but a large share of tree fruits lay the foundation of productivity along the same lines for the growth of their first crops. In all cases, whether fruit spurs are produced or not, fruit or blossom buds are formed the year previous to that of fruit production, and are directly dependent upon the foliage for their character, and sometimes for two or three seasons preceding. In this matter of the growth of fruit buds, a tree fruit differs from raspberries, blackberries and grapes, for they produce bloom upon branches grown the same season.

"Every orchardist should be able to determine what influences cause trees to produce fruit buds. This article is designed as a study in this direction and should be supplemented by observations in the orchard, of trees in fruit, and better yet by a study of the philosophy of tree growth."

An Old Riddle.

I am obliged to plant a grove
To gain the hand of her I love.
Said grove she says I must compose.
Of just nine trees in ten straight rows,
And three in every row must place,
Or ne'er expect to see her face.
But if the grove in order rise,
I win the girl, a glorious prize.
Ye learned bards with laurels crowned,
Assist my hand to till the ground,
That this fantastic grove may shade
The blushes of this charming maid.

YOU CAN'T BUY HAPPINESS, but if you are suffering from dyspepsia, scrofula, salt rheum, impure blood, you may be cured and made happy by taking Hood's Sarsaparilla.

HOOD'S PILLS are the best family cathartic and liver medicine. Harmless, reliable, sure.

Union Pacific Route.

What you want is the through car service offered between Denver and Chicago via the Union Pacific and Chicago & Alton railroads, which is unexcelled by any other line. Magnificent Pullman sleepers, dining cars and chair cars, run through daily without change, Denver to Chicago via Kansas City.

Every man should read the advertisement of Thos. Slater on page 15 of this paper.

Some Farm Exports of 1895.

Some one, with a liking for statistics, has prepared the following short statements of American farm contributions to the welfare of other parts of the world:

Of manufactured linseed oil there went abroad last year 62,718 gallons, valued at \$37,363.

It is stated that \$871,465 worth of American preserved fruits were used last year in Europe.

Peas and beans went abroad last year to the extent of 242,680 bushels, valued at \$420,002.

The natives of the Celestial empire last year needed 36,144 barrels of flour, and paid \$103,375.

Last year we exported beeswax to the amount of 399,212 pounds, and received for it \$90,875.

Of pickled pork the Europeans called for 58,266,893 pounds, for which they disbursed \$4,188,400.

American corn was needed by Europe to the extent of 27,691,137 bushels, valued at \$14,650,767.

American hams were needed in Europe to the extent of 105,494,123 pounds, valued at \$10,960,567.

The slaughter-houses of this country last year exported to Europe \$904,071 worth of soap grease.

Asia last year imported from the United States 11,064,869 pounds of raw cotton, and paid \$806,058.

Our lard was needed in Europe to the extent of 474,895,274 pounds, at a valuation of \$36,821,508.

China last year consumed 92,400 pounds of American meats and dairy products, valued at \$12,025.

Of glucose or grape sugar, we last year exported 133,806,329 gallons, and received for it \$2,567,784.

Our potatoes were last year exported to the extent of 527,957 bushels, for which we received \$418,221.

It will surprise most readers to learn that last year this country exported \$1,581,891 of sausage casings.

Unmanufactured wool was last year sent abroad to the amount of 4,279,109 pounds, valued at \$454,463.

Last year the farmers of this country exported 331,722 cattle, for which they received \$30,603,796.

Dried beef, smoked and otherwise, was sent abroad to the amount of 321,673 pounds, valued at \$73,569.

France imported last year from the United States 2,463,994 gallons of cottonseed oil, paying \$776,817.

American corned beef was exported last year to the amount of 62,473,325 pounds, valued at \$3,558,230.

American canned beef last year went abroad to the amount of 64,102,263 pounds, valued at \$5,720,230.

Africa last year called for and received 224,739 gallons of American cottonseed oil, paying \$72,356 for it.

American tallow was needed in Europe last year to the amount of 25,864,300 pounds, valued at \$1,293,059.

American walnuts, pecans, hickory nuts and the like were last year sent abroad to the extent of \$115,274.

Wheat led all other articles in quantity, 76,102,704 bushels being exported, for which we received \$43,805,663.

Animal oils, for lubricating purposes, were exported to the amount of 144,556 gallons, valued at \$75,585.

The Europeans last year consumed \$1,569,520 worth of American peaches, plums, and other small fruits.

Of cotton other than the sea island we last year exported 3,502,171,737 pounds, for which we received \$202,118,351.

Refrigerator pork was exported from this country last year to the extent of 818,581 pounds, valued at \$60,660.

The American orchard owner last year exported 818,711 barrels of apples and received \$1,954,818 for them.

Of hides and skins, for tanning purposes, this country last year exported 36,002,859 pounds, valued at \$2,310,323.

The refrigerating business in milk last year was not particularly brisk, only \$219,785 worth being sent abroad.

Of American flour 15,263,892 barrels went abroad last year, for which the hungry Europeans disbursed \$51,651,928.

The farmers of this country in 1895 supplied Africa with 43,194 bushels of wheat, for which they were paid \$37,154.

Asia last year consumed 23,313 pounds of our hops in the manufacture of beer and malt liquor, paying \$2,917 for them.

The dairy maids of this country last year manufactured 5,598,812 pounds of butter for export, and received for it \$915,533.

The export of American refrigerated beef was last year enormous, amounting to 191,338,487 pounds, valued at \$16,832,860.

The Spanish Province of Puerto Rico last year imported from the United States 118,617 barrels of flour, valued at \$332,676.

The whole of South America last year imported from the United States 288,336 pounds of oil cake and paid \$3,825 for it.

Of American sheep 405,748 went abroad in 1895 to produce mutton for the Europeans, who, in return, sent back \$2,630,636.

British India last year consumed \$13,720 worth of preserved fruits grown on American soil and put up in American factories.

Africa last year imported from America and consumed 1,878,800 pounds of our canned meats and paid \$109,799 for them.

In the Dairy.

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

Result of Filled Cheese Legislation.

While the new law on filled cheese does not go into effect until September 4, the passage of the bill is beginning to show some results. Last week a prominent Southern dealer in cheese appeared on the New York market and in conversation stated that he had heretofore handled large quantities of filled cheese, his business in that article alone last year having amounted to fully \$200,000, but owing to the restrictions of the new law governing that commodity, he would not be able to use a box, and that he should not take out any license. His presence here was for the purpose of looking over the situation of full-cream State cheese and to make arrangements for supplies for his fall and winter trade. He purchased some 700 or 800 boxes of fine State full-cream cheese which were stored here, and intimated that he would require several thousand boxes more in the near future. This is the first effects of the new law, and if it is a forerunner of future business in full-cream cheese in that direction it is bound to have a favorable effect on the future of the market, more especially on small-size cheese.—*New York Produce Review.*

How Mr. Gurler Sells Milk.

H. A. Gurler, a dairyman of national reputation, is now engaged in selling milk, produced on his farm, which is sent to Chicago. In a circular advertising the sale of his milk he describes in detail the processes used in its care.

"The milch cows are daily groomed and their udders washed with warm water; the milkers thoroughly cleanse their hands and put on a milking suit over their ordinary clothing before milking. All pails, strainers, cans, etc., are thoroughly cleansed, and the bottles in which the milk is shipped to the consumer are sterilized by live steam. The first few drops of milk drawn are rejected, as experience has shown that germs which cause the souring of the milk invade the passages of the teats and cannot be got rid of by external washing. As soon as the milk is drawn it is run through a centrifugal separator; the cream and milk which have been separated from each other are mixed as they come from the separator.

"This is done to cleanse the milk; it leaves behind in the machine a great deal of dirt which cannot otherwise be removed from the milk, even under the most careful conditions. The milk is then cooled to a temperature of between 34° and 40°, and bottled, stopped with a white pulp stopper, and a paper seal put over the top in such a manner that the milk cannot be reached unless the seal is destroyed. On each seal is stamped the date of the bottling. A refrigerator wagon carries the milk from the dairy to the shipping station. The milk is sold under a guarantee that it shall never contain less than 4 per cent. of fat, and that in its preparation all of the above precautions have been fully observed. The herd is inspected every month by a veterinarian, and the animals have been tested twice with tuberculin."

The Farm Milk House.

Mr. Harvey Johnson, of Logan, Iowa, describes his milk house in a recent number of *Wallace's Farmer*, as follows:

"In replying to the inquiry of a farmer subscriber as to how to build a milk house large enough to handle the milk of some twenty cows, I can do no better than describe the one we have been using for the past two years, and have found it so well adapted to its purpose that were we going to build, we would not make any radical change.

"It is eleven by twenty-two feet, built of stone, with eight-foot side walls, six feet under ground and two feet above (built there in order to have better control over the temperature); the walls and ceiling are plastered and the floor cemented. It has a shingle roof and the ceiling is made higher by plastering up to the collar boards.

"The building is divided into two

rooms by a brick, plastered partition. The front room has an outer door at the end, has half a window on each side and in it we have the separator, churn, gasoline engine, scales, Babcock test, butter boxes, etc. The back room has a window on each side, which are darkened in summer. In this room we keep the worker, prints, ripening vat, wrappers, etc.

"On the back side, running the full width of the room, is a brick cemented trough, two feet deep and two feet wide, with close-fitting lids. In this is kept the ice, cream and butter. This room can be kept cool during the very hottest weather.

"The floor of the entire building should have a slope of at least six inches toward one corner, where a pipe should be located that will carry away the drippings from the ice and the surplus water.

"In selecting a location for such a building a heavy shade should be avoided, as it will make the interior damp and moldy. The summer sun should shine on the building at least a part of the day.

"As to the question, 'Would it be advisable to make butter in the same room where milk is kept?' would say that it would be perfectly advisable, provided everything is kept clean as it should be. When milk and butter are free from impurities neither will harm the other. But if your subscriber has a separator, or he expects to, there will be no reason for keeping the milk; it should be separated and fed to the pigs and calves as soon after milking as possible."

Dairy Notes.

Pennsylvania has 977 creameries, which puts the Keystone State well to the front as a butter-producing section.

The average yearly consumption of whole milk per inhabitant of the United States is said to be twenty-five and one-half gallons, and of butter nearly twenty pounds.

The Connecticut Agricultural Experiment Station suggests that all milk sold for consumption within the limits of the State should have a specific gravity of between 1.029 and 1.033, and should contain not less than 3.5 per cent. fat and 11.5 per cent. solids.

It is quite significant to note what a strong hold associated dairying has on the farmers of the United States. While sixty years ago all the milk was made up on the home farm, now there is six times as much butter made in creameries as on farms and thirteen times as much cheese made in factories as on farms.

Commissioner Boardman says that the most of the cheese sold in Iowa comes from Wisconsin and but little from Illinois, owing to the bad reputation the latter State has acquired because of making so large an amount of filled cheese. The honest cheese-makers of Illinois, and there are a few of that stamp, have cursed this state of affairs for some time.

The Thistle Milking Machine Co., of Glasgow, Scotland, have recently sent a representative to this country to introduce their machine. They claim to have many machines in practical use in England and Scotland, and that they are giving eminent satisfaction. If all the claims of this company be substantiated, we believe the dairymen of America will be quick to understand and appreciate its value.

Overlooking the Cow.

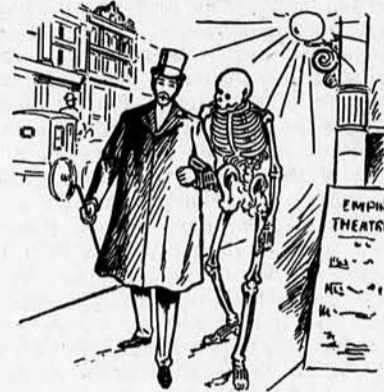
Every dairyman in this land recognizes the desirability of proper utensils to use in this work. A proper dairy room, proper feed, but above all is the proper dairy cow overlooked quite often. So many writers are telling how necessary it is to have the best churn, separator, feed, etc., but entirely forget the fact that there is a cow in the field. You may have a marble-finished dairy house, equipped with all the modern Dutch, Danish and other foreign makes of dairy tools, improved by Yankee ingenuity, and if you have not the cow your dairy is "nit." Next to the cow comes the man, or the improvement on the dairyman—the dairy-woman.—*Jersey Bulletin.*

ARM IN ARM.

A Man Walks Down Broadway--Death Was His Companion.

DIES ON THE PAVEMENT.

Many a man who is envied by his acquaintances and pointed out as a "lucky fellow" as he walks down the street, is walking arm in arm with death. Only a short time ago, a prominent New Yorker, who was supposed to be worth his millions, dropped dead on the pavement of Broadway. He was on his way to the theater. No doubt on that very evening he had been



pointed out many times as a fortunate man—as a man to be envied. Some of the doctors said "heart failure." Some of them said nervous exhaustion. Others said overwork. It is probable that they were all right.

In every city and town and hamlet in the country there are men, envied by their acquaintances and pointed out as "lucky fellows," who are walking arm in arm with death. They are too busy to care for health. They do not take time to rest. They do not take time to eat. They do not even take time to sleep. Soon they are troubled with indigestion. They neglect it and put it aside as a trivial disorder not worth noticing. In due time they find that they have no appetite. They are troubled with headaches. First slight and occasional, and then severe and long-continued. They then lose the power to sleep. Work comes hard to them, but they prefer the working hours to the sleeping hours. The tired and tortured brain works harder during the night than during the day. "Sleep that knits up the ravelled ends of care" will not come to them save through the use of opiates. The blood is impure. The nerves are shattered and complete nervous prostration is imminent. The muscles and tissues of the heart are improperly nourished and "heart failure" may be the result. A man in this condition is walking arm in arm with death. The man stands before an open grave. He must call a halt and try in some measure to repair the injury he has done himself. How promptly these repairs can be made is dependent upon the natural inherent recuperative powers of the man and the degree of injury he has done himself. In any event, there is a sure, speedy and safe remedy at his command.

Dr. Pierce's Golden Medical Discovery is the product of the life experience of one of the most eminent and skillful physicians in the world, who has devoted his best energies to the treatment of cases of this description. It is a wonderful medicine. It speedily and almost miraculously cures all disorders of the digestive organs. It promptly restores the appetite and makes it keen and hearty. It assists in the digestion of the food and restores vigorous action to the organs of assimilation. The blood is supplied with the proper elements for the nutrition of all the organs of the body. This accomplished, the battle is half won. When the arteries are bounding with the rich, red, life-giving blood of health, sickness soon becomes an impossibility. Nature resumes her proper course. Disease is driven out. No organ can long continue diseased when you continually pump rich, nourishing blood into it. Old and inert tissues are torn down and carried away and new ones built up to take their place. This is true of the brain as well as the body. The patient ceases to suffer from headaches and loss of sleep and nervous exhaustion. There is a prompt gain

in flesh, in strength, and the ability to eat and sleep and work are restored. Thousands upon thousands of men in all walks of life from that of the laborer to that of the banker and professional man have testified to the wonderful merits of the "Golden Medical Discovery." Their letters are on file at the World's Dispensary Medical Association, at Buffalo, N. Y. Copies of them will be sent to any one who will write for them.

Dr. Pierce's Golden Medical Discovery is sold by all good druggists. Occasionally an untrustworthy druggist may offer some other medicine as a substitute, claiming that it is "just as good." Common sense indicates that he has a selfish object in offering the substitute. He is thinking of his profits, not of the purchaser's physical welfare.

Nature's tendencies are all health-wise. Just a little stitch here and there will keep an entire family in continuous good health. If the mother is a capable, practical woman the family will seldom, if ever, have to call upon the doctor. She will know how to put the stitch in here and there. Practical common-sense women nowadays keep in the house a copy of Dr. Pierce's Common Sense Medical Adviser. It is the best home medical book ever written. More copies of it have been sold than of any other medical book ever printed. Over 680,000 copies were sold at the original price of \$1.50 each. A new edition has just been printed and will be given away absolutely FREE. Send twenty-one 1-cent stamps, to pay the cost of mailing only, to the World's Dispensary Medical Association, Buffalo, N. Y., and you will receive a copy in heavy paper covers. If you want a French cloth, beautifully stamped binding, send 10 cents extra, or 31 cents in all.

Kalamazoo, Mich., is famous for celery—also as the home of Thos. Slater, whose advertisement appears on page 15.

Popular Low-Price California Excursions.

The Santa Fe Route personally conducted weekly excursions to California are deservedly popular. About one-third saved in price of railroad and sleeper tickets as compared with first-class passage.

The improved Pullmans occupied by these parties are of 1896 pattern and afford every necessary convenience. A porter goes with each car and an experienced agent of the company is in charge.

The Santa Fe's California line is remarkably picturesque, and its middle course across the continent avoids the discomforts of extreme heat or cold.

Daily service, same as above, except as regards agent in charge.

For descriptive literature and other information address G. T. Nicholson, G. P. A., A., T. & S. F. Ry., Chicago.

To Colorado, Montana, Hot Springs, Puget Sound and Pacific Coast via Burlington Route.

Take the shortest and most desirable line to the far West; complete trains from the Missouri river. Daily train leaves Kansas City at 10:40 a. m., arrives Billings, Montana, 1,050 miles distant, 6:45 next evening; free chair cars Kansas City to Billings; sleepers Kansas City to Lincoln; through sleepers Lincoln to Billings. Connects with fast train beyond to Montana and Puget Sound. Ten to twenty-five hours shorter than other lines from Kansas City.

Through sleepers and chair cars Missouri river to Denver; Rio Grande scenic line beyond for Colorado, Utah and California. Ask agent for tickets over the established through lines of the Burlington Route.

L. W. WAKELEY, Gen. Pass. Agt.,
St. Louis, Mo.

KANSAS HOME NURSERY now offers choice berries and orchard fruits of all kinds in their season. Fresh shipments daily by express. Prices to applicants. A. H. Griesa, Box J, Lawrence, Kas.

Garnahan's Tree Wash and Insect Destroyer

Destroys the bore worm and apple root louse, protects the plum from the sting of the curculio and the fruit trees from rabbits. It fertilizes all fruit trees and vines, greatly increasing the quality and quantity of the fruit. Agents wanted everywhere to sell the manufactured article. Address all orders to John Wiswell, Sole Mfr., Columbus, Kas., and Cleveland, Ohio.

CIDER MACHINERY
Hydraulic, Knuckle Joint and Screw Presses, Graters, Elevators, Pumps, etc. Send for Catalogue.
BOOMER & BOSCHERT PRESS CO.,
399 W. Water St., Syracuse, N. Y.

Making Pig Pork.

To succeed in fitting pigs for the market at six months old the closest attention must be paid to all the details of the business. A record should always be kept of the time of coupling. I have a book especially for this purpose. The period of gestation in the sow is 112 days, but there will be some variation, yet it is rare that a sow carries her pigs more than 115 days. In making the record I write it in this way: "Black sow Bess, bred July 8, 1896; look for pigs October 28." A glance at this memorandum shows when the 112 days will be up. A week before the date of farrowing put your sow in a safe, comfortable place. For pigs that are born in the early spring the house should be double boarded, with building paper between, and no matter how warm the season or how pleasant the weather, the sow should have a good roof over her and a floor which cannot be flooded. Neglect of these two points—keeping a record of breeding and providing good shelter—has caused the loss of millions of pigs. A young pig can endure some cold after it sucks and has been dried, but is very easily chilled to death at birth. The food of the sow for a week or two before farrowing should be cooling and laxative; roots and slop, made from bran and oil meal, are excellent. The critical time for feeding is the first week after farrowing, as overfeeding with heating, concentrated food, such as corn, will often produce milk fever, which destroys the sow's appetite and causes her milk to dry up, and the pigs starve. The next point to be looked after is to see that the young pigs have exercise. If shut up in a close pen they are likely to get over-fat and die of thumps. If the weather is good it is best to let the sow out with her litter when a week old, and if there is no lot for the sow, make a hole large enough for the pigs to pass through and you will soon find them taking plenty of exercise. A dry, warm bed, free from dust, is a prime factor in healthy pigs, and to have this will require frequent change of nest material. When the pigs are about three weeks old they will begin to eat with the mother, and a part of the pen should be partitioned off so as to keep the sow out and give the pigs free access, and here feed the pigs. Begin with a little shelled corn and oats soaked, and in a trough easy of access give a little milk. Never let soiled or sour food remain in the trough, but feed just what the pigs will eat up clean; this should be the rule in feeding all animals. I prefer to wean the pigs at eight weeks old, but if it is desirable to breed the sow sooner and milk is plenty, they may be weaned without danger of stunting at from five to six weeks old. From weaning time to marketing feed all they will eat, but let corn make but a small part of the ration until within six weeks of selling. During this period the food should be such as will build bone and muscle and give the best development of all the vital, digestive and assimilative organs, and for this purpose the food should be rich in nitrogen, bulky and nutritious. Milk is the best food and is almost indispensable for a short time before and after weaning, and good, sound, clean potatoes, boiled and mashed and thickened with bran middlings and oil meal, makes the best substitute for milk. Salt all the slop slightly, as it makes it more palatable, and I believe also more digestible. In addition to this, if salt and ashes are kept where the pigs have free access to them, it will help to keep them healthy. Never feed sour slop. A slight fermentation is not objectionable, but it should never be allowed to reach the acid stage. Cooking food, with the single exception of potatoes, is not profitable, but young pigs in winter will do better to have their slop slightly warmed. Barrels in which to make slop in cold weather should be packed in sawdust and warmly covered and then the addition of a gallon or two of boiling water each day will keep the slop warm. In feeding bran I use one or two quarts of oil meal (old process) to each bushel, and about four quarts of middlings, and feed it about as thick as it will run. While finishing the pigs on corn, do not stop feeding the slop, but reduce

the amount. A pig fed on this bulky, nitrogenous food develops a large stomach and great digestive powers and can manufacture a large amount of food into pork, and a good feeder can make his pigs gain a pound per day from birth to six or eight months old, and the man with a dairy who sells only cream or butter can do considerably more than this.—Waldo F. Brown, in *Prairie Farmer*.

The Proper Size for a Bee-Hive.

The Langstroth bee-hive, which is largely in use, is a box nine and one-half inches deep, thirteen and seven-eighths inches wide, and twenty inches long, outside measure. The regular Langstroth frame is nine and one-eighth inches deep and seventeen and five-eighths inches long. These frames, when in the hive, occupy one and a half inches of space for each frame, and eight of the frames are used in the above hive. Hives and frames are usually made from pine boards, planed down to seven-eighths of an inch in thickness. Formerly a ten-frame hive of the Langstroth pattern was largely used, but of late years the size of hives have been thoroughly experimented with, and the eight-frame hive has, as a result, been adopted by a large majority of bee-keepers.

Almost every one commencing with bees, who does not use the regular sized hives and fixtures, will, if he succeed to any extent, in time change at considerable expense, and fall into the regular beaten path. You may have a hive in view that suits your fancy, and you may adopt it, but in time, as your experience grows, you will see your mistake and lay it aside.

Late Breeding.

During August and September there is usually a very scant honey flow, and as a consequence but little breeding is done, and as a rule we go into winter quarters with old bees that must die of old age long before spring. This can be and should be remedied. We beekeepers always have considerable to say in early spring in regard to feeding and getting colonies strong, etc., and this is all right; but we do not say enough about fall feeding to get colonies strong in young bees that will come out strong and vigorous in the spring. We must depend principally upon bees that are bred during the fall months for wintering properly, and generally, on account of the scarcity of honey, there are but few bees bred during the fall months. Perhaps September-bred bees are the best for wintering successfully. In open winters we might breed later, but after the middle of October it is probably not safe, as young bees going into winter quarters need frequent flights. I have frequently fed colonies during the fall months, more especially those that lack stores for winter, and in all such cases I have found they winter much better. To produce the best bees thus for wintering, and in all hives wherein the queens have ceased laying, we should commence feeding not later than the first of September, and a week or so earlier will do no harm. After we get the queens to laying, it will be twenty-one days before the bees hatch, so it will be seen that the first of September feeding will bring the bees during the latter part of the same month, which will be about right.

Young men or old should not fail to read Thos. Slater's advertisement on page 15.

To Cripple Creek
VIA COLORADO SPRINGS
The Chicago, Rock Island & Pacific Railway is
4 hours quicker
To Cripple Creek than any other line.
Full particulars by addressing JOHN SEBASTIAN, G. P. A., Chicago.

Special Want Column.

"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time, will be inserted in this column, without display, for 10 cents per line, of seven words or less, per week. Initials or a number counted as one word. Cash with the order. It will pay. Try it!
SPECIAL.—Until further notice, orders from our subscribers will be received at 1 cent a word or 7 cents a line, cash with the order. Stamps taken.

FOR SALE, CHEAP.—A fine imported English Shire stallion. Address Wm. Morganfield, Ogden, Riley Co., Kas.

FOR SALE OR TRADE.—One hundred and sixty acre farm in Graham county, Kansas. Nice, smooth land. No incumbrance. Also 100 acre farm in Scott county, Kansas. Smooth land. No incumbrance. I will sell cheap. Address Thomas Brown, Box 55, Palmer, Kas.

ALFALFA SEED.—Crop of 1896. Pure and fresh. Write for prices. McBeth & Kinnison, Garden City, Kas.

FOR SALE.—Two Poland-China boars, sired by the best son of the great Hadley Jr.; ready for light service and the making of grand service boars. Price \$20 each. Address Riverside Herd, Council Grove, Kas.

WANTED, FARM.—Must be reasonable. State terms and address "C. H. A.," FARMER office.

FOR SALE.—Choice bottom farm, cheap. Address S. Ernst, Glen Elder, Kas.

FOR SALE.—Farms in Morris, Osage, Lyon, Bourbon, Cherokee, Labette, Neosho, Anderson, Montgomery, Coffey, Woodson and many other counties for sale on eight years' time. No interest asked or added in. Write for new circulars with descriptions and prices. Hal W. Nelswanger & Co., Topeka, Kas.

FOR SALE.—A desirable residence convenient to Washburn college. Will be sold at a bargain before November 1. C. L. Traver, Topeka, Kas.

LADY WANTED.—To sell the Hook Spoon. A very useful article for the kitchen. Send 15 cents and get a sample. Special terms to agents. Keystone Supply Co., 2420 N. Taylor Ave., St. Louis, Mo.

FOR SALE.—One hundred and sixty acre farm; well improved; plenty of water; well adapted for raising chickens, hogs and cattle, and for sale cheap. Put your high rents and correspond with Geo. S. Hill, Caldwell, Kas., for the best farm within five miles of Caldwell, which is both a freight and passenger division of the Rock Island railroad.

DOUGLAS COUNTY NURSERY.—For fall and spring trade, general supply of all kinds of nursery stock, apple stocks and forest tree seedlings. Send for price list. Wm. Plasket & Son, Lawrence, Kas.

FARMER WANTED.—Man and wife preferred, to take charge of farm in Noble county, Oklahoma. For terms and conditions, write W. McKay Dougan, M. D., Western Shoshone Agency, White Rock, Nev.

SHAWNEE COUNTY CIDER MILL.—Bring your apples to my cider mill, three miles west of Kansas Ave., on Sixth street road. My mill will be in operation every Tuesday, Thursday and Saturday till November. Henry McAfee Topeka.

FOR SALE.—A handsome six-year-old mammoth Kentucky jack. Cost \$900 at 2 years old. Can be had at a bargain. Write H. C. Bowman, 116 West Sixth St., Topeka.

EGGS FOR HATCHING.—See advertisement elsewhere. Belmont Stock Farm.

FOR SALE.—A new, solid rubber tire bicycle, for only \$15. Good for service anywhere. No fear of puncture. A bargain for some farmer boy. Call and see it at KANSAS FARMER office.

WANTED.—Readers of the KANSAS FARMER to try our "Special Want Column." It is full of bargains and does the business. For less than one dollar, 2-cent postage stamps are acceptable.

SHORT-HORN BULLS.—Crulckshank-topped, for sale. Choice animals of splendid breeding. Address Peter Sim, Wakarusa, Shawnee Co., Kas.

FOR SALE AT SPECIAL PRICES.—Hay outfits, carriers, forks, etc. Inquire at the store of P. W. Griggs & Co., 208 W. Sixth St., Topeka, Kas.

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

WANTED.—Buyers for Large English Berkshires and improved types of Poland-Chinas, from prize-winners, at farmers' prices. Riverside Stock Farm, North Topeka, Kas.

FOR SALE.—A hedge-trimmer which can be attached to a McCormick mower. Will be sold at a bargain if taken quick. Inquire at KANSAS FARMER office.

WANTED.—Buyers for Large English Berkshire gilts, bred or ready to breed, son of imported boar. Bargains! O. P. Updegraff, North Topeka, Kas.

WE MAKE A GOOD FARMER'S SPRING WAGON.—two lazy backs and let-down end-gate, for \$55. Warranted. Kinley & Lannan, 424-426 Jackson street, Topeka.

FOR SALE.—One hundred and sixty acre farm. One and a half miles from Bushong station, Lyon county, Kansas. Good spring. Price \$8 per acre. J. B. McAfee, Topeka, Kas.

FARM FOR SALE.—A good Arkansas valley farm, close to Larned. Well improved, large frame house and barn, granary, fencing, etc.; close to school; two railroads in sight. Price \$10 per acre, payments to suit. A. H. Duff, Larned, Kas.

Commercial Collections a Specialty.

H. C. ROOT, Attorney at Law, 104 Sixth Ave. East, Topeka, Kas. Practices in all State and federal courts.

LIVE STOCK AUCTIONEERS.

Live Stock Auctioneer, JAS. W. SPARKS, Marshall, Mo.
Sales made everywhere. Refer to the best breeders in the West, for whom I sell. Satisfaction guaranteed. Terms reasonable. Write before claiming dates. Mention KANSAS FARMER.

ELI ZIMMERMAN, Hiawatha, Kansas, Live Stock and General Auctioneer.
Pedigreed and registered live stock a specialty. Write for dates. Sales conducted anywhere in the country. Best of references and satisfaction guaranteed.

S. A. SAWYER, FINE STOCK AUCTIONEER.—Manhattan, Riley Co., Kas. Have thirteen different sets of stud books and herd books of cattle and hogs. Complete catalogues. Retained by the City Stock Yard, Denver, Colo., to make all their large combination sales of horses and cattle. Have sold for nearly every importer and noted breeder of cattle in America. Auction sales of fine horses a specialty. Large acquaintance in California, New Mexico, Texas and Wyoming Territory, where I have made numerous public sales.

THE STRAY LIST.

HOW TO POST A STRAY. THE FEES, FINES AND PENALTIES FOR NOT POSTING.

BY AN ACT of the Legislature, approved February 27, 1886, section 1, when the appraised value of a stray or strays exceeds ten dollars, the County Clerk is required, within ten days after receiving a certified description and appraisal, to forward by mail, notice containing complete description of said strays, the day on which they were taken up, their appraised value, and the name and residence of the taker-up, to the KANSAS FARMER, together with the sum of 50 cents for each animal contained in said notice. And such notice shall be published in the FARMER in three successive issues of the paper. It is made the duty of the proprietors of the KANSAS FARMER to send the paper, free of cost, to every County Clerk in the State, to be kept on file in his office for the inspection of all persons interested in strays. A penalty of from \$5 to \$50 is affixed to any failure of a Justice of the Peace, County Clerk, or proprietors of FARMER for a violation of this law.

Broken animals can be taken up at any time in the year.

Unbroken animals can only be taken up between the first day of November and the first day of April, except when found in the lawful enclosure of the taker-up.

No persons, except citizens and householders, can take up a stray.

If an animal liable to be taken up, shall come upon the premises of any person, and he falls for ten days, after being notified in writing of the fact, any other citizen and householder may take up the same. Any person taking up an estray, must immediately advertise the same by posting three written notices in as many places in the township, giving a correct description of each stray, and he must at the same time deliver a copy of said notice to the County Clerk of his county, who shall post the same on a bill-board in his office thirty days.

If such stray is not proven up at the expiration of ten days, the taker-up shall go before any Justice of the Peace of the township, and file an affidavit stating that such stray was taken up on his premises, that he did not drive nor cause it to be driven there, that he has advertised it for ten days, that the marks and brands have not been altered; also he shall give a full description of the same and its cash value. He shall also give a bond to the State of double the value of such stray.

The Justice of the Peace shall within twenty days from the time such stray was taken up (ten days after posting) make out and return to the County Clerk, a certified copy of the description and value of such stray.

If such stray shall be valued at more than \$10, it shall be advertised in the KANSAS FARMER in three successive numbers.

The owner of any stray may, within twelve months from the time of taking up, prove the same by affidavit before any Justice of the Peace of the county, having first notified the taker-up of the time when, and the Justice before whom proof will be offered. The stray shall be delivered to the owner, on the order of the Justice, and upon the payment of all charges and costs.

If the owner of a stray fails to prove ownership within twelve months after the time of taking, a complete title shall vest in the taker-up.

At the end of a year after a stray is taken up, the Justice of the Peace shall issue a summons to three householders to appear and appraise such stray, summons to be served by the taker-up; said appraisers, or two of them, shall in all respects describe and truly value said stray, and make a sworn return of the same to the Justice.

They shall also determine the cost of keeping, and the benefits the taker-up may have had, and report the same on their appraisement.

In all cases where the title vests in the taker-up, he shall pay into the County Treasury, deducting all costs of taking up, posting and taking care of the stray, one-half of the remainder of the value of such stray.

Any person who shall sell or dispose of a stray, or take the same out of the State before the title shall have vested in him, shall be guilty of a misdemeanor and shall forfeit double the value of such stray and be subject to a fine of \$20.

FOR WEEK ENDING AUGUST 27, 1896.

Montgomery county—J. W. Glass, clerk.

HORSE.—Taken up by A. W. Nuttle, in Fawn Creek tp., August 1, 1896, one dark brown horse, 5 years old, branded T or Y with o underneath and line between on left hip.

MULE.—By same, one bay mare mule, no marks or brands.

Crawford county—John Ecker, clerk.

HEIFER.—Taken up by Wm. Cone, of Pittsburg, August 15, 1896, one bluish gray heifer, 2 years old, no marks or brands; valued at \$15.

FOR WEEK ENDING SEPT. 3, 1896.

Nemaha county—F. M. Hartman, clerk.

HEIFER.—Taken up by Henry Steve, in Richmond tp., (P. O. Seneca), August 13, 1896, one red yearling heifer, no marks or brands; valued at \$10.

Chautauqua county—T. L. Hargrove, clerk.

HORSE.—Taken up by Z. T. Sears, in Hendricks tp., (P. O. Elgin), July 8, 1896, one dun horse, white stripe in face, 9 years old, weighs about 900 pounds; valued at \$15.

HORSE.—By same, one dark bay horse, about 6 years old, weighs about 1,100 pounds, sixteen and a half hands high; valued at \$15.

Dickinson county—G. D. Kieffer, clerk.

MARE.—Taken up by J. E. Phillips, in Rinehart tp., June 24, 1896, one bay mare, about 3 years old, white face and white hind feet, weight about 800 pounds; valued at \$15.

Labette county—J. F. Thompson, clerk.
MARE.—Taken up by W. W. Lewellen, in Hackberry tp., October 15, 1895, one gray mare, fourteen and a half hands high, brand similar to HD joined together on left shoulder; valued at \$10.

CRIPPLE CREEK

The Santa Fe Route is the most direct and only through broad-gauge line from Chicago and Kansas City to the celebrated Cripple Creek gold mining district. Luxurious Pullmans, free chair cars, fastest time, and low rates.

GOLD! GOLD!!

Address G. T. Nicholson, G. P. A., A., T. & S. F. Ry., Monadnock Blk., Chicago, or W. J. Black, A. G. P. A., Topeka, Kas., and ask for free copy of profusely illustrated book descriptive of Cripple Creek. It is well worth reading.

SANTA FE ROUTE

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.

MORBID GROWTH.—I have some pigs that swelled up after castration and then seemed to take on a kind of growth, and some break and then waste away like a cancer.

Answer.—It is a morbid or diseased growth caused by the irritating medicine you used at the time of castration. The diseased growth should be removed with a knife, and if this is done thoroughly nothing more is necessary.

Important to Breeders.

Every one interested in improved stock should have the Breeder's Gazette, of Chicago, as well as the KANSAS FARMER, which we furnish for the price of one—both papers one year for only \$2 two dollars; or we will supply the National Stockman and Farmer, of Pittsburgh, Pa. (the best general farm and stock journal in this country, price \$1.50), and the FARMER, for \$1.50.

Thos. Slater has a message for every man on page 15.

Remember that you can get the KANSAS FARMER and the Kansas City Daily Star, both for one year, for \$4, or the KANSAS FARMER and the Kansas City Weekly Star, both for one year, for \$1.20.

Unequaled Service

Denver to Chicago via Kansas City is given via the UNION PACIFIC and Chicago & Alton railways.

Through Pullman Sleepers, Pullman Dining Cars and Free Reclining Chair Cars leave Denver Daily. The Union Pacific is the great through car line of the West.

E. L. LOMAX, Gen. Pass. and Ticket Agent, Omaha, Neb.

"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.

To St. Paul and Minneapolis via Burlington Route.

Two splendid through trains each day from Missouri river points to the north via the old established Burlington Route and Sioux City line. Day train has handsome observation vestibuled sleepers, free chair cars, and dining cars (north of Council Bluffs). Night train has handsome sleepers to Omaha, Council Bluffs and Sioux City, and parlor cars Sioux City north.

L. W. WAKBLEY, Gen. Pass. Agt., St. Louis, Mo.

John Moffett, Manager. L. B. Andrews, Office. T. S. Moffett, W. C. Lorimer, Cattle Salesman. H. M. Baker, Hog and Sheep Salesman. W. A. Morton, Solicitor.

MOFFETT BROS. & ANDREWS

Live Stock Commission Merchants. Feeders and stockers purchased on orders. Personal attention given to all consignments. Correspondence invited. Market reports furnished. References:—National Bank of Commerce, Kansas City, Mo.; Citizens' State Bank, Harper, Kas.; Bank of Kiowa, Kiowa, Kas. Rooms 67-68 Live Stock Exchange, Kansas City, Mo.

Horse Owners! Use



GOMBAULT'S Caustic Balsam

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

When you write mention Kansas Farmer.

MARKET REPORTS.

Kansas City Live Stock. KANSAS CITY, Aug. 31.—Cattle—Receipts, since Saturday, 8,980; calves, 521; shipped Saturday, 938 cattle, 40 calves. Best natives steady; Texans steady, and westerns weak to 15 cents lower. The following are representative sales:

Table with columns: No., Ave. Price, No., Ave. Price. Rows include 40, 21, 36, 1, 21, 1, 41, 56.

TEXAS AND INDIAN STEERS. 21..... 920 \$3.30 1..... 420 \$3.00 1..... 1,070 3.00 52..... 1,106 3.00 41..... 1,143 3.00 1..... 1,070 2.85 56..... 794 2.42 1/2 82..... 761 2.15

NATIVE HEIFERS. 6..... 1,000 \$3.60 40..... 790 \$3.40 1..... 930 3.00 1..... 910 2.90 6..... 800 2.75 2..... 815 2.75 6..... 631 2.65 5..... 760 2.60

NATIVE COWS. 1..... 1,170 \$2.75 2..... 645 \$2.50 1..... 1,040 2.50 1..... 1,200 2.40 9..... 996 2.55 1..... 1,220 2.40 4..... 1,000 1.65 8..... 935 1.75

NATIVE FEEDERS. 45..... 1,127 \$3.75 10..... 945 \$3.75 12..... 1,193 3.65 1..... 1,120 3.60 20..... 1,167 3.40 20..... 1,128 3.35 2..... 1,150 2.20 5..... 100 3.30

NATIVE STOCKERS. 44..... 557 \$3.52 1/2 9..... 762 \$3.45 3..... 710 3.25 11..... 635 3.35 3..... 870 3.15 1..... 790 3.00 2..... 770 3.00 1..... 700 2.75

Hogs—Receipts since Saturday, 2,024; shipped Saturday, 1,394. The market was weak to 50 lower. The following are representative sales:

Table with columns: No., Price, No., Price. Rows include 81, 70, 20, 6, 67, 63, 68, 77, 15, 31, 7, 2, 15, 100, 41, 58, 52, 70, 19, 58, 108, 1, 2, 15, 100, 41, 58, 52, 70, 19, 58, 108, 1, 2.

Sheep—Receipts since Saturday, 5,869; shipped Saturday, none. Desirable grades steady, others weak and in some cases lower. The following are representative sales:

Table with columns: No., Price, No., Price. Rows include 9 lambs, 130 sheep, 22 lambs, 22 sheep.

Horses—Receipts since Saturday, 91; shipped Saturday, 71. The regular auction sale of horses will begin to-morrow morning for the fall and winter season. A good string of drivers and saddlers are on hand and all circumstances point to a most favorable beginning as there are a number of foreign buyers on the ground and others are expected to-night. In anticipation of a regular market to-morrow trade was quiet to-day.

Chicago Live Stock.

CHICAGO, Aug. 31.—Cattle—Receipts, 21,000; market weak to 10c lower; fair to best beefs, \$3.00@3.50; stockers and feeders, \$2.50@3.70; mixed cows and bulls, \$1.10@3.40; Texas, \$2.50@3.35.

Hogs—Receipts, 45,000; market 5 to 10c lower but active; native, \$3.40@3.45; rough packing, \$2.55@2.75; mixed and butchers, \$2.85@3.40; heavy packing and shipping, \$2.65@3.20; pigs \$2.50@3.30.

Sheep—Receipts, 17,000; market for sheep steady, lambs 15 to 25c lower; native, \$2.00@3.60; western, \$2.50@3.50; lambs, \$2.75@3.25.

St. Louis Live Stock.

ST. LOUIS, Aug. 31.—Cattle—Receipts, 3,070; market steady on best, lower on others; native steers, \$3.60 4.50; Texas steers, \$3.40 4.50.

Hogs—Receipts, 2,500; market 5c lower; light, \$2.10@3.35; mixed, \$2.80@3.20; heavy, \$2.80@3.25.

Sheep—Receipts, 2,000; market steady.

Chicago Grain and Produce.

Table with columns: Aug. 31, Opened, High'st, Low'st, Closing. Rows include Wh't, Corn, Oats, Pork, Lard, Ribs.

Kansas City Grain.

KANSAS CITY, Aug. 31.—Receipts of wheat were large here to-day and trade was slow in getting started, but when business got under way it was active. Hard wheat below No. 2 was 1/2c lower as a rule. Red wheat was scarce, as usual, and firmly held. There were firm bids for wheat out of store, 5 1/2c Galveston for No. 2 hard and 5 1/4c for No. 3 hard.

KANSAS G. A. R. REUNION

Topeka's Autumnal Festivities!

FOR THE UNION VETERANS OF 1861-5,

Sept. 28-Oct. 3, 1896.

A WEEK OF

Pageantry, Floats, Carnival Pranks, Civic, Military and Flower Parades, Campfires, Sham Battles, Band Contests, Firemen's State Tournament, etc.

MONDAY, Sept. 28. Labor Parade and Celebration. Governors' Campfire at Camp Nelson A. Miles.

TUESDAY, Sept. 29. Kansas Firemen's Parade and Tournament. Illuminated Bicycle Night Parade and Great Campfires.

WEDNESDAY, Sept. 30. Band Contests, Arabian Band Procession, and an "All Round Campfire."

FLORA'S FESTIVAL AND

PARADE OF THE FLOWERS 2 P. M.

THURSDAY, Oct. 1. A Day of Great Pomp. Civic and Military Parades in Honor of the Union Veteran Visitors.

THE DRAGON OF AGES

A Huge Moving Panorama of Illusory Mechanism, Manned by Don Quixote and Sancho Panza and their Train of Witch-Servants, will lead the

GRAND PARADE ON THURSDAY NIGHT.

FRIDAY, Oct. 2. Band Contests, Campfires presided over by Famous American Soldier-Statesmen, Day Spectacular Street Show, ending at night with

Grand "Midway Parade" and Carnival Masquerade on Kansas Avenue.

SATURDAY, Oct. 3. Great Kansas Political Feast, Famous Speakers, Last Campfire, Martial Music. Hon. WM. J. BRYAN has promised to be present on this day.

One Fare for Round Trip on all the Railroads.

Receipts of wheat here to-day, 221 cars; a year ago, 110 cars.

Sales were as follows on track: Hard, No. 2, 1 car 52 1/2c, 4 cars 52c, 1 car 51 1/2c, 1 car 51c; No. 3, 1 car 50c, 2 cars 49 1/2c, 12 cars 49c, 27 cars 48 1/2c, 7 cars 48c; No. 4, 18 cars 47c, 26 cars 46 1/2c, 9 cars 46c, 4 cars 4 1/2c, 2 cars 45c; rejected, 1 car 44c, 1 car 43c, 2 cars 42c, 1 car 41c, 1 car 40c; no grade, nominally 30@35c. Soft, No. 2 red, 1 car 58c; No. 3 red, 1 car choice 56c, 2 cars 54c, 1 car 53c; No. 4 red, 1 car choice 54c, 1 car 51c, 1 car 50c, 1 car 47 1/2c, 2 cars 47c; rejected, nominally 40@44c; no grade, nominally 31@40c. Spring, No. 2, 1 car 50c; No. 3, nominally 4@48c.

Corn met with better demand than for some days, especially white corn, and prices were about the same as on Saturday. Offerings were fairly large. There was no trade in futures, and no reported sales of round lots for shipments.

Receipts of corn here to-day, 72 cars; a year ago, 48 cars.

Sales by sample on track: No. 2 mixed, 5 cars 19c, 2 cars 18 1/2c, 10 cars 18 1/2c; No. 3 mixed, 2 cars 17 1/2c, 1 car yellow 18c; No. 4 mixed, nominally 17c; no grade, nominally 14c; white corn, No. 2, 27 cars 20c; No. 3, 2 cars 19c; No. 4, nominally 17c.

Oats sold at Saturday's prices and met with fair demand with rather large offerings.

Receipts of oats to-day, 39 cars; a year ago, 31 cars.

Sales by sample on track, Kansas City: No. 2 mixed, 1 car 17c, 1 car 17 1/2c; No. 3 oats, nominally 15@16c; No. 4, 1 car good 14c; no grade, nominally 8@11c; No. 2 white oats, 2 cars 22 1/2c, 1 car 21 1/2c, 3 cars 20c; No. 3 white, 3 cars 21c, 1 car 19c, 1 car 18c, 1 car 17 1/2c, 1 car 17 1/2c, 3 cars 17c, 1 car 16 1/2c; No. 4 white, nominally 13@15c.

St. Louis Grain.

ST. LOUIS, Aug. 31.—Receipts, wheat, 131,000 bu.; last year, holiday; corn, 186,000 bu.; oats, 7,700 bu. Shipments, wheat, 13,000 bu.; corn, 106,256 bu.; oats, 3,900 bu. Closing prices: Wheat—Cash, 59 1/2c; August, 59 1/2c; September, 59c; December, 62 1/2c@62 3/4c. Corn—Cash, 18 1/2c; August, 18 1/2c; September, 18 1/2c; December, 20 1/2c, May, 23 1/2c. Oats—Cash, 17 1/2c; August, 17 1/2c; September, 16 1/2c.

Kansas City Produce.

KANSAS CITY, Aug. 31.—Butter—Creamery, extra fancy separator, 14c; firsts, 13c; dairy, fancy, 13c; fair 10c; store packed, fresh, 9@10c; packing stock, 7c.

Eggs—Strictly candled stock, 9c per doz.

Poultry—Hens, 5c; roosters, 15c each; spring, 6 1/2c per lb.; turkeys, hens, 8c; gobblers, 7c; spring ducks, 7c; old, 5c.

Fruits—Peaches, shipped stock, 1/2 bu. boxes, fancy, 4 @ 50c; clings, 3 c; inferior, 30; 4-basket crates, 60c; 6-basket crates, \$1.00; inferior stock, 75c; home grown stock, fancy, Alberta, 50@60c a peck; good to choice, 30@40c; seedlings, 15@20c a peck; 30@35c a half bu. Apples—Choice red apples sold at 25c a peck; fancy yellow are selling at 75c a bu.; eating sell from 35 @ 50c a bu.; cooking, 15@30c; Maiden Blush, shipped stock, fancy packed, \$2.00; common to inferior, \$1.25; Rambo, fancy, \$1.50; common, \$1.00 per brl.; crabs, 50c per bu.; other varieties, 20c per peck. Grapes, Concord, choice, 15c; fair, 12 1/2c per peck basket; inferior, 10c; fancy Werdens, 15c; white grapes for jelly purposes, 12 1/2 @ 15c a peck.

Potatoes—In a small way a good demand was supplied at 20@25c per bu.; in round lots, 17@19c; car lots, 17 1/2c. Sweet potatoes, new stock, 35@40c per bu.

Wm. A. Rogers. Robt. E. Cox. Fred W. Bishop.



Live Stock Commission Merchants. Rooms 265 and 266 Live Stock Exchange Building, Kansas City, Mo.

GROWERS OF AND DEALERS IN Cattle, Hogs and Sheep

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Stockers and feeders bought on order. Liberal advances to the trade. Write for market reports and special information.

When you write mention Kansas Farmer.

The Apiary.

Conducted by A. H. Duff, Larned, Kas., to whom inquiries relating to this department should be addressed.

The East Indian Honey Bee.

There are several varieties of the bees of East India, but the one brought more prominently to notice is the giant honey bee or Apis dorsata. Frank Benton, who has explored the East Indian Islands in search of honey bees, has this to say of them: "These bees build huge combs of very pure wax, often five to six feet in length, and three or four feet width, which they attach to overhanging ledges of rocks or to large limbs of lofty trees in the primitive forests or jungles. When attached to limbs of trees, they are built singly, and present much the appearance of those of the tiny East Indian bee. The giant bee, quite in contradistinction to the other species of apis, does not construct larger cells in which to rear drones, these and the worker bees being produced in cells of the same size."

Strange stories have been told of these bees in America and Europe. It has been stated that they build their combs horizontally, after the manner of paper-making wasps; that they are so given to wandering, as to make it impossible to keep them in hives, and that their ferocity renders them objects greatly to be dreaded. The first real information regarding these bees was given by Mr. Benton, who found them in their native home, and secured them by cutting the combs from their original attachments, and it was thus ascertained that their combs are always built perpendicularly; also that the colonies placed in frame hives and permitted to fly freely did not desert the hives, and that they were far from being ferocious. These colonies were easily handled by proper precautions, without even the use of smoke. It was also proved that they are good honey-gatherers. These large bees would doubtless be able to get honey from flowers whose nectaries are located out of reach of ordinary bees, notably those of the red clover, now visited chiefly by bumble bees and which it is thought the East Indian bees might pollinate and cause to produce seed more abundantly. They might prove an important factor, especially in the Southern States, for the production of wax, now such an expensive article. Should these bees visit in the main only such flowers as are not adapted to our native bees, their introduction, wherever it could be made successful, would, without decreasing the yield from our bees, add materially to the honey and wax production of the country. Enough is known of the small East Indian bee to remove all doubt of the possibility of its successful introduction, and it is also probable that the large one would prove valuable. In either case, it does not appear that any evil results might follow their introduction. There are numerous other varieties or species of bees in Africa and Asia about which no more or even less is known. It is a subject that should receive careful consideration, because of the possible benefits to apiculture and the wider beneficial effects on agriculture.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1886.

SEAL. A. W. GLEASON, Notary Public.

Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75c.

Bee Notes.

The nucleus plan of increase is always a safe method. One or two frames of comb, bees and brood to start with until you have them supplied with a laying queen, and then build them up by giving them combs of brood from colonies that are populous and can spare them without crippling too much the working force.

Old queens are more inclined to swarm than young ones. If you require all colonies in spring with young queens, swarming will be greatly lessened during the season and colonies will become much stronger and the result is a much larger honey crop. Young queens always exceed older ones laying eggs and are much less inclined to swarm.

Bees are every farmer's friend and they should be encouraged in every community. The part they take in the fertilization of fruit blossoms is

invaluable, and not only that, but they take a hand collecting and distributing pollen in almost all kinds of cereals grown. Corn furnishes great quantities of pollen, which is eagerly sought after by bees, as is all kinds of sorghums, small grains, etc.

At intervals during the summer when bees cannot gather honey the queens cease laying and the strength of the colony is considerably curtailed. A little feed daily at such times will keep the queens laying, and the colony will be in much better shape for storing surplus when the honey flow opens. This is especially so and will result profitably in alfalfa districts during the intervening time of the different bloomings.

There is no feed better or cheaper for bees than granulated sugar. It should be thoroughly melted by adding a little water and brought to the boil. When light feeding is desired it may be given them in tight-bottom hives by pouring a little down in the corner of the hive on the bottom. If heavy feeding is desired the sirup may be poured into the combs, or in feeders placed in upper stories. The only time to feed successfully is late in the evening, just in time to get the work done before dark.

Colonies that lack stores for winter should be fed the required amount in the fall, and September is the best time to do it. It should be done when it is yet warm enough to allow the bees to seal the stores over. Winter feeding is a failure, and loss of colonies is the result. Every colony should have twenty-five or thirty pounds of good sealed stores to bring them through to the first of May, with good winter protection besides. It is always better to have a reserve supply of sealed combs of honey to give them when placing them in winter quarters, and apiarists as a general thing keep this reserve for the purpose.

STATE OF OHIO, CITY OF TOLEDO, ss. LUCAS COUNTY.

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & CO., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1886.

SEAL. A. W. GLEASON, Notary Public.

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Ask agent for tickets via the Burlington Route.

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Ho! for Cripple Creek.

Remember that the Chicago, Rock Island & Pacific is the only line running directly from the East to Colorado Springs, the natural gateway to the Cripple Creek District. Colorado Springs lies at the foot of Pike's Peak at its eastern base, and Cripple Creek is part way down the southwest slope of Pike's Peak and near its western base.

Two all rail routes from Colorado Springs are offered you. One by the Midland railway up Ute Pass, via Summit, to Cripple Creek. Another over the Denver & Rio Grande, via Pueblo and Florence, to Cripple Creek. Take the great Rock Island Route to this wonderful gold mining camp. Maps, folders and rates on application. Address

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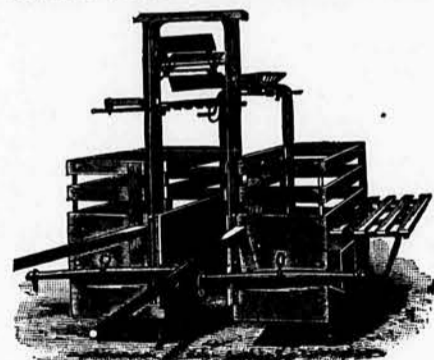
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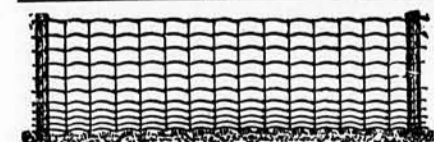
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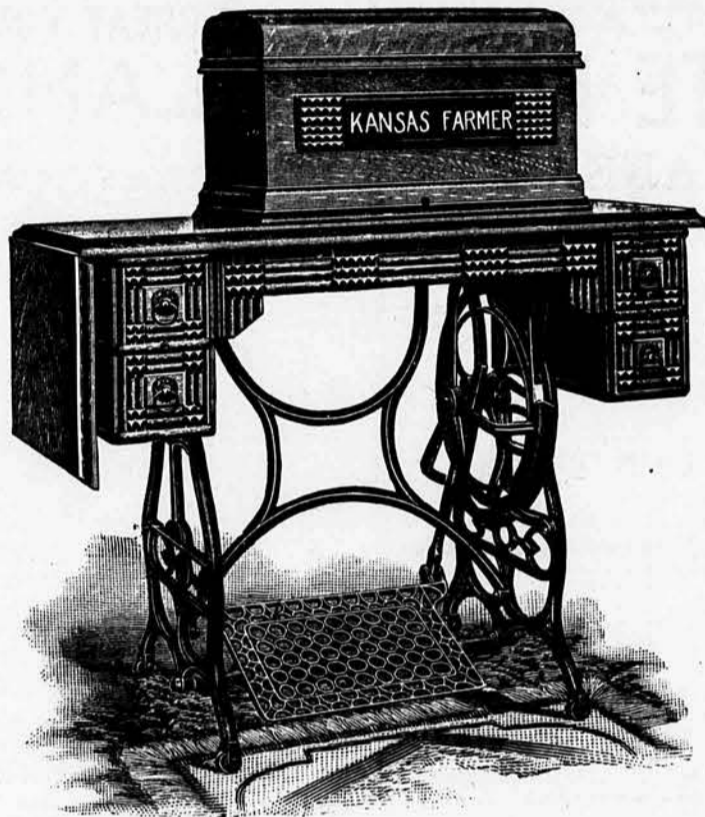


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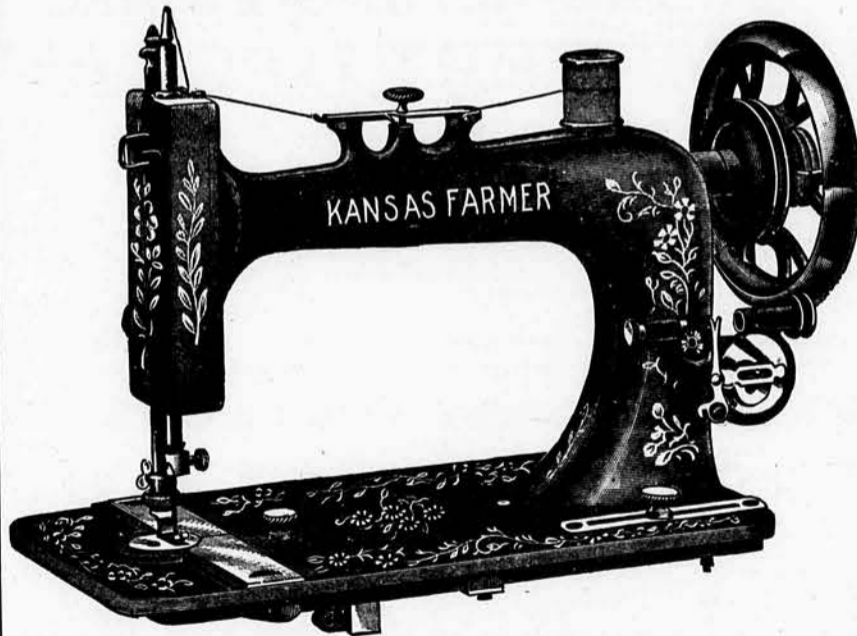
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High Arm Sewing Machine. This machine is of the same high grade that is usually sold by agents and dealers for from \$45 to \$50.
We Claim for It That it has all the good points found in all other machines any made; that every part is adjustable and all lost motion can be readily taken up; that it has the simplest and most easily threaded shuttle made; that all the wearing parts are of the best case-hardened steel.



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Falling Sexual Strength in old or young men can be quickly and permanently cured by me to a healthy vigorous state. Sufferers from.....

NERVOUS DEBILITY, WEAKNESS, VARICOCELE,

AND ALL WASTING DISEASES should write to me for advice. I have been a close student for many years of the subject of weakness in men, the fact is, I was a sufferer myself. Too bashful to seek the aid of older men or reputable physicians I investigated the subject deeply and discovered a simple but most remarkably successful remedy that completely cured me. I want every young or old man to know about it. I take a personal interest in such cases and no one need hesitate to write me as all communications are held strictly confidential. I send the recipe of this remedy absolutely free of cost. Do not put it off but write me fully at once, you will always bless the day you d.d so. Address

THOMAS SLATER, Box 960, Shipper of Famous Kalamazoo Celery, KALAMAZOO, MICH.

When you write mention Kansas Farmer.

HENRY W. ROBY, M. D., SURGEON.

Office: 730 Kansas Ave., TOPEKA, KAS.

J. G. Peppard MILLET CANE
 1400-2 Union Avenue, CLOVERS
 KANSAS CITY, MO. TIMOTHY
 GRASS SEEDS.

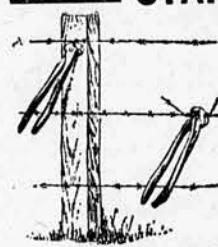
SEEDS

ELM BEACH FARM POLAND-CHINA SWINE



The home of the great breeding boar, **SIR CHARLES CORWIN 33095**. Our 1896 crop of pigs are by six different boars and out of fashionably bred sows, including such grand individuals as the prize-winning **\$500 Lady Longfellow 34099 (S)**, that has eight pigs by the prize boar, **King Hadley**. **STOCK FOR SALE** at all times and at very reasonable prices. We also breed Short-horn cattle. Write or come and see us.
IRWIN & DUNCAN, Wichita, Sedgwick Co., Kas.

RUSSELL'S STAPLE PULLER



AND WIRE SPLICER
 A combination tool used in repairing and removing wire fences. Price \$1.25. Drives and pulls staples, cuts and splices wire. Its special use is in building and repairing wire fences, but may be used for many different purposes about a farm. Saves its cost in one day's work. You can't afford to be without it. Ask your hardware merchant for it, or address

Russell Hardware & Implement Manuf'g Co.,
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 When you write mention Kansas Farmer.

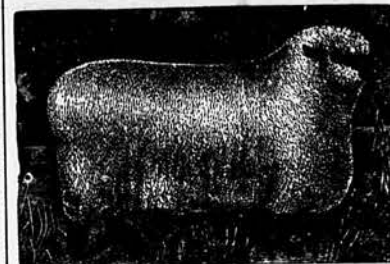
Bannerman's Phenyle Has Been Tested

For Hog Lice, Chicken Lice, Horn-fly, Sheep Tick and Maggots and Hog Cholera. Nothing equals Bannerman's Phenyle as a germicide. It is all that is claimed for it. A trial package, 5-pound can, \$1, or 25-pound pail, \$3.50. Once tried you will not be without it. Mention this paper. For full particulars address **The Anglo-American Stock Food Co., 113 Adams St., Chicago, Ill.**

Wanted, an Idea. Who can think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write **John Wedderburn & Co.** Patent Attorneys, Washington, D. C., for their \$1,800 prize offer and list of 200 inventions wanted.

THOS. B. SHILLINGLAW, Real Estate and Rental Agency, 115 East Fifth St., Topeka, Kas. Estab. lished in 1884. Calls and correspondence invited.

SHROPSHIRE RAMS!



A choice lot of yearling and two-year-old rams, sired by **Rector 94** and **Grand Delight 2d** and other noted rams, and a grand lot of imported and American-bred ewes. Prices in keeping with the hard times and the quality.

KIRKPATRICK & SON,
 Connors, Wyandotte Co., Kas.

THIRD ANNUAL KANSAS STATE FAIR!

AT WICHITA, KANSAS,

September 22, 23, 24, 25 and 26, 1896.

\$8,000 in Purses in Speed Department.

Five per cent. payable when nomination is made and 5 per cent. deducted from winner. **ENTRIES CLOSE SEPTEMBER 12, 1896.** Liberal Premiums and special inducements to exhibitors of Live Stock, Poultry and Pet Stock and for Agricultural, Horticultural, Manufacturers' and Merchants' Displays. Big Prizes for Largest and Best Displays of Farm and Garden Products Grown in One Township.

GET READY FOR THE BIG FAIR OF 1896

For information about entries or Premium Lists, address **C. S. SMITH, Secretary, Wichita, Kas.**

SEVENTY-FIVE HEAD.

SEVENTY-FIVE HEAD.

GREAT COMBINATION SALE OF POLAND-CHINAS!

GRESHAM & NATION,

At Quality Place, the home of Quality Herd, the World's Fair Winners, one mile north of Santa Fe depot.

HUTCHINSON, KAS., THURSDAY, SEPTEMBER 10, 1896, 10:30 A.M.

Consisting of aged and yearling sows safe in pig, six-months sows, trios (two sows and one male), yearling, under 1 year and six-months males, sows with pigs by their sides. Also a half interest in the great **Darkness Quality 14361**, the greatest boar in the United States to-day—girth and flank 72 inches, length 70, leg 94. A prize-winner, whose breeding cannot be surpassed and a No. 1 sire. Dam, the great \$500 **Darkness F. 73222**. This fellow is of the World's Fair litter (October, 1893). The **Black U. S., King Butler, Darkness, Wilkes, Tecumseh, Lawrence Perfection**—in fact, the offering is loaded to the gunwale with the great World's Fair winners' breeding, as well as other leading strains. Catalogues now ready.

Bids by letter or wire treated as fairly as though bidder were present. Free lunch at noon. Lodging at our expense. Street car line runs within eighty rods of sale. Come and secure some of the best breeding on earth.

Address the above firm, or **COL. S. A. SAWYER, Auctioneer, Manhattan, Kas.**

Vansell's Third Annual Sale of Registered Poland-Chinas, At Muscotah, Atchison Co., Kas., Tuesday, September 8, 1896. Seventy-five Head,

Consisting of three aged boars, fifteen sows and fall gilts, and sixty spring of 1896 pigs of both sexes. Youngsters sired by the great breeding boars **Admiral Chip 7919 S.**, the \$250 hog, and **Kankilska 1570 S.** The matured herd boars, **Young Competition 15082 S.** and **Kansas Chip 15083 S.**, consigned by **J. E. Hoagland**, Whiting, Kas., are both good ones. There will also be offered three pure-bred **YOUNG SHORT-HORN BULLS**, bred on the farm. The sale will open on the farm. **TERMS:**—All sums under \$15, cash; over \$15, eight months time on approved notes bearing 8 per cent. interest. A discount of 4 per cent. on cash payments over \$15.

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

M. C. VANSELL, Muscotah, Kansas.

THE AUCTION SALE OF THE SEASON 75 POLAND-CHINA SWINE.

AT CONNORS, WYANDOTTE CO., KANSAS, TUESDAY, SEPTEMBER 29, 1896.

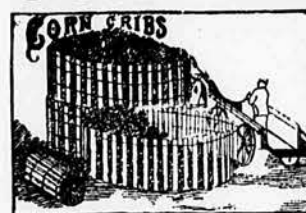


Twenty young sows—Chief **Tecumseh 2d**, **Black U. S.**, **King Perfection** and **Hoosier Boy** families—bred and safe in pig to the peerless **HADLEY JR. 13314**, whose get has won more prizes and sold for more money than the get of any other boar of the breed at his age. **Five March** pigs by him. These are for herd-headers and the show ring. **Fifty spring** pigs by **Wilkes Sanders 14222**, **King Perfection 22087** and **Clay Dee 23877**. **Wilkes Sanders** is one of the greatest sons of the old world's winner, **J. H. Sanders**, and the richest breeding on his dam's side, going through **Queen Wilkes** to **Black Wilkes**, to the greatest sons of the old world's winner, **J. H. Sanders**, through **A. A.** on dam's side. **King Perfection** is the first and only boar sold from Kansas at \$1,000. **Clay Dee** won first in class and sweepstakes at Kansas State fair in 1895. Breeders of all breeds invited to this sale. If you want to be in the front in this business, order catalogue, mark it and come to this sale.

COL. J. W. SPARKS, Auctioneer.

KIRKPATRICK & SON, Connors, Wyandotte Co., Kas.

CORN CRIBS!



These cribs are made of selected and seasoned oak and 5 double strands of wire and will last a lifetime. After the crib is empty it can be used for garden or yard fence. It is the most economical, serviceable and durable temporary crib in use. This crib is made in three sizes—500, 800 and 1,200 bushels. Write for prices. Secure agency.

WESTERN MANUFACTURING CO.,
 Seventh and Wyandotte Sts., Kansas City, Mo.

THE COMING PUBLIC SALE OF REGISTERED POLAND-CHINAS

At Fair Grounds, St. Joseph, Mo., Thursday, September 17, 1896.

When will be offered a draft of sixty head from the **Cherry Orchard Herd**, consisting of yearling boars, thirty bred sows and fall gilts, with about thirty youngsters spring of 1896 farrow. Three yearling boars are good ones. **Hadley M. Washington 15544 S.**, sired by the noted \$555 boar, **Hadley Jr. 13314 S.**, and out of **Martha Washington 8th (23893)**. **Sir Charles 16005 S.**, by **Sir Charles Corwin 33095 O.** Also a grandson of **J. H. Sanders 27319 O.** The thirty bred sows are a smooth lot, fashionably bred and worthy a place in any herd, having for sires **Wren's Medium 12387 S.**, **Corwin Whiteface 9924 S.** and **Black Corwin 16136 S.** Their dams belong to the **Corwin** and **Tecumseh** families. Twenty of them are safe in pig by the yearling boars above mentioned. I have made these selections from my herd of 150 head, and take pride in calling the attention of my fellow breeders to their worth individually and their merits from noted ancestry.

Terms of Sale:—All sums under \$20, cash; over \$20, six months time on approved notes bearing 8 per cent. interest; 4 per cent. off for cash. Sale to open at 1 o'clock p. m. Usual sales day lunch at noon. Send for free copy of sale catalogue.

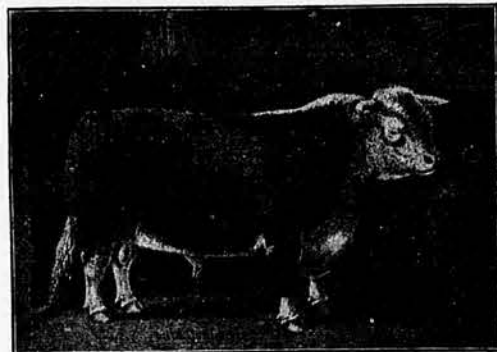
COL. S. A. SAWYER, Auctioneers.
COL. JAS. W. SPARKS.

W. H. WREN, Marion, Kansas.

SUNNY SLOPE FARM

EMPORIA, KANSAS.

Hereford Cattle Headquarters



WILD TOM 51592.

Sweepstakes bull **Wild Tom 51592**. Weight when thirty-four months old 2,305 pounds in show condition. He is the best living son of **Beau Real 11055**. Dam **Wild Mary 21238**. **Winings:**—Iowa State Fair, 1895, first in class, first in special, first in sweepstakes, and Silver Medal; Kansas State Fair, first in class, first and special at head of herd, first bull and four of his get.

FARM—Two and a half miles northwest of city. We furnish transportation to and from the farm if notified.

Sunny Slope Farm is one of the largest breeding establishments in the United States. Three sweepstakes bulls in service—**Wild Tom 51592**, **Climax 60942**, **Archibald VI. 60921**, also the great breeding bull, **Archibald V. 54433**, who was the sire of two sweepstakes animals (**Archibald VI.**, sweepstakes under one year of age, and **Miss Wellington 5th**, sweepstakes heifer over all beef breeds when twelve months and twenty days old. We have thirteen serviceable bulls for sale, ranging from eight to twenty months old. We also have forty bulls for sale, ranging from five to eight months old. Also a choice lot of heifers and cows. We combine the blood of **Anxiety**, **Lord Wilton** and **Grove 3d**. Breeders are invited to inspect our herd.

C. S. CROSS,
 EMPORIA, KANSAS.

H. L. LEIBFRIED, Manager.