VOL. XXXIX. NO. 33. TOPEKA, KANSAS, THURSDAY, AUGUST 15, 1901. ESTABLISHED IN 1863 $1.00 A YEAR.

Breeders' Directory

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—125—
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I must sell; am overstocked and short of feed.
15 head of Black, mealy nosed Jacks and Jennets; 7 registered Stallions (all good ages); 25 Horses, consisting of mares (in foal), 1- and 2-year-old Colts, and some Driving Horses.
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EVERY FIRST PRIZE: except one, at the Universal Exposition, Paris in 1900.
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Cattle, Sheep, and Hogs.

Owing to shortage in crops, I will sell a few registered red Bates Shorthorn cows or heifers, safe in calf to fine, registered bull, at famine prices. Will also sell registered Shropshire rams or ewes—nice ones—at reduced prices. Good April sow and boar Poland-China pigs at reasonable prices; also a few sows and gilts, bred for September and October farrow to Black Missouri Chief 25785, one of the best sons of Missouri's Black Chief 19399, and out of a sow from Chief Tecumseh 2d 9115, whose dam was by Klever's Model, the great $5,100 sire.

J. CLARENCE NORTON, Moran, Kansas.

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Denver, Colorado Springs, and Pueblo and return,	$15.00
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Salt Lake City and Ogden, and return,	$30.00

July 10 to 31, and August 11 to 31, round trip tickets to same points as named above will be sold at one fare plus $2 for the round trip.

A Pullman Observation Sleeper runs between Kansas City and Colorado Springs on Santa Fe trains Nos. 5 and 6. The observation end is for free use of all Pullman passengers.

For further particulars, rates and other dates or to other places, or for free copy of "A Colorado Summer," write to, or call on.....

T. L. KING,
Agent, the Atchison, Topeka & Santa Fe Railway. TOPEKA, KANSAS.

WHEN WRITING ADVERTISERS MENTION KANSAS FARMER.

Agricultural Matters.

Fall Seeding of Alfalfa.

BULLETIN NO. 104, FARM DEPARTMENT, KANSAS EXPERIMENT STATION, H. M. COTTRELL, M. S., AGRICULTURIST.

In some sections this summer tame grass pastures were eaten to the roots and then the cattle were turned on the meadows and these were grazed as closely as the pastures. Where this is the case it is probable that with the usual conditions during the coming fall and winter a large part of these pastures and meadows will next spring be either dead or so badly killed that they will have to be plowed up. This will make a severe shortage in hay next year, and farmers should plan to meet this difficulty. The only sure way and the most profitable way to insure an abundance of hay next summer is by seeding alfalfa this fall, putting it in between August 15 and September 15. Alfalfa sowed at this time will under favorable conditions in Eastern Kansas yield a good cutting of hay next May and with ordinary conditions yield three to four cuttings of hay next summer. On average soil the yield of hay should be from four to six tons per acre for the season and alfalfa hay is worth more ton per ton for feeding beef cattle, dairy cows, young stock, sheep, and hogs than any other hay that can be raised on Kansas farms.

WHEN TO SOW.

Alfalfa may be sown from August 15 to September 15 and if the season is favorable will make a vigorous growth through the fall and go through the winter in good condition. August sowing is perferable as it gives the alfalfa a longer time in which to grow before the ground freezes.

PREPARATION OF THE GROUND.

The ground for alfalfa should be thoroughly pulverized and deeply plowed but it must be well settled before seeding and only the surface loose. Alfalfa will usually fail if seeded in the fall on freshly plowed ground. If it is necessary to plow the ground before seeding, plow as early as possible, harrow thoroughly, making a good seed bed and then wait until a good rain has settled the soil before seeding.

A well cultivated corn field with the stalks cut and drawn off will give ideal conditions for seeding alfalfa. Such a field should not be plowed but harrowed before seeding. Wheat, oat, flax and millet stubble ground plowed, harrowed thoroughly and allowed to settle before seeding furnishes good conditions for alfalfa. If such ground is mellow, plowing may not be necessary and the land will need only to be disked and cross-disked.

A careful farmer and a careless renter a few years ago put in alfalfa in adjoining fields in Northeastern Kansas. The farmer plowed the land deeply and pulverized it until it was like a garden bed. He immediately sowed alfalfa, secured a thick stand and in a few months the alfalfa entirely died out. The renter thought it would not pay to spend much time on another man's land. His field had been in corn the previous year. He broke the stalks with a pole, sowed the seed broadcast and lightly covered it with a harrow. He secured a good stand that was permanent. Usually a good stand can not be secured with so little preparation, but a deep mellow seed bed at seeding time generally insures a failure. The more thoroughly the seed bed is prepared the better, if it is allowed to settle before seeding.

The ground must be deeply pulverized, well settled with a good mulch on the surface, and saturated with moisture so as to bring up the seed quickly and force the fall growth. If either of these conditions are lacking do not sow.

HOW TO SOW.

The best way to sow alfalfa is with a press drill using 20 pounds of seed per acre. Mix the seed with equal parts by measure of coarse corn chop or bran, drill and cross-drill sowing half the seed each way. If either a hoe or disc drill is used care must be taken not to get the seed to deep, about 12 times the diameter of the seed is the proper depth if this places the seed in moist soil. If necessary to sow broadcast use 25 to 30 pounds seed per acre, cover with a harrow and roll unless there is danger from blowing. It is much better to seed with a drill. Alfalfa should be sown alone. It does not want a nurse crop.

WHERE FALL SEEDING IS PROFITABLE.

In general it may be said that fall seeding is advisable wherever the proper conditions of seed bed in regard to moisture and mechanical condition can be secured in August or early September. In some years in some sections of Kansas the conditions for fall sowing may be secured but grasshoppers will destroy the young plants.

From the east line of Kansas westward for 120 miles spring seeding of alfalfa fails more often than it succeeds. Last year in Wabaunsee county a farmer secured a heavy stand of alfalfa from fall seeding on a field where he had tried spring seeding for four years in succession and failed. Alfalfa seeded in September, 1900, yielded its first crop of hay in May 1901.

West of a line 120 miles west of the eastern line of the State fall seeding of alfalfa is not so certain. If conditions are right it will pay, otherwise spring seeding is the best. Judging from our correspondence and investigation fall seeding is usually best in States east of Kansas.

ADVANTAGES OF FALL SEEDING.

Alfalfa may be seeded in the fall after another crop has been taken off. The next year it will yield full crops of hay and no time is lost. Alfalfa seeded in the spring usually yields no hay until the following year and requires mowing several times during the first summer to keep the weeds down. Alfalfa sown in the fall under proper conditions requires no attention whatever until the following spring when a crop of hay is ready to be harvested.

It must be remembered though that conditions must be right or fall seeding will fail as a vigorous fall growth must be secured in order to carry the alfalfa through the winter.

VALUE OF ALFALFA.

Alfalfa when sold will probably return a greater cash income year by year than any other feed crop raised in Kansas. When fed on the farm where raised it ranks among the most profitable crops.

At this station pigs were pastured through the summer on alfalfa with light feeding of corn. After deducting the probable gain from the corn, the gain per acre from alfalfa pasture was 776 pounds of pork. One lot of fattening hogs were fed all the grain they would eat, another lot all the grain and dry alfalfa hay they would eat. The lot having the hay made a gain of 868 pounds of pork per ton of alfalfa hay. Alfalfa should form part of the daily ration of every growing pig and of all stock hogs.

With scrub cows fed alfalfa hay and Kaffir-corn grain, at ordinary prices for feed, butter fat was produced at a cost for feed of seven cents per pound. On the college farm young cattle are wintered on alfalfa hay and fodder from corn, Kaffir-corn, or sorghum, and make through the winter a good growth without grain.

A stockman in Rice county, Kansas made a gain of five pounds per day per head on steers for forty-seven days with alfalfa hay and corn. In ordinary feeding 1,000 pounds of grain are required to put 100 pounds of gain on a fattening steer. With alfalfa hay and corn-meal at this station fattening steers made 100 pounds gain for each 718 pounds of gain.

Alfalfa makes good pasturage for horses. Horsemen report a gain of six pounds a day per head on horses pastured on alfalfa and given a light ration of corn or Kaffir-corn.

Alfalfa hay is one of the best feeds for sheep, that is grown, and either green or dry alfalfa is a valuable feed for poultry .

On account of its effect on the skin and hair alfalfa is one of the best feeds for cattle being fitted for the show ring.

At the Wyomng Experiment Station part of a field was seeded to alfalfa and part planted to a variety of field crops. At the end of five years the alfalfa was plowed up and planted to the same crops as the other part of the field. Wheat on the part kept for five years in alfalfa yielded 30 bushels per acre, on the other part 18 bushels. Oats on the alfalfa land yielded 78 bushels per acre on the other land 37 bushels. Alfalfa increases the fertility of the land and improves its physical condition, making stiff soils mellow and binding loose soils. Kansas farmers need alfalfa for profitable feeding and they need alfalfa for increasing the yield of their crops.

SOILS ADAPTED TO ALFALFA.

Alfalfa is adapted to a wide range of soils and climate. It will make the greatest growth on rich well drained bottom land where the subsoil while not sand or gravel is porous. It has been grown for years on the farm of the Kansas State Agricultural College on high upland, where the subsoil is stiff hard pan and where it is 180 feet to water. The yield on this land averages more than three tons per acre per year. On better land the yield is four to six tons per acre per year.

FARMER'S TELEPHONE $11

Wire and poles at lowest prices. Sold outright to you. No leases. No rent to pay. Agents wanted in every county.

Write to

KELLOGG SWITCHBOARD & SUPPLY CO., 232 S. Green St., Chicago, Ill.

Alfalfa will not grow in wet land, nor on land subject to overflow. On the college farm a part of one field has only 4 feet of soil and then solid rock. In ordinary years fair crops are raised on this part of the field. In drouth the yield is light but the alfalfa lives ready to grow with vigor as soon as rains come.

Many farmers in Eastern Kansas have tried to grow alfalfa and have failed and the general impression is that alfalfa is not a suitable crop for that section of the State. The failures are due to improper methods of seeding or to wrong treatment after seeding. Secretary Coburn in his recently published book on alfalfa* shows that alfalfa is a profitable crop in 31 States and Territories. It grows successfully in such widely different soils and climates as those of California and Washington and Delaware and New Jersey, Idaho and Montana, and Louisiana and Georgia. Secretary Coburn shows that the annual yield per acre in New Jersey has a feed value equal to 6 tons of bran, that in Montana fields sixteen years old are now yielding good crops and that in Louisiana 6 cuttings are made annually.

With this showing farmers in eastern Kansas should not be afraid that alfalfa will not succeed with them. We have found a yield of 6 tons per acre in a single season in Jackson county where the best farmers believed it could not grow. From careful investigations made during the past five years we are convinced that 90 per cent of the tillable land of eastern Kansas is adapted to growing alfalfa. It does not live long on sandy soils and should not be sown on any soil that is not in good condition.

On most farms in eastern Kansas fall-sown alfalfa seeded on well drained land will grow well and will yield profitable crops. It is a profitable crop for both bottom and upland.

*Alfalfa, by F. D. Coburn, secretary of the Kansas State Board of Agriculture, published by Orange Judd Co., New York. Price 50 cents.

The Crop Reporting Service of the Division of Statistics of the Department of Agriculture.

The Division of Statistics of the Department of Agriculture issues each month (February excepted), detailed statements relating to the existing agricultural conditions throughout the United States, the data upon which these statements are based being obtained largely through voluntary correspondents. The chief reliance for the ascertainment of conditions is placed upon three princpial corps of correspondents, namely, county correspondents, township correspondents, and State statistical agents.

Statements relating to live stock and the principal farm crops (except cotton) are made public on the 10th of each month, the cotton statements being issued on the 3d of each month during the growing season. In order that the information contained in these reports may be made available simultaneosuly throughout the entire United States, and that by reason of quicker mail service the territory adjacent to Washington may not have an advantage over that at a distance, the statements are sent out by telegraph. In order that the figures may be placed within easy reach of the farmer at the earliest possible moment, cards, containing the principal features of the report, are printed and mailed to every postmaster in the United States, within from four to twenty hours of the time that the statements are telegraphed, with instructions that they are to be conspicuously posted for the information of the public.

County Superintendents.—There are in the United States, approximately, 2,750 counties of agricultural importance. In each of these counties the Department has a principal county correspondent, who maintains an organization of three assistants, each covering a specified territory. These county correspondents are selected with special reference to their qualifications for the service and constitute a most efficient branch of the crop-reporting service. Facilities are furnished the principal correspondent to enable him to obtain regular reports from his assistants. These reports he tabulates at the end of the month, supplementing the information thus obtained by his own observation and knowledge of the situation, and the consolidated report is submitted to the statistician. Although there is no compensation attached to the position, an average of about 90 per cent of them report monthly.

Township Correspondents.—The list of township correspondents comprises from 6 to 15 individual correspondents in each county. These are distributed geographically throughout the county, the number being dependent upon the size of the county and its importance in production. The correspondents on this list report directly to the statistician, the schedules for county and township correspondents being tabulated by clerks in Washington.

State Statistical Agents.—This list embraces a regularly appointed salaried State statistical agent in each of 43 States, it being the duty of each to report upon agricultural conditions for his own State only. Each of these agents maintains a special list of correspondents over which he has entire control, completely covering the State and averaging, in total numbers, from 20 to 600 correspondents each, according to the size of the State and its agricultural importance. These State statistical aids report directly to the State agent. Schedules are carefully tabulated and weighted according to the relative importance of each county represented and the summarized report submitted to headquarters on the 7th of each month. From States west of the Mississippi river the reports of State agents are telegraphed in cipher.

Each of the three lists mentioned above is kept entirely separate and distinct, no one individual being allowed to serve upon any two of the lists.

The reports referred to above are brought together in convenient form on the 8th of each month and the statistician is thus provided with three separate estimates covering the same territory and the same crops, made by separate corps of correspondents, each reporting for a territory with which he is thoroughly familiar, and from these results the statistician compiles his own estimates. The information thus obtained, however, is supplemented by the reports of salaried special field agents who systematically traverse the producing portions of the country, procuring all possible data and carefully analyzing the situation.

Information with regard to final yield per acre is further obtained from reports received from a very large corps of individual producers, each reporting for his own farm only.

The total number of all classes of correspondents in the crop-reporting service agregates nearly 250,000.

In all tabulations careful attention is paid to the weighting of the figures submitted so that each county and each State may have its correct, and proper influence in the determination of the total for the State or for the United States, according to its importance. The statistics are compiled with the

(Continued on page 710.)

FARM WAGONS

The Western Farmer or Teamster who neglects to investigate the **new Tiffin Wagon** is not alive to his own interest. It **runs easier, wears longer** and **looks nicer** than any other wagon. **Insist** upon having it. If your dealer don't handle it and will not get it for you, *write to us.* "We will do the rest."

THE TIFFIN WAGON CO., Tiffin, Ohio, or 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.

October 7, 1901—Newton Bros., Duroc-Jersey swine, Whiting, Kans.
October 8-10, 1901—American Berkshire Association Sale at Kansas City.
November 21, 1901—Ernst Bros., Shorthorns, Tecumseh, Neb.
November 20-22, 1901—National Hereford Exchange, E. St. Louis, Ill. (Sotham management.)
December 10, 11 and 12, 1901—Armour-Funkhouser, Herefords, Kansas City.
December 13, 1901—H. C. Duncan, Shorthorns, Kansas City.
January 28 to 31, 1902, for Sotham's Annual Criterion Sale, at Kansas City.
February 25-27, 1902—C. C. Stannard and others, at Kansas City, Mo., 200 Hereford.
March 25-27, 1902—National Hereford Exchange, Chicago, Ill. (Sotham management.)
April 22-24, 1902—National Hereford Exchange, Kansas City, Mo. (Sotham management.)
May 27-29, 1902—National Hereford Exchange, Omaha, Nebr. (Sotham management.)
June 24-26, 1902—National Hereford Exchange, Chicago, Ill. (Sotham management.)

The Beef Trade.

T. F. B. SOTHAM, CHILOCOTHE, MO.

As we stand upon the threshold of the twentieth century peering into the future in the earnest endeavor to take advantage of our past experiences, we are confronted with an all-prevailing sense of changed and changing conditions. When we pause and consider that the great bulk of the territory west of St. Joseph a quarter of a century ago was considered a barren waste, in which a few straggling herds of cattle ranged, but in which systematic cattle raising was actually unknown, and compare that time with the conditions which exist in that territory to-day, we can but marvel that such a change could be wrought in so short a time. Then, one could settle where he would and have an unlimited range with no one to dispute possession. To-day, it is impossible to find a section of country within the confines of the United States, or with Mexico and British America added, which is not occupied with the shepherd, herdsman, or farmer, and if any one should locate anywhere in this vast territory, he must first purchase the right of a predecessor.

During the seventies and eighties it became the fashion to organize cattle companies in this vast Western territory, and to draw on the Eastern States for supplies of breeding stock. Our Eastern markets up to this time had been able to take very good care of the supplies of cattle so that when the Western demand for Eastern stuff set up, the normal supply of beef was curtailed, necessitating an increase of price for that which was marketed. Later, when the Western demand ceased and Eastern stuff found its way to the beef markets, a normal condition was resumed for a while, until the surplus of the new territory that had been recently stocked, became marketable, when the markets were inadequate to the increased supply. The profits of these Western cattle companies not being up to those assumed in the prospectus weakened their support and the surplus not being sufficient to pay dividends, whole herds were closed out. Falling prices, as a matter of course, followed this glut of cattle, and the low prices scared Eastern farmers into the belief that cattle raising would never more be profitable and they sold short, thus still harder jolting the market, and the result was an avalanche of cattle which literally buried prices. Such a condition of things can not occur again in this country, for the simple reason that there is no territory tributary to our markets from which an avalanche of cattle can descend. The markets now absorb the product of the entire United States, and their demands have already drawn upon the surplus of both Mexico and Canada. Thus these people who remembered the boom of the eighties and also the collapse, have been erroneously looking forward to a collapse of the present prosperous condition of the cattle business, wihout studying carefully the causes of the former boom and its reaction, and comparing them with the causes of the present prosperity.

We are glad to note that Secretary Wilson has recently come out with a statement that the present profitable prices for cattle will continue. With the statistics gathered by the census of 1900 set beside those gathered by the census of 1890, it is difficult to see how a level-headed man can come to any other conclusion.

We are learning in this country by thorough and expensive object lessons that no one section of our population can prosper at the expense of another. We are inter-dependent upon each other, and as we become annually more and more expert in different lines of business, we become more and more specialists. A specialist is an expert in one particular industry or in a single branch of any industry. The specialist while expert in his limited line is dependent upon others in every other direction. Thus, while in certain sections of the South, cotton is supreme, they are dependent upon outside territory for all other products. Take for instance, the stupendous iron interests of the East. They are dependent upon outside territory for everything they eat and wear. What we may term as the grazing districts of the West, that is given over entirely to sheep and cattle raising ,is dependent upon the farming States further east for everything except meat. While the farming States of Ohio, Mississippi and Missouri valleys alone, could exist by and within themselves, they do not attempt to do so, and the lands of these rich farms have so increased in value that farmers to be successful thereon, are compelled to bring them to a higher state of cultivation through the adoption of the most intelligent agriculture. As these lands inevitably increase more and more in price, and the demands of grain raising encroach more and more upon the grazing lands of these central States, this territory will surely lose what little is left of its independence until in time we can expect to see this territory depend entirely and very properly upon the grazing districts of the West for its supply of live stock. Were it not for the ranches of the West to-day, there would indeed be a beef famine. Calves can be raised on the ranges when the proper blood is used, of as good quality as can be raised in the more favorable agricultural regions, that is, as long as these calves have their mother's milk and the grass to sustain them. But these calves can not be successfully wintered in the range country. That is to say, it is impossible to winter these calves or any cattle for that matter upon the ranges without great loss of flesh. There will come a day when the demands of the beef market will compel the saving of the awful waste that now occurs annually in the winter throughout the entire range country. Ranchmen are turning their attention more and more to raising rough feeds and we predict that before many years cattle raised in he range country and destined directly for the beef markets, will all be removed from the range for the farming districts at weaning time in the fall, and the feed that is provided on the range will be used for the development and sustenance of the she stuff. There is comparatively little loss in allowing the breeding herd to become thin in winter time, so long as they are kept in a strong, healthy, breeding condition, but in young animals destined for the feed lots every pound of flesh wasted will cost to replace it as much feed as would under more favorable circumstances produce two or more pounds of additional weight.

Removing calves from the ranges at weaning time to the blue grass pastures, clover stacks and corn cribs of the farming States and immediately putting them in training for the beef market, has more than one advantage. It has been demonstrated beyond dispute that a bushel of corn will make double the gain on a calf that can be gained by the same amount of feed on an older or stunted steer. The younger the animal, the greater the gain for the amount of food consumed. A grade Hereford calf raised on grass and milk alone, weighing from 350 to 450 at weaning time in October can be shipped to the corn States and by judicious feeding be made to weigh 1,200 pounds or better at 18 months. A 1,200 to 1,400 pound Hereford bullock from 18 to 24 months old makes the best beef possible to be grown. The notable fact to be considered in reference to this Hereford beef is that its early maturity produces the very finest quality of beef at the minimum cost. Referring to the depression concurrent with the glut in the beef markets, it is a notable fact that the average price of the best beef during all that depression was encouraging to the man who knew how to make it. Prize Hereford steers thoroughly ripened averaged better than six cents throughout the entire depression. The glut in the market, whenever there is one, has never been occasioned by really prime cattle. There has ever been "room at the top," and assuredly always will be. It was the avalanche of cheap cattle that caused the glut, and they interfered with prime stock only insofar as consumers would consent to substituting the inferior beef for the real good article. These prosperous times are causing people to pay more attention to good living and tend to increase the market for good beef, because there is nothing that man puts in his mouth that is so delicious or equal in nutrition to good beef, and when a person has a taste of the real prime article, they will never hereafter be satisfied with inferior.

I have but touched in a crude and disconnected way on the present condition of the beef trade. Volumes could be written on the various phases of it. I have no desire to mislead myself or anyone else, as the cattle interest is my sole interest and with it I rise or fall. Having no other business, and being dependent upon cattle, I can not afford to delude myself, and must of necessity try earnestly to look matters square in the face. But with decreasing numbers of cattle as shown by the census and with increasing home and foreign markets, we are unable to see, nor has any one thus far been able to point out to us any probable method for the increase of the beef supply that will not be offset by the increase in the demand for beef. Therefore, we can but conclude that the present prosperity in the beef trade is permanent, which prosperity must inevitably increase.

A Few Suggestions.

The drouth which has prevailed over a considerable portion of the west during the last six weeks has caused many of our stock growers to do some thinking along somewhat different lines from those that have engaged their attention heretofore, and during the last few weeks we have frequently heard the remark, we must learn to adapt ourselves to the country or locality in which we live, and not try to adapt natural conditions to our own ideas of what we would like them to be. Some of our most successful men have been those who had the ability and originality to lift themselves out of the deeply trodden ruts of time and lead out along new and improved lines of thought and action. As an example of this kind we call to mind a feeder who some six or eight years since conceived the idea that as he had a farm that was not specially adapted to growing corn he could buy his corn more cheaply than he could raise it. Acting upon this idea he simply sowed his farm all down in roughness and bought his corn, generally securing it at 18 cents or under, by purchasing largely and cribbing up a year's supply when corn was plentiful and cheap. His farm was good average upland with some creek bottom, but for years he did not attempt to raise an acre of corn.

This man made plenty of money, doing better than any of his neighbors who tried to raise their own corn. The alfalfa subject had not yet been brought to his attention or we believe he could have done still better by growing and feeding it largely.

A friend of ours who feeds about a hundred head of steers and several cars of hogs each year was in yesterday and told us that he intended to feed about the usual number of steers this year as he had them on hand and could better afford to pay 50 cents for corn and wheat than to sell them at the prices he had been offered for them in their present form, as he believed that fat steers would be worth from one and one-half to two cents more next winter than stockers are now. When we asked him about alfalfa he said he had only about 15 acres and had only recently sowed it, the first few acres last season, and the balance this year. He allowed a lot of calves to run on last year's seeding early in the spring and had damaged it some by pasturing while the ground was wet, but had since cut two nice crops off the field.

He only regretted that he had not begun growing alfalfa years ago, as it is the only crop for this locality that will come in ahead of an early drouth like last year or this. By growing it liberally such a season as this will strike the average feeder much lighter than it has done heretofore. Some feeders are finding wheat a good combination to grow in connection with cattle and get a large amount of feed by pasturing it moderately in the fall and winter and using the straw for bedding and feed the bran and shorts also, making an excellent feed for either cattle or hogs. A peculiar thing we have heard spoken of frequently this spring is that the chinch bugs are doing much less damage to corn and other feed crops in the wheat belts than where little or no wheat is grown. This shows that the generally accepted theory that wheat breeds and multiplies the bugs is a mistake and that in localities where hedges, dead grass, stalks and other trash abound the bugs winter through and come out ready for business in the spring. No bugs can winter on a wheat field.—Western Breeders' Journal.

Fortify the body to resist malarial germs by putting the system in perfect order. Prickly Ash Bitters is a wonderful system regulator.

MICA
Makes short roads.
AXLE
And light loads.
GREASE
Good for everything
that runs on wheels.
Sold Everywhere.
Made by STANDARD OIL CO.

George Harding & Son's Shorthorns Average $656.

The Chicago Live Stock World says:

After the date of August 7 was set by Messrs. Geo. Harding & Son for their Shorthorn cattle sale at Chicago there occurred the most serious drouth in the central West that has been known in many a long year. The conditions became so bad that even after the rains came there were vast areas in the corn belt where very little corn could be made. The men managing the sale felt very dubious about the outcome. They did not take into consideration the greatness of the country, the greatness of the cattle demand, the greatness of the good times, or the greatness of Chicago. The 43 cattle made the splendid average of $656.74 per head. They were great cattle, but no matter about that the prices were a match for them. Cattlemen in general and Shorthorn breeders in particular are to be congratulated. There was nothing drouthy about those figures.

The Drovers' Journal says:

If the visiting stockmen in attendance at the Harding sale had any doubts as to a satisfactory condition of the cattle business they were speedily removed. At the opening of the sale fears were entertained by some that the cattle would sell slowly and the average price would be low, but as the sale opened and the first offering sold at $1,010 and continued until the top price of $1,625 was reached, the enthusiasm had touched every man in the audience. Out of the 43 animals sold 9 went to Iowa and 7 to Missouri—two States that were supposed to have been irreparably damaged by the recent drouth. The promptness that characterized the bidding of the Missouri and Iowa breeders restored the feeling of confidence which seemed to be lacking when the sale opened. The Drovers' Journal has maintained that the damage to the various crops was not as serious as has been reported, and the result of the sale yesterday supports our position. The Missouri and Iowa purchases would never have been made had not the sound judgment of the buyers prevailed. This judgment is based on a belief that the country is perfectly able to take care of her cattle interests and that the demand for breeding stock will be as great or greater than it ever was.

The sale resulted in the disposal of 43 lots for $28,235, an average of $656.62. No sensational prices were paid, the top of the sale being $1,625, at which figure T. J. Ryan & Son, of Irwin, Iowa,

In a Pullman to San Antonio.

You get into a Pullman at Topeka 12.08 a. m. today, and can stay in it (except for meals) all the way to San Antonio, Texas, 8.40 a. m. the second day.
Also through chair cars.
Route—through Wichita, Ft. Worth and Austin—a garden all the way. Connect at San Antonio for City of Mexico.
Talk it over with T. L. King, Agent Topeka.

Santa Fe.

purchased the roan cow, Julia Marshall, calved Jan. 5, 1898. She has a white bull calf at foot by Kintore Hero, a bull which sold in the A. P. Cook Company dispersion sale at Chicago last November for $1,000 to A. E. Stevenson. General Manager A. G. Leonard, of the Union Stock Yard and Transit Company, was a liberal bidder, paying $1,010 for the cow, Rose Scott, and $800 for the show cow, Dora Stamford. Col. G. W. Casey, of Shawnee Mound, Mo., was another liberal bidder and buyer, as was also A. Chrystal, Marshall, Mich.; C. E. McLane, Danville, Ind.; E. R. Stangland, Marathon, Iowa; C. C. Bigler & Son, Hartwick, Iowa; E. S. Donahey, Newton, Iowa; S. S. Shelby, Westport, Mo.; H. F. Brown, Minneapolis, Minn. D. R. Hanna, of Ravenna, Ohio, son of Senator Mark Hanna, was also a liberal bidder, being represented by his manager. The top price for bulls was paid by T. J. Ryan & Son, Irwin, Iowa, who secured Avon Prince for $405. R. B. Ogilvie paid $400 for August Archer, a son of Best of Archers. The bull was purchased for J. E. Mitchell, of Winnepeg, Manitoba.

Thirty-nine cows brought $27,030, average $693.08; 4 bulls brought $1,210, average $302.50; 43 head brought $28,240, average $656.70.

Gossip About Stock.

Newton Bros., Whiting, Kans., announce that they have changed the date of their third annual sale of Duroc-Jersey swine to October 11, 1901.

Do you want a choice January boar or gilt at a bargain figure? If so, note the new advertisement of Loch Aerie Stock Farm, owned by W. S. Powell, of Moline, Kans., also see "Stock Gossip" next week.

Some special bargains in the way of prices are offered by our new advertiser of Poland-China swine, Harry E. Lunt, Burden, Cowley County, Kansas. He has about 50 boars and gilts of early farrow and serviceable age that will be closed out at prices to suit the times. Watch for further announcements.

T. K. Tomson & Sons, Elder Lawn Herd of Shorthorn cattle from Dover, Kans., headed by the famous herd bull, Gallant Knight, will be shown this season at the Iowa, Nebraska, and Missouri State fairs. It is hoped that they may secure such honors as will restore the prestige of the State for winning stock.

The Bureau of Animal Industry of the Department of Agriculture is making arrangements to have photographs made of representative cattle at the Pan-American Exposition for use in government publications. This is a merited recognition of the thorough manner in which this important department of the exposition is being conducted.

Snyder Bros., of Winfield, Kans., are now offering special inducements in price to quick buyers of pure-bred stallions of Percheron, Shire and Clydesdale breeds; also the splendid saddle stallion, Diamond King 1571. The ages range from 2 years and upward. This is a chance for buyers that has been unequalled during the past two years.

Silver Creek Herd of Shorthorn cattle, owned by J. F. Stodder, Burden, Cowley County, Kansas, was visited last week by a Kansas Farmer editor, Mr. Stodder w visit the leading fairs of Kansas and Oklahoma with a splendid show herd. He will also hold a public sale at Winfield on October 11, 1901. Further particulars will be given next week.

"Kansas is a good place in which to advertise improved stock," writes A. E. Burleigh, of Knox City, Mo., in renewing his advertisement. He has just received an order from the Kansas State Agricultural College for Polled Durham cattle, one bull and 2 females, which he thinks an excellent exponent of the breed as a general purpose cattle.

Ten of the finest Holstein cows in America arrived at the Pan-American Exposition the 9th inst. They are sent at this early date that they may become acclimated and accustomed to their surroundings. These valuable cows have attained the high average that entitles them to the "Advanced Registry" of the Holstein-Friesian Association.

The premier herd of Shorthorn cattle and Percheron horses, owned by Hanna & Co., of Howard, Kans., receivel a visit last week by a Kansas Farmer man, and next week's paper will be embellisned with the regular advertisement of this highly creditable establishment known as Palo-Duro Stock Farm. Further particulars concerning the same will also be given in these columns.

In his next annual report the secretary of agriculture will give an annual classified census of live stock, with a semi-annual supplement of statistics. He will ask for an appropriation sufficient to carry on the work, and asks the assistance of the live stock associations in carrying the measure to a successful issue. A report of this nature will be of great importance to growers of live stock and the efforts of Secretary Wilson are to be commended.

Among the recent sales of Angora goats to be noted, says the Drovers' Telegram, are those of T. H. Mastin, of Mastin, Kans., to several Eastern parties. O. P. Shupe & Co., of Mt. Pleasant, Pa., bought of him 200 grade Angora does at $5.50 per head, and 100 kids at $3.50. Geo. M. Reed, Viola, Ill., secured 200 grade does at $4 each. A. S. Green, Galesburg, Ill., bought 204 head at the same price. A. L. Cleaves of Cherokee, Iowa, purchased 20 does and 1 buck for $135.

Manwaring Bros., Lawrence, Kans., says: "The stock we purchased at the Kansas City sale August 1 arrived home in good condition and are certainly better than we thought they were when we purchased them. With these grand sows and what we already had we consider we have as good a herd for quality as can be found in the State. We have a goodly lot of young stuff for sale at reasonable figures, but the drouth has not scared us into selling them at starvation prices."

Secretary W. C. McIntire, of the American Angora Goat Breeders' Association, says he expects the second annual sale and show, to be held at Kansas City October 17 to 21, to be the greatest event in the history of the association. More breeders are getting interested in the work than ever and they are all looking forward to the coming event with great enthusiasm. The drouth, instead of hurting the goat business, has improved it, as it showed up the hardy animals in their true light, bringing forth all their merits as rustlers.

Superintendent Converse has arranged for a mammoth meeting of swine men to take place on the exposition grounds September 5 and 6, at which time speakers of prominence in swine lore will be there to make such addresses upon different subjects as are pertinent to the cause. At this meeting, representatives of foreign countries from the Government offices, who are interested in live stock, will be present. The outcome of this meeting will not only be of interest to the swine men but will increase our trade with the countries to the south of us.

W. P. Wimmer & Son, breeders of Poland-China, Mound Valley, Kansas, write: "As there was no corn raised in this part of the country we are going to cut the price of our hogs in half over last year's prices. We have as fine a lot of pigs as we ever raised, and as well bred as anything in the West. And we will surprise those sending us an order, both as to price and quality. We think this a good time to buy blooded stock, provided there is feed in sight. Farmers around here are selling all their stock that they can possibly spare. Hogs will be very scarce in this county next year."

One of the largest and best breeding establishments of Mammoth and Spanish jacks and jennets in the West is owned by our new advertiser, Philip Walker, Moline, Elk County, Kansas, the owner of Pleasant Hill Jack Farm which was visited by our representative, who was much surprised to find so large a number, some 70 head of extra quality jacks and jennets, the successful result of twenty years' careful experience with this class of stock. During the past season Mr. Walker has had a splendid trade in Kansas, Missouri, Oklahoma, and Nebraska, having sold over 30 head of registered jacks. Buyers should see this stock.

In speaking of the national cattle show in October, at Kansas City, Eugene Rust, traffic manager of the stock yards company, said that all indications were that the show would be the most succesful ever held in this country. "The completion of the new barn at Nineteenth and Genesee street, will help greatly toward making the show a success. It will be roomy and light and the visitors wil be enabled to see the cattle to much better advantage. I have talked with a great many breeders and they all appear enthusiastic over the show. Many of them have imported animals especially for exhibition here this fall. There will be animals of all the four breeds which take part in the show which have been imported especially for the event, and which will then be on exhibition for the first time in this country.

Preparations are being made for one of the most enjoyable events in the history of this country when the third annual picnic of the Kingman County Cattlemen's Association is held at Kingman, Kans., August 27, 28, and 29. Combined with the picnic of the cattlemen will be the soldiers' reunion, old settlers' reunion, State tournament of gun clubs, stock fair and racing, insuring plenty of amusement for all classes. The old soldiers will have the right-of-way on the first day. There will be a grand parade, and Judge Madison, of Dodge City, will speak. The State shooting tournament will be in progress all day. The second day will be devoted to the cattlemen. There will be a cowboys' parade, ladies' riding contest, boys' riding contest, and roping contests. The day's program will conclude with a realistic representation of the robbery of a stage coach. The third day will be devoted to the stock show and racing.

As the time draws near for the swine exhibit at the Pan-American Exposition a greater interest is being taken in the same than was at first expected. It seems unfortunate that it was necessary to hold this exhibit in the month of August, and many thought the hot weather would militate against the number of entries that might be made for this show. We have, however, 600 individual entries, the number of exhibitors of each breed are as follows: Berkshire 6, Poland-China 4, Chester White 4, Duroc-Jersey 2, Small Yorkshire 1, Large Yorkshire 4, Essex 2, Cheshire 2, Tamworth 3, Victoria 2. The entries are coming from territories as far West as Iowa and as far East as New Brunswick, and South to North Carolina. Owing to the opportunities offered by the exposition, aside from the premiums, to show to the people of South and Central American countries something of the swine industry in the United States and Canada, and interest in this particular division is greater than was anticipated.

A Big Kansas Institution.

The Kansas State Agricultural College, Manhattan, Kans., has purchased of C. F. Stone, of Peabody, Kans., three pure-bred Holstein-Friesians that are seldom equaled. The bull, College Emperor, last year as a calf won first prize at St. Joseph, Eldorado and Newton. One of his grandams gave thirty-one pounds of butter in a week and won first sweepstakes at the Iowa State fair, the St. Joseph exposition, Kansas State fair, Kansas City exposition, St. Louis, and at the Nebraska and Illinois State fairs, and won second at the world's fair after having been milked thirteen months. Another grandam of this bull gave 32 pounds of butter in seven days and his great grandam gave 39 pounds in a week. The two heifers won first and second prizes last year at St. Joseph against strong competition, and also first and second at Eldorado and Newton. Their sire won first prize at Illinois State fair, St. Louis, and St. Joseph. They trace to cows giving twenty-seven, thirty-two and thirty-nine pounds of butter in a week, and also to the first prize dairy cow in Belgium.

Fine Dairy Animals.

Nineteen thousand Kansas farmers control one of the biggest mutual fire and tornado insurance companies of the West. The second quarterly meeting of the board of directors of the Farmers Alliance Insurance Co., was in session in McPherson, Kans., August 8, 1901. The report of the secretary and treasurer shows membership over 19,000:

Carrying risks of	$17,000,000
Resources	186,000
Risks written since Jan. 1	1,700,000
Losses paid in 13 years	260,000

The plan is mutual, and furnishes insurance at actual cost.

Publishers' Paraghaphs.

Complete plans and specifications for a modern frame country school house—one room 25 by 32, with two wardrobes and private room for teacher, with neat cupola—together with blanks for contracts can be had FREE by applying to L. M. Wood, architect, 627 Kansas Ave., Topeka, Kans. This applies to any school district in Kansas or Oklahoma.

The Minnesota fair is in some sense a Northwestern exposition. Its exhibitors come from a dozen States and since it adopted the character of a national live stock exhibition its viitors are quite as widely distributed. The fair opens this year on September 2. The vice president of the United States is to open the Minnesota State Fair this year. "Teddy," the idol alike of the New York reformers and the Western plainsmen and one of the most loved men in the country without respect to party, has accepted an invitation to make the opening address at the Gopher State fair. In addition the management has arranged for national live stock displays by the Shorthorn and Hereford Associations, is offering $40,000 in premiums and purses, and has erected a new building costing $25,000, to increase the exhibition capacity of the fair, announces evening racing and spectacular fireworks for each night, and, altogether, promises to make the week of September 2 a particularly hot time in the towns of St. Paul and Minneapolis.

SENT FREE TO WEAK MEN

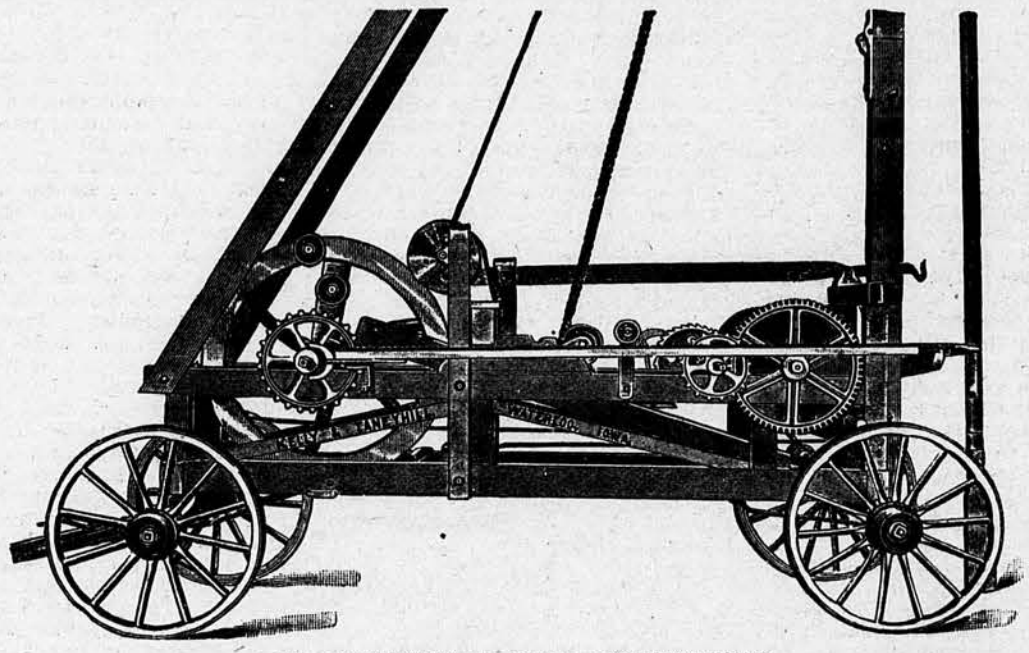
Charity, the Noblest Impulse of Man, Exemplified by a Well Known Missourian.

W. S. Harter, an honored and influential citizen of Nevada, Mo., makes a statement and an over-generous offer that comes in the shape of a proclamation of health to all afflicted with lost vitality and its kindred

ailments. His case was a most pitiable one; nightly emissions so draining that his constitution was weakened to such a degree that it was impossible for him to perform his duties. He spent hundreds of dollars for remedies and to specialists, but could not regain his vitality or check the awful nightly emissions. One day a brother lodge member called his attention to a remedy, in fact implored Mr. Harter to take the remedy for his affliction; he did so and in one month's time was entirely cured, his constitution rejuvinated, and his vitality regained. To-day he is a man in every sense which that word would imply. Mr. Harter is not what one would call an immensely rich man, but his gratitude for this marvelous remedy is so great, that he says he intends making his life's labor that of putting this remedy in the hands of all those afflicted as he was. Mr. Harter being a very conscientious man, thought perhaps the remedy may not prove in every case so wonderfully beneficial as it did in his. For this reason he gave 50 sufferers the treatment, and in every instance the same wonderful results were experienced as was in his case; so he now says he will send every sufferer of this death-dealing disease, Lost Manhood and its kindred ailments, absolutely free the means which directed him to health and contentment. At Nevada, Mo., there is located State Asylum No. 3, in which there are at present about 700 patients; Mr. Harter claims that upon good authority he is informed that about 75 per cent of these unfortunates lost their minds through this disease and the awful drainage brought upon them through nightly emissions. With this awful picture ever before him, he believes it is his duty to humanity to save those now upon a brink of destruction, which is much worse than death. Any reader sending name and address to Mr. W. S. Harter, 517 Ash Street, Nevada, Mo., will receive without delay, and free of charge, this wonderful knowledge.

Daily Excursions via Nickel Plate Road.

Chicago to Buffalo and New York. Special low rates and favorable limits to all points east. Call on or address John Y. Calahan, General Agent, 111 Adams St., Chicago. ((No. 21.)



THE CLIMAX WELL-DRILLING MACHINE.

The illustration published herewith represents the Climax Well-Drilling Machine No. 3, mounted on heavy trucks which is made by the Kelly & Taneyhill Co., Waterloo, Iowa. For the past twenty-five years this concern has been a leader in inventions and improvements pertaining to this class of machinery. It has introduced many new devices, especially during the last three years, and lately the machine here illustrated has been evolved. A glance at the cut will show that it is a new departure in the line of well-drilling appliances, possessing marvelous simplicity and being unincumbered by balance wheels, cog wheels and pinions, which are sometimes considered great drawbacks to the ordinary portable boring machines. Instead of these wheels and pinions, which cause friction and liability to break, the Climax is provided with one large wheel, with propelling rollers attached to the rim. This wheel is ingeniously constructed and is balanced in such a way that its momentum operates the drill tools with a steady motion, without the aid of a balance wheel or any other gearing. This system of drilling is a complete success. The machine runs with much less power and the liability of breaking is reduced to the minimum. The Kelly & Taneyhill Co. offers the Climax as a machine that approaches nearly to perfection. It is made in ten regular sizes, but if desired, it will be put up in any other size. This company has been in well-work so long and has studied the formations of the entire country so thoroughly, that it is prepared to supply the demand for any kind of earth-boring machinery. In its branch of business, experience has taught that there is no stopping place—so the company's motto is "onward and upward."

The Home Circle.

AND THEN—ETERNITY.

Men have won as weak as we,
Men have lost as strong as we,
Men have died as brave as we,
Three score years and ten
Of grief and joy—and then
Eternity!

Men have loved the same as we,
Men have harbored hate as we,
Men have longed for rest as we—
Three score years and ten
With hate and love—and then
Eternity!

Men have fought to win the prize,
Men have almost touched the skies,
But the wealth or grandeur cries:
"Three score years and ten
With wealth or fame and then—
Eternity!"

Men have fought their base desires,
Men have quenched their passion's fires,
Men have called on what inspires,
Three score years and ten
With soul secure—and then
Eternity!
—Robert J. Burdette.

The Care of the Sick.

MRS. J. R. FULLER, BEFORE THE WHITE ROCK, REPUBILC COUNTY, FARMERS' INSTITUTE, JULY 26, 1901.

There are two essentials requisite to the successful treatment of the sick. First, medical skill; second, good nursing. Without good nursing the most skillful physicians fail to effect a cure; with it, the most unqualified may succeed. It is quite difficult to find a professional nurse in most rural districts, and if one be found it is often impossible to procure the services, on account of the expenses which must necessarily be incurred; hence this office usually devolves upon some relative or neighbor, who is considered to be the best qualified for the position. A woman is generally selected for this important position. Her soft hand, and soothing voice, her kindly sympathetic and provident nature, together with her scrupulous cleanliness, render her man's equal (if not his superior) in the capacity of nurse. There are circumstances, however, in which the services of a man are indispensable, hence the necessity that all should be qualified to care for the sick.

A nurse should be attentive to the requirements of the physician and patient, for she sustains an intimate relation to both. She should observe the directions of the physician, and faithfully perform them. She should note all the symptoms of the patient and do everything in her power to promote comfort and recovery. She should anticipate the wishes and not cause the patient to ask for anything desired. So far as practicable let the wishes be gratified. Sick persons are not all alike, and the peculiarities of each must be studied separately. The nurse must be kind, but firm, and not yield to such whims of the patient as may be detrimental to recovery. The nurse should possess an inexhaustible supply of patience. She should always be cheerful, look on the bright side of every circumstance, animate the patient with encouragement, and inspire with hope.

The nurse should possess moral principles which alone can win the confidence of the patient. She should have judgment, circumspection, intelligence, forethought, carefulness, and neatness. In a word, she should exercise common sense.

The sick room should be as comfortable, cheerful and pleasant as circumstances will allow. A few flowers and books wonderfully enhance the cheerfulness of the room.

Permit no accumulation of bottles or anything that can in any way render the room unpleasant. Medicine, drink, or nourishment, should never be left uncovered in the sick room, since they quickly absorb the gaseous emanations from the patient and make them unfit for the purpose which they were intended to serve. Their presence also gives the room an untidy appearance. The bed should not be of feathers on account of their undue warmth. A husk mattress or straw bed covered with a cotton quilt, is far preferable. The bedding should be changed quite frequently. The air in the sick room should be kept as pure as possible. That which is so necessary in health is indispensable in sickness. A window should be lowered from the top and one raised from the bottom. This will permit pure air to enter from without and the exit of impure air from within. But the air must not blow directly on the patient.

Light is as necessary to health as is pure air. Warmth is essential to the well being of the patient, and it is necessary that a thermometer be kept in the room.

Cleanliness can not be too thoroughly impressed upon the minds of those who have care of the sick. The clothing of the bed and patient should be changed often, and thoroughly aired if not washed. The hands and face of the patient should be bathed often, should have the hair combed, teeth brushed, nails cleaned, lips moistened, and everything about them kept clean and tidy. A sponge bath at least once a day with pure soft water and toilet soap is very essential as it keeps the patient clean, is restful and they can sleep better after it.

The diet stands in a very important relation to health. It should be the study of the nurse to devise such nourishment as will be acceptable to the patient, and suitable to the recovery.

The food should be light, nutritious, and easy of digestion. Never ask patients what they would like, as they are sure to want something that will be hurtful to them. A nurse must use her own judgment. Milk is one of the most important foods in fevers. Beef tea also furnishes an excellent nourishment for the sick, but there are so few who know how to properly prepare it. I will give my way of making it, and think it better than other recipes I have read. Take lean, juicy steak, cut it into fine bits, put them into a glass jar, cover tightly, and place in a kettle of water and keep boiling. Thus the whole strength of the juice will be obtained without losing any of its properties.

Sleep, which is nature's grand restorer, a "balm to all mankind," is also very important. It is necesary in health and doubly so in sickness. It is the great source of rest and refreshment. Often a day's rest in bed, free from the cares and anxieties of an active life, if sufficient to ward off the approach of disease. The least noise or confusion disturbs the sufferer and diminishes the chance of recovery.

Nothing annoys the sick or nervous person so much as whispering, or the rustling of newspapers. If conversation be necessary, let the tones be modified, but never whisper. As a rule the patient should never be awakened when sleeping quietly, not even to take medicine, unless in severe cases.

Visiting the sick is a very important part in this subject. Probably not many of you have given this much thought. It may result either in good or bad. Pleasant, cheerful associations, animate the patient, inspire hope and aid in his recovery, while melancholy and disagreeable associations discourage the patient and retard the recovery. Unless persons who visit the sick can carry joy, hope, and mirth with them, they had better stay away. Cheer the sick by words of encouragement, and the hold on life will be strengthened.

Some will go into a sick room, and on looking at the patient will exclaim, "How bad you look!" "Why how you have failed since I saw you last'!' "I would have another doctor, one who knows something; you can not live long without help!" etc. This should always be discouraged. Let all persons be guided by this rule: "Never go into a sick room unless you can carry with you a few rays of sunshine." Then, again, one can injure the patient by staying too long. Never let the sufferer be wearied by too frequent, or too lengthy visits, nor by having too many at once ,and above all things do not confine your visitations to Sunday. Many do this, and give themselves credit for an extra amount of piety on account of it, when if they would scrutinize their motives more carefully they would see at once it was a contemptible resort to save time.

The sick are often grossly neglected during the week, only to be visited to death on Sunday.

Obleriak's Secret.

Obleriak peeked out of his whalebone igloo. His kayak was floating on the water. In the shadow of the next topek was his komatik close by his oomiak. The lights in the Tower were beginning to fade. The last of the sightseers were leaving the Midway as the lights went out. Obleriak coughed softly and Pawiak, his bristly dog, sniffed in answer. All was quiet for five minutes, ten minutes, fifteen minutes. Then the furry little figure of Obleriak crept softly out of the igloo, dragging a white bearskin with it. Pawiak was released and he whined and licked his master's face, tangling his gleaming teeth in the scrawny beard. Then together they crept to a remote corner of the Esquimaux village and sat together on their haunches on the whitebear rug.

Obleriak spoke first in a low gutteral. Pawiak answered in an eager whine. Man and dog seemed to talk together until at last Obleriak rose and drew from a hiding place a small fur bag, from which he took small saws, and files, and sharp knives, and pieces of walrus tusk that shone like ivory in the moonlight. Pawiak stretched out about five feet away, where he could watch the entire village. Then he cocked his ears and lay with eyes wide open watching the night. Obleriak bent over the fur bag, selected a piece of white and began to carve and saw and scrape and polish. At times he rose and salaamed to his handiwork, then sqatted again and resumed his labors.

A voice sounded faintly in a topek. Pawiak gave a low, warning whine. Instantly the white image on which Obleriak was working was whisked out of sight beneath the white fur and Obleriak was idly scraping the likeness of a little seal. No eye should see or intruder disturb his silent, secret work on the mysterious object. After a long wait, in which Pawiak gave no second alarm, Obleriak drew forth the image again and carved and carved and carved.

As he carved he muttered. He seemed to be chanting or reciting and incanting. Twice he arose and walked solemnly about the bearskin in a half-hopping, half-stumbling manner, making weird passes with his hands and uttering strange sounds. Then he knelt and worked as if his life depended on it. All the while, Pawiak kept watch. The hours of the night passed. Gray dawn was spreading an ashy pallor in the East. Obleriak saw the first streaks of coming day, hastily hid the little fur bag, led Pawiak back to his cage, crept into the whalebone igloo and when the village was aroused at 9 a. m., for the day's doings, Obleriak emerged chipper and fresh as if he had slept soundly and restfully all night. To make the deception all the more real, Pawiak made a great hullabaloo of the morning greeting, as if he had not left his master a few hours before in the early merging of dark and dawn.

Night after night has that performance on the part of the mysterious little Esquimaux and his dog gone on. Regularly, Obleriak has crept out with the bearskin, released Pawiak, uncovered the bag and toiled the night away.

The object of his toil is grotesque. It is a god or image or figure over six inches long. Its tip or crown is a queer outline of the Tower. Graven all over its funny body the spires and peaks and other striking points of the exposition architecture. All these are dotted with speckles, from which radiate lines, as if they were miniature child-drawings of the sun or of light. There are unintelligible hieroglyphics as if a Chinaman had worked for several nights on the image. Also, there are unrecognizable figures or drawings. They all mean something.

Obleriak is devout. When he came to the exposition and saw all the glory and splendor and loveliness he was moved deeply, and as he thought it over he came to believe that the god of light had made it his dwelling place. The god of light shuns the Far North at times for many weary weeks. Obleriak pondered it all and came to know that the god of light fled from his palace at midnight, but hovered concealed to see that all went well. To those who, in the silent watches of the night, toiled to his glory and gave him the praise, Obleriak believed the god of light would come and linger and live in his work. Best of all, if one who was devout would fashion an image after his likeness the god of light would shine in it, and when the image went away and the palace of radiance had fallen and become of the bygone, light would beam from it and it would be as a pillar of fire through the long northern nights.

Obleriak dreams, as he toils, of the long darkness to come when he is home again in the Far North, where the seals sleep on the snow fields and the icebergs gleam like colossal diamonds. In his imagination, he seems to see himself step forth in the night, take the image from his breast, incant to it the mystic echo of the sounds now swelling in the City of the Beautiful, and, lo! it will beam brightly and light Obleriak wheresoever he may go.

It seems a pity that some day he must awaken. The awakening will be the cruel part. He may not grudge the lost labor, but he will mourn the shattered faith. Meanwhile, he carves seals and little bits of bric-a-brac by day in the village, where all may see him. The sacred image is hid beyond the reach of others. Only Pawiak shares the secret.

No Nerve.

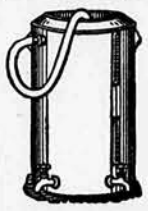
"You have no nerve at all," said the disgusted dentist to the patient who was making a frightful fuss. "Now listen to that," returned the patient warmly. "Blaming me for lack of nerve when you told me not five minutes ago that you'd extracted most of it and intended to kill what was left."—Chicago Post.

No Mask
of eggs or glue is used in roasting
LION COFFEE
It is all coffee—pure coffee—strong and of delicious flavor. Some coffees are varnished with a cheap coating of eggs, glue or other equally noxious substances.
The sealed package insures uniform quality and freshness.

Warning Signs
How is your heart? Does it flutter or palpitate, skip beats, or cause pain and tenderness in left side? Is the pulse too slow or too fast? Are you troubled with shortness of breath, choking sensation in the throat, or fainting, smothering or sinking spells? These are warning signs of a diseased heart. Why not make your heart strong and healthy?
"I was troubled with palpitation and weak heart for ten years, and at times was very bad. I tried many remedies without results, but a few doses of Dr. Miles' Heart Cure brought relief. It is the only cure for a weak heart."
CHAS. O. DICKINSON, Hamilton, Ill.
Dr. Miles' Heart Cure
builds up the heart muscles, quiets the irritation and regulates the force and frequency of its beating. Sold by druggists on a guarantee.
Dr. Miles Medical Co., Elkhart, Ind.

CREAM SEPARATOR FREE

This is a genuine offer made to introduce the Peoples Cream Separator in every neighborhood. It is the best and simplest in the world. We ask that you show it to your neighbors who have cows. Send your name and the name of the nearest freight office. Address
PEOPLES SUPPLY CO., DEPT. X, KANSAS CITY, MO.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The only separator on the market that does not MIX the milk and water, and sold under a positive guarantee. More Cream, Better Butter, Milk fine, and no labor at all. Get a SMITH. Agents wanted. Mention Kansas Farmer.
Smith's Cream Separator Co. 113 West Locust-St., DesMoines, Ia.

A FREE CHURN
This offer is made to quickly introduce the ECONOMY TWO-MINUTE CHURN in every community. We would ask that you show it to your neighbors who have cows, knowing that when they find how simple and durable it is, also that it will make butter from sweet or sour milk in two minutes' time, they will order one. Send us to-day your name and name of your nearest freight office.
ECONOMY MFG. CO., 174 W. 7th, Kansas City, Mo.

The Rocker Washer

WARRANTED to do the family washing 100 PIECES IN 1 HOUR. No need forwashboard; no wear on clothing. Write for special prices and description.
ROCKER WASHER CO. Clinton St., Ft. Wayne, Ind.
Liberal inducements to live agents.

The Young Folks.

THE WAY OF THE WORLD.

Laugh, and the world laughs with you;
Weep, and you weep alone;
For this brave old earth must borrow its mirth—
It has troubles enough of its own.
Sing and the hills will answer;
Sigh—it is lost in the air;
The echoes bound to a joyful sound,
But shrink from voicing care.

Rejoice, and men will seek you;
Grieve, and they turn and go;
They want full measure of all your pleasure,
But they do not want your woe.
Be glad, and your friends are many;
Be sad, and you lose them all;
There are none to decline your nectared wine,
But alone you must drink life's gall.

Feast, and your halls are crowded;
Fast, and the world goes by;
Succeed and give and it helps you live,
But no man can help you die.
There is room in the hall of pleasure
For a long and lordly train,
But one by one we must all file on
Through the narrow isles of pain.

—Ella Wheeler Wilcox.

THE MAN OF THE WEEK.

George Stephenson.

(Died August 12, 1848.)

Statistics are generally dry. The following are at least suggestive: In 1897, according to Mulhall, there were 442,200 miles of railroad—enough to reach 18 times around the earth. With their equipment, these roads had cost more than $35,000,000,000. During the year named, more than 3,000,000,000 of passengers were carried by rail, nearly 2,000,000,000 of tons of freight were moved, and the gross earnings of the roads amounted to $3,155,000,000—more than enough to pay the debt of the British Empire. Yet the man who invented the locomotive and surveyed and built the first railraod died only fifty-three years ago!

The railroads of the United States have cost $10,000,000,000. In 1900 they carried 537,997,301 passengers and 975,789,941 tons of freight; their total income was $1,336,096,379. This by nearly a million railroad employees over 186,590 miles of track, not counting some sixty-odd thousand miles of side-tracks and sidings.

George Stephenson's locomotive stands for a big industry.

Some twenty-five years ago Samuel Smiles said that "London now depends so much upon railways for its subsistence, that it may be said to be fed by them from day to day, having never more than a few days' food in stock." The same thing is now true of nearly every great city in the civilized world. New York and Chicago would suffer for food supplies if the trains were stopped for a single day. What would be the result if all the railroads were "tied up" for a week no one can imagine. The railroads are a part of our civilization, a vital part of our daily life. They have made possible the great cities of the present day.

And the country—have the railroads any close and important relation to agricultural progress and prosperity? Could Kansas and Nebraska send wheat to Liverpool without the locomotive? Could any of the States—Minnesota, Indiana, Tennessee, or Texas—find a market for its staple products without the railroad to carry them direct to market or to seaport or navigable lake or river? Jefferson thought it would take a thousand years to develop the Northwest. Had he seen a vision of the conquests which Stephenson's locomotive was to make he would have thought otherwise. We ourselves can not conceive how our great interior States could have been developd without the railroad. When Kansas has such a crop as it had last year, its great system of railroads is taxed to the utmost. So, in all the great agricultural States, abundant harvests for the farmers mean a superabundance of work for the railroads. The city and country produce and consume for each other; the railroad brings them and their products together.

George Stephenson, who invented the locomotive and built the first railroad, was born near Newcastle, England, on June 9, 1781. His father was fireman of a colliery engine, and with his wife and six children lived in a single room. It can easily be undestood that the boy had very limited opportunities. He early became interested in the steam-engine, his father's employmnt giving him a chance to convert his interest into knowledge. So, while other boys were making clay marbles, he built clay engines.

The children of the colliery laborer had to begin work at an early age, and George was no exception, except for his diligence, intelligence, and faithfulness. His first regular work, we are told, was to herd cows "at the wage of twopence a day." Later he led the horses for the plowmen on nearby farms. But he was not to be a farmer and soon became a driver of a gin-horse at a coal mine. Then he became assistant to his father, and was well on the way to the goal of his boyish ambition—to be an engineman and earn a man's wages. At fifteen he was a fireman, and at seventeen was promoted to the position of engineman. He was now in advance of his father, and believed himself "a made man for life."

But for George Stephenson to accomplish one purpose was but to feel the need of doing greater things. He must earn money and save money. To do this he worked overtime and at odd jobs—mending shoes, clocks, engines, or heaving ballast out of coal ships. Then he discovered that, to be as good an engineer as he wanted to be, he must learn how to read. So, though he was a grown man and an excellent workman, he went to a night school to learn reading and spelling. Reading led to arithmetic; and by and by the laborer's son—himself a laborer all the while—became an interested student of mechanics and mechanical drawing. The way was opening large before him, but he did not know it. He was keeping his own engine in repair, remodeling and adjusting others when no one else could make them work—working, studying, thinking all the time.

So it came about that while others were trying to put the steam engine on wheels, George Stephenson was better able than any one else to do it right. His first "traveling engine" made its trial run on July 25, 1824. But this engine, although it was successful from the first and also profitable to its owners, was not a real locomotive as we know that wonderful machine. It made steam too slowly and lacked direct connection between cylinder and driving-wheels. The inventor of the locomotive must make many inventions. The two great problems were to make steam rapidly and to make the right application of the power of the steam to the driving-wheels. Stephenson solved the first by making a tubular boiler and securing a forced draft by allowing the steam to escape through the smoke-stack. The second he solved by transmitting the power direct from the cylinders to the driving-wheels. Thus—to use the words of President Hadley of Yale University—"George Stephenson provided the modern locomotive, complete in all its essential features."

Stephenson's fight for mastery was not won till after he had built two or three railroads. But his was a winning fight—first with poverty and lack of opportunity. Winning in this, there was open before him the greatest opportunity of his time. Those who read and reflect know the rest. At his death, Stephenson was recognized as the greatest engineer of the nineteenth century. The whole world is debtor to him. His genius revolutionized industry.

D. W. WORKING.

Storks of the Orient.

When I went to the East in 1838, Commodore Porter was our Minister Resident at the Sublime Porte. He was residing at the time of my visit at San Stefano, about 10 miles west of Constantinople, right on the shore of the beautiful Sea of Marmora. It was a charming place for a war-worn veteran to enjoy the quiet evening of life. In all that region north of the Sea of Marmora, extending beyond the Balkan Mountains to the Danube, the stork is a favorite bird. Along the north of Marmora, where there are very few tall trees, the stork builds its nest on the tops of chimneys, which in the East are always covered, the smoke issuing from side windows or openings. The nests are very rude in appearance, about as large as a two-bushel basket. Sticks as large as your finger are skillfully woven into them. They are made soft and nice with moss and cotton and wool, or whatever the skillful bird thinks will make her parlor comfortable. The stork has two long legs, but for some reason or other generally stands upon one, the other drawn up among his feathers. I think I have seen as many as 50 in a row on a river bank, each one standing on one leg. When thus standing in repose it is about 3 feet high, the chief part of the height being leg and neck. It stalks over the field with an awkward gait, its neck alert, and its lightning stroke finishes the race of any snake, lizard, toad, bug, or other "vermin" on the ground. From kitchen refuse it selects what suits its taste and is bold in claiming it. It has no voice. The strange clatter of its broad, flat bill is indescribable. It seems to play rough tunes to its mate.

Commodore Porter had a stork's nest on the chimney of his kitchen, a building separate from the house and connected by a covered way. The chimney was tall, round like a column, and very picturesque, covered by this rough nest. The Commodore took great delight in watching the social life of his storks, especially when they came to teach the youngsters to fly. The young, awkward, long-legged thing would stand on the rim of the nest and flap its wings, but fear to launch away, while the old storks would career around and clatter their bills reprovingly and coaxingly, but vainly. At length, patience exhausted, an old stork would give him a sudden push and topple him off. He would then use his wings to purpose and the parent birds would be filled with pride and exultation. If the untried wings showed signs of failure in returning to the nest one of the parent birds would come beneath him and lift him with powerful wings to a height that would make his return sure and easy.

Unhappily, one of the Commodore's dogs, who knew better, seized one of the storks by the wing and injured it so that it dragged, and, of, course, the bird could not fly. The Commodore, finding that the wing was only lacerated but not broken, bound it up in place, put the stork in a large cage in the night and had it out to feed in the day time. Its companions stayed by it in anxious sympathy all the day, and only when it was housed would they return to their nest. It seemed so much like human sympathy that Commodore Porter resolved that if good feeding would save the wounded bird he should be ready for the flight southward when all the storks would leave. The stork at length began to use its wing for flying down, but it was longer in getting able to rise even 6 or 8 feet, and nothing would tempt it to regain its nest. It had lost courage and confidence and was satisfied with its condition, and had evidently formed an attachment to the Commodore.

But now the case assumed another aspect. A clattering and knocking and scraping was heard high up in the heavens, and behold, thousands of storks were careering about, calling out all the storks from river, brook, and seashore, from three-top and chimney-top, to prepare for the southward flight. A large body swept low over San Stefano and a deputation of four alighted to examine the disabled companion. After a time they rose into high air, made their report and all the storks went home. Their reappearance for their final flight was expected in about three or four days, when they would gather in full force, and following one solitary leader they would take a lofty flight for tropic fields.

Day after day, for two whole weeks, the Commodore waited for them, when at length they came in gathering flocks, as far as the eye could reach, probably from all Roumelia, Macedonia, and, it may be, from the banks of the Danube.

A large flock hovered low over the wounded mate, with a tremendous clattering of their big red bills. A few alighted, and, after due examination and consultation, all departed, but two stalwart fellows, who were commissioned to remain and share the fate of the wounded. They were the "Christian commission" of the storks. Then one stork led off in a lofty, steady fight, with outstretched neck, toward the south; two others followed, and three, and so on, until the base of the triangle thus formed was some hundreds of feet. Then flock after flock fell in and the long column at length disappeared.

Commodore Porter resolved to give the three storks the best possible winter quarters. It was not their purpose at all to stay. It was already very late for their migration. When the wounded was again able to mount to his native home, the chimney-top, it was evident that his two attendants were preparing for flight.

A great clattering of bills called out the Commodore, and the news ran through the village that the birds were going to take leave. Everyone turned out to view the start. Never were storks before thus honored. They put off in a direct line, the wounded one second. He could not quite maintain the level of their flight. He would certainly fall into the sea of Marmora. The Commodore followed them with his glass, and saw the rear guard at length come underneath the poor fellow, take him on his back and bear him high into the air for another flight. So they disappeared.

"They will have about 50 miles to fly on that line before they can find rest and fodder," said the Commodore, "but those gallant fellows will do it. They will do it or all perish together."—Presbyterian Banner.

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BLOCKS OF TWO.

The regular subscription price for the KANSAS FARMER is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to secure the paper at half price. While the subscription price will remain at one dollar a year, and no single subscription will be entered for less than this price, every old subscriber is authorized to send his own renewal for one year and one new subscription for one year with one dollar to pay for both. In like manner two new subscribers will be entered, both for one year for one dollar. Address, Kansas Farmer Company, Topeka, Kans.

An Emporia correspondent writes Secretary Coburn that a simple remedy for hog cholera has been used successfully in that vicinity. Here it is: One pound of red pepper, one pound of gun powder, one pint of turpentine mixed. One tablespoon to each hog, night and morning, in swill.

An event in southwest Kansas will be the third annual picnic of the Kingman County Cattlemen's Association, combined with an old soldiers' reunion, old steelers' reunion, state tournament of gun clubs, stock fair, and racing at Kingman, Kans., August 27, 28, and 29, 1901. The program advertises attractions enough to make the event a great one.

Probably nine-tenths of the KANSAS FARMER'S patrons are keepers of cows, and to know how best to manage these cows to secure the most profitable returns is a matter of much importance. The December quarterly report of the State Board of Agriculture, a valuable pamphlet of 86 pages, specially prepared by Prof. D. H. Otis, is devoted exclusively to dairying in Kansas, and the best management of the cow and her product, which subjects it discusses from every practical standpoint. The board still has a limited number of copies of this pamphlet, and by early application to Secretary F. D. Coburn, Topeka, you can doubtless obtain one. The contents of this quarterly are also printed in the board's 12th biennial report, hence persons already possessing the biennial will have no occasion to write for the pamphlet.

KANSAS FURNISHES ANOTHER GOOD MAN.

It has become fashionable for other States, and to some extent for the national government, to call upon Kansas when a man is wanted to combine education, desertion, and action. The drafts thus drawn upon Kansas have been especially numerous for young men trained to apply science to the problems of agriculture. Not one of these drafts has ever been defaulted.

Just now it is the State of Missouri which has taken from the Kansas State agricultural college Prof. R. W. Clothier, assistant in chemistry at the experiment station. Missouri places Professor Clothier in the chair of agriculture and chemistry at her State normal at Cape Guardian.

The selection is a most fortunate one for Missouri. Professor Clothier is exact as a scientist, is energetic and practical. He was reared on a farm in Wabaunsee County and takes with him into professional life all of the industry, perseverance, fidelity to duty, and constancy of purpose which the farm life instilled. The State of Missouri is to be congratulated on securing the services of Professor Clothier. The State of Kansas will expect him to make his mark in his new position.

AGRICULTURE AT THE AGRICULTURAL COLLEGE.

The agricultural colleges of the several States are the product of the tremendous force with which the thought of the country was brought into contact with practical problems during the administration of Abraham Lincoln. The full meaning and purpose of the act of Congress providing for their endowment was not at first realized. The conservatism of educators, who as a rule were slow to appreciate utilitarian views as applied to education, has even to this day retarded the development of some of these colleges along the lines advocated by those who hold advanced views as to the purposes of the act and the benefits to be derived from it. An aggravated case of lack of appreciation of the spirit of the act comes from Connecticut, where, according to the report of the New England Farmer, four professors were recently deposed for their "opposition to the policy of relegating the study of agriculture to a secondary place in the curriculum." Perhaps nothing better than this is to be expected of Connecticut, whose entire agricultural interests are small and become insignificant in comparison with the aggregate of her other interests.

There are in the West two typical views as to the purposes and proper scope of agricultural colleges. According to one view an agricultural college ought to be a high school for farmers' sons and daughters—a sort of finisher of the work of the common schools—perhaps a farmers' academy—at most a low grade university, where a little of a good many things should be taught with some illustrations from the farm and the shops. According to the other view an agricultural college should teach well the branches of a thorough English education with special emphasis laid upon those sciences which are applicable in agriculture and the mechanic arts. According to this view practical agriculture, animal husbandry, and the application of sciences to agriculture, should hold the leading places in the curriculum.

This view harmonizes well with that later act of Congress whereby an annual appropriation of $15,000 is made to each State for the maintenance of an agricultural experiment station, usually in connection with the agricultural college. The experiment station is expected to conduct original researches as to the problems which concern agriculture, and to report the same in bulletins to the public.

At the April meeting of the regents of the Kanas State Agricultural College, a committee on farm and experiment station was appointed. It consists of Hon. F. D. Coburn, chairman, and Hon. J. S. McDowell, and Hon. S. J. Stewart. At the June meeting this committee brought in a report recommending eleven propositions in the line of modern progressive ideas of agricultural college and experiment station work. Nine of these were adopted.

The most important of these eleven propositions was passed over to the July meeting, and again passed over to the September meeting. This proposition provides for a transfer of the work of plant breeding to the farm department, and directs that the agriculturist of the station push this work with the utmost vigor and make it one of the chief features of the farm experimental work. It also directs such modification of the use of experiment station funds as to provide the necessary means to carry out the proposition without drawing on the State appropriation.

The fact will be recalled that the Kansas Experiment Station has had the appropriation of $15,000 a year from Congress during the identical years in which like appropriations have been received by the other States. In some lines of experimental work the Kansas station has issued reports of great value. It must be confessed, however, that our experiment station has not on the whole held a place in the front rank. In the matter of plant-breeding the Illinois station publishel a bulletin showing most valuable results with corn two years ago. Minnesota followed with a bulletin on the work of her station in improving the spring wheat of that latitude. The increase in the yield of wheat by this breeding at the Minnesota station is placed at 2 to 3 bushels an acre. Whatever has been done at the Kansas station along this line has not progressed far enough to be reported. Kansas farmers can not avail themselves of the improvement in wheat wrought in Minnesota because ours is winter, while theirs is spring wheat. Kansas farmers can not avail themselves of the full benefits of the improvements wrought in corn in Illinois because our climate is so different as to require a corn plant especially adapted to our conditions. Kansas has peculiar problems of her own as to plants which her experiment station must solve for her. In this respect she must either paddle her own canoe or drift.

The regents of the agricultural college have it in their power to place our school and experiment station at the head of the procession or to leave them in undefined positions among the mediocres. They should lose no more time, but should at the September meeting adopt the well considered proposition of the committee on farm and experiment station as to plant-breeding.

An increase in the wheat yield half as great as that produced in Minnesota means an increase of over $3,000,000 a year in the income of the farmers of Kansas. An increase of two bushels per acre in corn means another increase of over $3,000,000 in the Kansas income. The dollars and cents of it are worthy of your attention, Messrs. Regents. This is a matter that ought not to be lightly postponed, nor to be made a football of politics.

The people of Kansas are an intensely practical people. They believe to the fullest extent in education that is of practical use. They expect the agricultural college to be the best and biggest institution of its kind in the world, and that it will not have to take second place as to any feature of is work. They do not want it to be a weak imitation of a university, nor to be a second rate or even a first rate academy. The young men and young women of Kansas are entitled to the best and strongest agricultural college that can be provided, and in this State of farms and farmers it is important to emphacize the word "agricultural." This department of both the college and the experiment station should be the prominent and distinguishing feature.

In thus urging the advancement of our already great agricultural college and experiment station to the front rank, personal interests of the workers in the institution have not been considered. If present incumbents are the best that can be secured for the compensation available, the regents are to be congratulated on their success in this regard. If the means at command can be made to secure the services of better talent, more energy, or greater industry in any department, it should be a guiding principle that nothing is too good for the Kansas Experiment Station, and the young men and women who will make the State's future. If making prominent the agricultural department seems likely to give any one man undue prominence, a division of the department may be made to equalize distinctions. But that the peculiar features required by the most advanced conception of a real "agricultural" college and experiment station should be made conspicuous is demanded by the interests of the farmers of this State of farmers, and by the needs of young men and women, the brothers and sisters of those who are making Kansas famous in every place they have entered.

BROOM-CORN SEED AS FEED.

The following inquiry from Mr. E. G. Freeman, Seward, Okla., directed to Professor Cottrell, has been referred to the editor:

"Wish you would kindly give a little talk through the KANSAS FARMER in regard to the merits of broom-corn seed as a feed—how to prepare, feed, etc."

About a quarter of a century ago Mr. W. C. Betzer, then extensively engaged in growing broom-corn in Barton County, Kansas, fed the seed to his horses and pronounced it "next to corn." This was a repetition of a former experience in Illinois. Others have used broom-corn seed with more or less satisfaction. The objection that the seed is apt to be musty is a common one. This condition is favored by the custom of harvesting while the seed is quite immature. This immature seed is also liable to be chaffy.

Broom-corn seed has a composition very similar to that of Kaffir-corn. Its percentages of digestible nutrients with the exception of the fat are a little lower than those of Kaffir-corn. It will be interesting to compare broom-corn seed with Kaffir-corn, sorghum seed, and with corn. The computations of values in the following comparison correspond with corn at 28 cents a bushel. If corn is worth 56 cents, double the money values in the table. If corn is worth 70 cents multiply the money values by 2½.

*Composition and relative values of corn, Kaffir-corn, sorghum seed, and broom-corn seed, when corn was 28 cents per bushel, or 50 cents per 100 pounds.

Name of feed.		Dry matter in 100 pounds.	Digestible nutrients in 100 pounds of feeding stuffs, and values of protein at 3.37 cents per lb., carbohydrates at 0.32 cent per lb., and fats at 0.56 cent per lb.			Total value of digestible nutrients in 100 pounds.
			Protein.	Carbo-hydrates	Fats.	
Corn, dent	lbs.	89.4	7.8	66.7	4.3	.....
	cts.	.....	26.3	21.3	2.4	50.0
Kaffir-corn	lbs.	84.8	7.8	57.1	2.7	.....
	cts	.....	26.3	18.3	1.5	46.1
Sorghum seed	lbs.	87.2	7.0	52.1	3.1	.....
	cts.	.....	23.6	16.7	1.7	42.0
Broom-corn seed	lbs.	85.9	7.4	48 3	2.9	... ...
	cts.	.....	25.9	15.5	1.6	43.0

Corn is now worth about 60 cents a bushel in Topeka. This is 2 1-7 times the price which prevailed when the above values were computed. Multiplying these values by 2 1-7 we shall have the following present values per 100 pounds for the four grains under consideration:

Corn, per 100 pounds	$1.07+
Kaffir-corn, per 100 pounds	.99—
Sorghum seed, per 100 pounds	.90
Broom-corn seed, per 100 pounds	.92+

In the writer's observation of the use of broom-corn seed it has been fed whole. Crushing it will probably yield much the same advantages as are derived from crushing Kaffir-corn. If it is fed whole to ruminating animals it will be well to remember the advantages found in Professor Cottrell's experiments when he caused cattle to eat their hay and grain together, thus inducing them to re-masticate the grain in chewing the cud.

* This table is an excerpt from a paper "Relative Values of Feeding Stuffs," prepared by the editor of the Kansas Farmer and published in the issue of February 20, 1901. It was republished in Secretary Coburn's report for March, 1901, and in the Stock Breeders' Annual for 1901. The complete paper, including tables of composition and relative values of a large number of feeding stuffs, can be obtained by sending 2 cents to the Kansas Farmer Company to pay for postage and mailing.

Government Crop Report for August.

The August report of the statistician of the Department of Agriculture shows the following averages of conditions on August 1:

Corn, 54.0; spring wheat, 80.3; oats, 73.6; barley, 86.9; spring rye, 83.6; buckwheat, 91.1; potatoes, 62.3; timothy hay, 84.1.

The following condition figures relating to corn and other crops indicate the damage caused by the recent extensive and severe drouth in such of the principal producing States named have been effected thereby.

CORN.

The average condition of corn declined 27.3 points during July and on August 1 it was 33.5 points lower than at the corresponding date last year, 35.9 points lower than on August 1, 1899, and 33.6 points below the mean of the August averages for the last ten years. In some localities the corn has been injured beyond recovery by hot, dry winds, in others timely rain during the closing days of July have gone far towards assuring fair yields. The condition in the principal States are as follows: Ohio, 73; Indiana, 57; Illinois,

51; Iowa, 57; Missouri, 29; Kansas, 19; Nebraska, 36. [There has been a great advance in all conditions in Kansas since this report was compiled. Corn is now in better average condition in Kansas than in either Missouri or Nebraska.] During July there was a decline of 5 points in Ohio, 25 in Indiana, 36 in Illinois, 30 in Iowa, 41 in Missouri, 55 in Kansas and 52 in Nebraska.

WHEAT.

The average condition of spring wheat declined 15.3 points during July; but on August 1, it was 23.9 points higher than at the corresponding date last year and only 3.3 points lower than on August 1, 1899, and 1.2 points below the mean of the August averages for the last ten years. The conditions in the principal States are as follows: Minnesota, 83; North Dakota, 93; South Dakota, 68; Nebraska, 50; Iowa, 85. During July there was a decline of 13 points in Minnesota, 7 in North Dakota; 32 in South Dakota; 39 in Nebraska; and 7 in Iowa. The average condition of oats declined 10.1 points during July and on August 1, it was 11.4 points lower than at the corresponding date last year, 18.2 points lower than on August 1, 1899, and 10.2 points below the mean of the August averages for the last ten years. The conditions in the principal States are as follows: New York, 69; Pennsylvania, 69; Ohio, 89; Michigan, 84; Indiana, 78; Illinois, 73; Wisconsin, 79; Maine, 89; Iowa, 81; Missouri, 30; Kansas, 37; and Nebraska, 44. During July there was a decline of 13 points in New York, 11 in Pennsylvania, 4 in Ohio, 6 in Michigan and Missouri, 5 in Indiana and Illinois, 12 in Wisconsin, 7 in Minnesota, 11 in Iowa, 10 in Kansas, and 40 in Nebraska.

OATS.

The proportion of the oat crop of the last year still in the hands of farmers is estimated at 5.9 per cent as compared with 6.8 per cent of the crop of 1899 in farmers' hands one year ago, and 6.9 per cent of the crop of 1898 in farmers' hands two years ago.

BARLEY.

The average condition of barley declined 4.4 points during July, but on August 1, it was 15.3 points higher than at the corresponding date a year ago, while it was 6.7 points lower than on August 1, 1899, and 2 points above the mean of the August averages for the last ten years. The conditions in the principal States are as follows: California, 98; Iowa, 84; Minnesota, 85; Wisconsin, 82; North Dakota, 96; South Dakota, 86; Kansas, 44; and New York, 77. During July there was an improvement of 2 points in California and North Dakota and a decline of 9 points in Iowa, 3 in Minnesota, 4 in Wisconsin, 19 in Kansas, 16 in South Dakota, and 15 in New York.

RYE.

The average condition of spring rye declined 9.7 points during July; on August 1, it was 7.6 points higher than at the corresponding date last year, 5.4 points lower than on August 1, 1899, and 2.2 points below the mean of the August averages for the last ten years. The conditions in the principal States are as follows: Wisconsin, 84; Iowa, 86; Nebraska, 68; Minnesota, 88. During July there was a decline of 7 points in Iowa, 9 in Wisconsin and Minnesota, and 21 in Nebraska.

BUCKWHEAT.

Preliminary returns indicate an increase of about 43,000 acres or 6.7 per cent in the acreage in buckwheat compared with last year. There is an increase of about 58,000 acres in New York and Pennsylvania, which together produced about two-thirds of the total buckwheat crop of the country. The majority of the other buckwheat producing States report diminished acreages. The average condition of buckwheat is 3.2 points higher than at the corresponding date last year, 2.1 points lower than on August 1, 1899, and .5 point above the mean of the August averages for the last ten years. The conditions in the principal States are as follows: New York, 91; Pennsylvania, 91; Wisconsin, 76; Maine, 96; Michigan, 85; West Virginia, 97; Iowa 57; and Minnesota, 84.

POTATOES.

The average condition of potatoes declined 25.1 points during July, and on August 1 it was 25.9 points lower than at the corresponding date last year, 30.7 points lower than on August 1, 1899, and 24.8 points below the mean of the August averages for the last ten years. The conditions in the principal States are as follows: New York, 76; Pennsylvania, 81; Ohio, 60; Michigan, 73; Indiana, 43; Illinois, 43; Wisconsin, 68; Iowa, 33; Minnesota, 73; Missouri, 24; Kansas, 29; and Nebraska, 43. During July there was a decline of 11 points in New York, 10 in Pennsylvania, 30 in Ohio, 17 in Michigan, 49 in Indiana, 41 in Illinois, 22 in Wisconsin, 57 in Iowa, 20 in Minnesota, 28 in Missouri, 32 in Kansas, and 50 in Nebraska.

SWEET POTATOES.

Of the 13 principal sweet potato producing States only 2 report an improvement during July; the other 11 States report declines ranging from 2 to 21 points.

HAY.

Preliminary returns indicate a reduction of 2.6 per cent in the hay average. Of the 14 States sowing one million acres or upwards last year 4 reported increased and 7 reduced acreages, while in 3 the average corresponds with that of last year. The condition of timothy hay is 4.2 points higher than at the corresponding date last year, 2.6 points lower than on August 1, 1899, and 1.7 points below the mean of the August averages for the last nine years.

CLOVER.

The reports as to production of clover are on the whole unfavorable, the percentages in the principal States as compared with a full crop being as follows: New York, 102; Pennsylvania, 63; Kentucky, 71; Michigan, 89; Indiana, 78; Illinois, 73; Wisconsin, 83; Minnesota, 84; Ohio, 86; and Iowa, 83. In point of quality the crop compares favorably with that of last year.

APPLES.

Reports regarding the apple crop are extremely unfavorable. The comparatively low condition reported on July 1, heavily declined during the month. A very poor crop will be gathered.

PASTURE.

There has been a marked impairment during the month in the condition of pasture, there being but few States in which declines are not reported. In Indiana, Illinois, Iowa, Kansas, Missouri, and Nebraska the falling off has been very heavy, ranging from 25 to 50 points.

Answers As To Silo.

EDITOR KANSAS FARMER:—I note in your issue of August 8 a request from J. L. Warner for information about silo. In three or four days either a large or small silo can be built on almost any farm in Kansas. In this locality stone weighing a ton or more can easily be swung around and imbedded in the ground. A sill should be fitted to the top and partly in the side to prevent the ensilage from pressing the walls of the silo outward. If it is to be 20 feet or more high the studing should be 2x10 and not over 18 inches apart. Brace it as you would in a floor. The inside should be boarded up with rough lumber and lined with tar paper, then an inner lining of flooring or ship-lap should be placed lengthwise. The sides of the top of the silo should be joined to prevent it from spreading apart at the top. A roof should be put on of boards ⅓ slant and battened. A silo 20x24x20 should hold 175 tons of ensilage.

In this section of the country there are plenty of threshers who can be secured to cut ensilage. I would recommend a cutting machine that would handle 75 to 100 tons per day. Then with a binder in the cornfield, and about six men, 50 to 100 tons of the very best feed can be secured in a day. Corn stalks, without corn even, when put into the silo would make excellent feed next winter. The corn I saw in the Kansas valley last week, between Kansas City and Junction City, would, if put in a silo, feed all the stock in the State during the coming winter. Even a half crop of corn put in silo will feed more stock than corn fed in the old way. Mr. L. A. Chase, of New York, says that one-third put in silo is better than the whole. Corn preserved in silo comes out cooked and in the best possible condition for the animal's stomach. All animals eat and relish it. Many have died from eating it and many have died because they did not get it, just as they will do the coming winter. Build silos according to your needs and fill them. Your correspondent asks if green corn can be stacked in the open field, without being cut up, and preserved. Yes. A French author has said that if green corn or hay is cut and stacked and weighted to about 2,300 pounds per square yard, it will keep without any wall. I have siloed whole corn and whole sorghum, but the cheapest and best way is to cut the corn about one-half or one inch long and pack it compactly in a silo. When the silo is full I think it wise to weight it down as it will keep better. However, I have sometimes put on straw and boards, and did not lose much, hence weighting it down is not absolutely necessary. For this part of Kansas I prefer a stone silo. A silo built in the ground is the best, and where the convenience of getting into and out on a level plain is considered it will be entirely the best. Mr. Chase, who is now visiting in Kansas, says he could not get along in New York without a silo. If the farmer has time I would recommend a stone foundation laid up in mortar for a lumber silo.

A. C. PIERCE.

Junction City, Kans.

Sow Turnips.

A contribution by the well known seedman F. Barteldes, of Lawrence, to the discussion of fall and winter feeds, contains the following in the Hutchinson News:

"For cattle, milch cows particularly, and sheep as well, nothing is better than turnips; and there is ample time now to secure a fine crop if planted in this month, and the quality will be much better than if matured in hot weather.

"The character of milk in flavor and quantity is greatly improved by a generous allowance of turnips and the health of the animal benefited as well. Nothing planted yields larger or more profitable returns, and the farmer who sows them now will have good reason to congratulate himself on his correct judgment ere the winter closes.

"The variety we should recommend as best and most nutritious is the German sweet turnip, but as the season required for its maturing is a little longer it would perhaps be advisable to plant the yellow sorts, such as the amber globe, yellow aberdeen, etc. Early maturing varieties like the white flat Dutch or the pomeranian white globe are also excellent sorts for fall planting and grow to good size.

"As to the storing and keeping the roots after gathering, there are several ways, either of which is good. One is, after the first light frost, to gather them in the warmer part of the day, so they may get a slight drying, and then pile them in heaps of 5 or 6 bushels each covering them with straw to a depth of about 4 inches, placing on that a covering of earth of corresponding thickness, adding more earth as the weather grows colder. A wisp of straw placed in top of the heap, extending from the turnips to outside of heap will supply ventilation and keep the roots from getting too warm and sprouting. Of course a ditch around the heap will be necessary, but the removal of the earth from its base in covering the heap will supply that. Another way is to pile in long rows and stack fodder over the turnips. When severe weather sets in remove to cellar. However, if a cool dry cellar is available that is the best place to store them for the winter. To prevent liability of cattle choking on the turnips it will be necessary to chop them in small pieces when feeding them.'

How He Pastured Sorghum.

EDITOR KANSAS FARMER:—In looking over your paper I notice that farmers are losing cattle by pasturing cane. We have always pastured 100 head of cattle on cane without any loss, and they were never hungry. We always gave them plenty of water before turning on the cane and not leaving them on the first time over five minutes, then ten, and so on until they became used to it. After they were taken off they were given no water for at least thirty minutes. By handling our cattle in this way we never lost a hoof and had no fear of losing any.

J. F. SHUMP.

Garden Plain, Kans.

Deafness Can Not Be Cured

by local applications, as they can not reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafnes is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by Catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that can not be cured by Hall's Catarrh Cure. Send for circulars, free.

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Sold by Druggists, 75c.

Hall's Family Pills are the best.

Thos. H. Foley, superintendent of the swine at the Central Kansas Fair, to be held at Hutchinson, September 2-7, 1901, asks us to inform the swine breeders that all hogs received for exhibition will be delivered to the fair grounds and depot free of charge.

Grain Markets.

Conducted by James Butler, secretary of the Farmers' Co-operative Grain and Live Stock Association.

"The human race is divided into two classes,—those who go ahead and do something, and those who sit still and say, why wasn't it done the other way."—Oliver W. Holmes.

Grain Markets 2 P. M. August 12.

This has been an exciting day in the grain markets of the country. All cereals sold at higher prices. The immediate cause of this boom may be assigned to the publication of the Government crop report which was given out last Saturday.

The so-called professional crop experts have for a long time estimated the growing spring wheat at 300,000,000 bushels on the basis of a full crop; but now comes your Uncle Sam and makes his guess for an 80 per cent spring wheat yield, which cuts down the yield to less than 250,000,000 bushels and makes a total crop of both winter and spring wheat of about 660,000,000 bushels, not the bumper crop that had been expected. The Government estimate of the corn crop is for a 54 per cent average, the lowest in the history of governmental statistics. The Government estimate on the potato crop is also very low and fruit and vegetable conditions are all of them much below the average. Added to this general shortage of crops comes the improved foreign demand caused by shortage in some of the European countries. Exports are enormous. They aggregated nearly 9,000,000 bushels last week and to-day were over 1,600,000 bushels. With these tremendous drafts upon our wheat supply, it is no wonder that the visible supply decreased over 2,000,000 bushels last week, an unusual occurrence at this time of the year. The receipts are much less than last year in all the primary wheat markets of the country. Receipts of wheat aggregated 579 cars in Kansas City today, while this day a year ago receipts were 938 cars. This would indicate that farmers have ceased to rush their wheat upon the market, which we think shows good judgment on their part.

We have been talking higher prices in these columns for some time, and it pleases us to see our predictions verified; and we still believe it is the part of wisdom to hold wheat rather than to sell it on breaks. In view of all surrounding conditions and wheat being the only full crop grown in this country this year, we feel that those of our farmer friends who can hold on to their wheat until the rush is over will be amply rewarded. The corn conditions as above stated are the lowest ever recorded in this country in August, and consequently the prices on corn will be made at home in the States west of the Mississippi River because the demand from consumers regardless of foreign marets will govern the price, which is bound to rule high the coming year.

The prices were strong and closed as follows:

Chicago.—No. 2 red wheat, 73½@75c; No. 2 hard wheat, 72½@74½; No. 2 corn, 59½@60c.

Kansas City.—No. 2 red wheat, 73c; No. 2 hard wheat, 68½@69¾c; No. 2 corn, 59½@60c.

Keep the body healthy at this season by using Prickly Ash Bitters. It is a necessary condition to successfully resist malarial germs.

Cheap-Rate Excursions To California.

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Visit Grand Canyon of Arizona en route.

Santa Fe.

Address, T. L. King, Agent, A. T. & S. F. R'y, Topeka.

The Crop Reporting Service of the Division of Statistics of the Department of Agriculture.

(Continued from page 703.)

original census figures as a basis, the acreage and production being carried on from year to year by the percentage method.

Correspondents are asked to report in percentages, as compared in the case of acreage or production with that off the preceding year and in the case of condtiion with a normal condition. Yield per acre and price per unit of quantity are, of course, reported quantitatively.

With regard to cotton, the information obtained in the manner referred to above is supplemented by that furnished on special schedules by a list of special cotton correspondents embracing a very large number of persons intimately concerned in the cotton industry, a complete list of cotton ginners, and a further list of cotton planters, each reporting his own plantation. This method of investigating cotton production is, however, employed only for the purpose of making a preliminary statement, the final figures being derived from statistics of movement and consumption obtained from transportation companies, port officials, and mills. This final report can not be completed until after the close of the commercial cotton year, August 31.

Feeding Wheat.

PRESS BULLETIN KANSAS EXPERIMENT STATION.

The almost unprecedented drouth of the present season, which bids fair to cut the corn crop down to next to nothing [not so bad since the rains began], but which began late enough to allow the production of a large crop of wheat, is turning the attention of farmers to the possibility of feeding wheat in the place of corn. In previous years of similar conditions thousands of bushels of wheat were profitably fed. Secretary Coburn, in his report for the quarter ending September 30, 1894, included statements from a large number of farmers upon feeding wheat. These varied greatly in tenor, some regarding corn as better than wheat, others wheat as much better than corn. These views were necessarily based upon general impressions rather than exact comparisons. Experiments in feeding wheat to swine were performed at the Kansas Experiment Station, and at the experiment stations of some other States. Experiments in feeding other stock have not been made at the Kansas Station, and but few at others, but hundreds of farmers have fed it to all kinds of farm animals. The following table, taken from Henry's "Feeds and Feeding," presents a compilation of the results obtained with swine at certain stations:

Station.	Average weight at beginning.		Number of days fed.	Feed eaten.		Feed for 100 pounds gain.	
	Fed corn-meal.	Fed wheat meal.		Corn-meal.	Wheat meal.	Corn-meal.	Wheat meal.
	Lbs.	Lbs.		Lbs.	Lbs.	Lbs.	Lbs.
Kansas	152	163	77	2,294	2,257	439	411
Ohio	136	137	70	1,228	1,273	453	438
South Dakota	96	103	90	1,159	1,144	458	481
Wisconsin	243	247	63	1,212	1,206	499	522
Wisconsin	247	247	126	6,014	6,054	496	465
Averages	.....	.....	.....	.....	.....	469	463

It will be seen that the results obtained were, on the average, practically identical. In other words, the wheat and corn fed in the form of meal are of equal value for feeding. The Kansas results are given in Bulletin No. 53, which contains some others in addition to the one included in the table. A limited number of copies of this bulletin are still available for distribution.

In feeding wheat satisfactorily, a number of considerations must be kept in view. The kernels being much smaller than those of corn, there is much more danger of their escaping mastication and passing out undigested. Many farmers who regard it as unprofitable to feed wheat whole found on crushing or grinding it that all difficulty disappeared. It is especially necessary when fed to steers or milch cows. In animals with smaller mouths there is less waste than with cattle, and some have observed a positive advantage with sheep in feeding it whole. This was due, however, to the greater consumption of whole grain than ground. Ground wheat has an important disadvantage in feeding, in that it is apt to form a gummy mass, which adheres to the teeth, making it difficult and disagreeable to handle by the animal. This fault has been the source of some of the poor results in feeding it, and is best obviated by feeding it mixed with some other grain, as corn, oats, or Kaffir-corn. Animals fed upon a mixture are also less liable to become cloyed than when fed on wheat alone.

In brief, the nutritive value of wheat, as shown by its composition, is greater than that of corn; it can be best utilized by feeding it ground or crushed, and mixed to a certain extent with oats, corn, or Kaffir-corn; it may be fed advantageously to horses, cattle, hogs, sheep, or poultry.

In discussing the feeding value of wheat, the grain only has thus far been in mind. In this year of extreme scarcity of roughage it may not be amiss to inject a word of suggestion that wheat straw is much better than nothing, and that in all probability the farmers of the wheat belt can contribute to the needs of their less fortunate fellow citizens, and add to their own profits by preserving, baling and marketing their straw instead of burning it as usual. J. T. WILLARD.

Wind Mills and Progress.

It is interesting in this age of new ideas, when steam and electricity are so much in evidence, says a press bulletin of the hydragraphic division of the U. S. Geological Survey, to notice how some of the older methods of obtaining power are still profitably employed. Take, for example, the use of the windmill. Nobody knows when this useful device was invented. It is rumored that the old Romans knew of its use, and there is another story that the Saracens introduced it into Europe. But while the early history of the windmill is shrouded in uncertainty, we do know that it came to play so important a part in the little kingdom of Holland as to be considered a national necessity in keeping that courageous nation out of the hands of the sea.

In Holland windmills are used to get rid of the water; in America they are employed to produce it. Out on the great plains in Kansas, Dakota, Iowa, and the adjoining States, an ideal place for windmills where the country lies flat, and the winds sweep uninterrupted for miles, the landscape is fairly dotted with them. They are all sizes and kinds, some tall and graceful, others placed low and resembling huge paddle wheels with the lower half housed, and the upper half catching the wind. A number of the larger ones grind corn or do other similar work, but the majority are engaged in pumping up water, for the needs of the stock and the irrigation of the land, from the exhaustless supply below the ground. Of course, each pump can bring up but a small amount of water at a stroke, but it is astonishing to see how much this little aggregates in the course of a year. An estimate has recently been made of the capacity of a windmill running ten hours a day for six months from an interesting report on windmills and their use, issued this year by the United States Geological Survey, which is studying the great plains to make available these rich underground water resources. It was found that an average wheel, 12 feet in diameter, with the wind blowing 16 miles an hour, is capable of pumping 1,920 gallons an hour, 19,200 in a day of ten hours, 576,000 each month, and 3,456,000 gallons in six months. This is the work of work of hundreds and thousands of others, and realize the vast amount of water brought into use by this means.

It is difficult to appreciate the significance of this work and the value of the windmill as factor in the development of the country. It means in the first place an abundance of water for stock and irrigating purposes, and water always means a great increase in the productiveness of the land. This is followed by an increase in values and the possibilities of larger population, bigger crops and better prices, and more business and increased earnings for the transportation lines. This is what the windmills are helping to do in America.

THE experience of practical painters has proved that thin coats of paint, well brushed out, give the most durable results. Because of its great spreading capacity and its extreme density, Pure White Lead is the pigment best adapted for this method of painting.

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Horticulture.

Keeping Cider Sweet.

In most farm communities, says the Orange Judd Farmer, sweet cider is available for a few weeks only. If a cider mill is owned on the home farm, cider can be made at any time after the apples begin to ripen. As a rule, however, the ordinary farmer does not have a mill, but depends on some neighbor, who makes cider for the entire community. After coming from a neighborhood mill of this kind it will remain sweet only a week or two, dependent, of course, largely upon the weather.

There is now a demand for a clear, sparkling sweet cider which retains the flavor of the fruit. It must be a strictly temperance drink. If a product of this kind is put on the market, the demand is almost unlimited. Good cider must be made from fairly well-matured apples free from worms and rot. Old mills tainted with pomace and with the wooden portion soaked with vinegar will not produce first-class cider, as acid ferments will be introduced, resulting in a rapid change.

Consequently, to make cider which can be kept sweet, select sound, ripe fruit. Unless this is done, all future treatment will be without result. It is not possible to make the best cider out of poor apples. Use clean cloths, vats, presses, etc., keeping them pure and clean by scalding at least once a day. Use every endeavor to keep the cider from contact with the micro-organisms which are in old pomace found around most cider mills. If these get in, fermentation at once starts and it will be impossible to completely check it. Fermentation is more rapid during hot, muggy weather, that is when the atmosphere is very humid and temperatures high. Souring will begin almost immediately under these conditions. Consequently, if cider is to be preserved, the best plan is to delay making until late in the fall, when the days are clear and dry, but the temperature low. Everyone knows that cider made in winter keeps much longer than that made during warm weather. This, as explained above, is due to the low temperatures retarding multiplication of bacteria and the development of alcohols and acids. Then, too, fruit late in the season contains a great amount of sugar, which tends to preserve the cider.

The best and only method of preventing changes in cider desired for table use is by heating to a temperature of 175 to 180 degress F, then at once placing in sterilized, airtight packages, and sealing while hot. In other words, employ exactly the same methods used in canning fruit. If properly put up according to this plan, cider will remain sweet almost indefinitely. Of course heat causes slight changes in the flavor, and deterioration takes place rapidly when the package is open, but the method is the most satisfactory one now in use. There are numerous compounds which, added to cider, will check fermentation and prevent souring, such as sulphur, salicylic acid, etc. These are antiseptic compounds, and not wholly satisfactory or to be commended.

Over in Missouri, the secretary of the horticultural society of that State reports that the fruit crop report for July from all parts of the State shows, at this date, an universal injury to the apple and peach orchards by the prolonged drouth of nearly ninety days. The apple trees show considerable injury, especially where heavily loaded with apples. The excessive drain upon the trees will be a serious one unless rain comes soon or the trees are thinned of their fruit. Some are now taking off one-half of the apples from the trees. Orchards that have been well cultivated are holding their fruit best. There never was a year when both the apples and peaches were so smooth and free from all insects and fungus diseases. The fruit is rather smaller than usual and some later also. The per cent of the apple crop has fallen from 85 per cent in May to less than 40 per cent for the State.

Low Rates to Buffalo Pan-American.

The Nickel Plate Road are selling tickets at exceptionally low rates to Buffalo and return, good for 10, 15, and 30 days. For particulars and Pan-American folder of buildings and grounds, write John Y. Calahan, General Agent, 111 Adams St., Chicago. City Ticket Office 111 Adams St.

(No. 19.)

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In the Dairy.

Conducted by D. H. Otis, Professor of Dairy Husbandry, Kansas Experiment Station, Manhattan, Kans., to whom all correspondence with this department should be addressed.

Experience With Calves on Whole Milk.

This experiment which consisted in milking the cows and feeding fresh milk to calves, began with the same character of calves and purchased in the same manner as those of the skim-milk experiment referred to in theAugust 1 and August 8 issues of the FARMER. At this time these calves averaged 94 pounds. They were kept under experiment twenty-two weeks, the same as the others. During this time they consumed 23,287 pounds of whole milk, 835 pounds corn meal, 835 pounds Kaffir-corn-meal and 835 pounds of alfalfa hay. The total gain was 2,878 pounds or a daily average 1.95 pounds per head. The milk for these calves was taken from an average product of the herd and as charged up at creamery prices for the butterfat it contained. Since these calves consumed both the butterfat and skim-milk, it is no more than right to charge them 15 cents additional for every hundred pounds of skim-milk contained in the whole milk consumed minus the cost of hauling. (12½ cents per hundred) if the whole milk was taken to the creamery. The price of milk varies from 55 cents to 69 cents per hundred, the average being 61 cents. This makes the milk consumed by these calves worth $142.16. Adding to this $2.33, the difference between the value of the skim-milk and cost of hauling the whole milk, we have $144.49. Figuring the grain and hay at the same prices as for the skim-milk calves, we find that these calves consume $10.30 worth of grain and $2.40 worth of alfalfa hay making a total feed cost of $157.19 or $15.72 per head. Allowing $275 per head as the cost of labor we have total cost of each calf during the experiment of $18.47.

Whole-Milk Calves.

Daily gain per head, 1.95 pounds; cost per 10 pounds gain, including labor, $6.64

For each hundred pounds of gain these calves consumed 809 pounds of whole milk, 31.8 pounds of butterfat, 58 pounds of grain and 29 pounds of hay. The feed cost per hundred pounds of gain amounted to $5.46, the labor $1.13, making a total of $6.64.

Is there any profit in raising whole milk calves by hand? Undoubtedly the cows will give larger income when the calves are fed by hand, but the element of profit depends upon whether this increase is large enough to pay for the extra labor. As stated with the skim-milk calves, 10 average cows from the college herd would yield 55,540 pounds milk. Subtract from this the amount consumed by these calves and we have left 32,253 pounds, which, according to the average test, would have made 1267.5 pounds of butterfat, valued at 15½ cents per pound, would amount to $196.46. The cost of milking would amount to $81.20 ($8.12 per cow) and the cost of hauling 32,253 pounds of milk at 12½ cents would be $40.31 or a total of $121.51. Substracting this cost from the value of the extra amount of butterfat produced by milking, we have a profit of $74.95 or $7.50 per cow. It is probable that the extra feed consumed by the cows when milked would greatly reduce or entirely absorb this profit.

If we make this comparison after eliminating the 25 per cent of cows in the college herd found to be unprofitable we would have an increased profit of 651 pounds of milk, or 25.6 pounds butterfat, worth $3.97. In this case the increased profit over the average cows would be 53 per cent in which case it would probably pay to milk the cows even though the calves be raised on whole milk.

In comparing the whole milk with the skim-milk calves, whose record was recently published in these columns, we find that they consumed 1,449 pounds less milk, 1,190 pounds less grain, but 194 pounds more of hay for each 100 pounds of gain the whole milk calves consume 252 pounds less milk, 64 pounds less grain but 2 pounds more hay. The value of the whole milk makes the total cost per hundred pounds of gain amount to $3.22 more than with the skim-milk lot. D. H. O.

The Kind of Operator That Earns a Good Salary.

O. W. LOHN.

Let us see how the station could and should have been run in order to make it a grand success, and I am glad to say that a great many of the skimming-station operators are men who take an interest in their business, read dairy papers, and try to improve right along by keeping in touch with the best knowledge found on these subjects.

In the first place an operator should take an interest in his patrons, he should be friendly with them. He should invite them to come in and visit with him, he should explain how everything works, he should explain how the Babcock test works, and should invite him to come and help test his own milk. When test day comes show him that it is not hard to learn to test and that he can do it as well as anybody after having tried a few times. In this way the farmer becomes interested and asks questions about everything, which, if the operator has had the good fortune of having attended a dairy school like the short course at the Kansas State Agricultural College, he can usually answer, and can offer much advice and many suggestions which will will be of great value to the farmer.

A skimming-station operator should be a general purpose man, if you please. He should be a good machinist, he should be well informed on the subject of feeding and care of cows, he should be able to prescribe for a sick cow or calf, he must be able to concentrate his mind so that he can run machinery, weigh the milk, fire the boiler, watch the temperature of the milk, see that the skim-milk is properly pasteurized, and that everyone gets his share of the same and no more, he should be a good business man and keep a record of everything, and must never allow himself to make a mistake.

The skimming-station operator represents the company for which he works, and as a rule is the only one with which the patrons have anything to do directly. The skimming-station operator should keep his station and surroundings neat and clean so that if any of the patrons' wives or daughters happen to come around to visit the station he can show them around without being ashamed of having to make any excuses on account of everything being so dirty.

One of the most important things for a station operator to do is to see that the skim-milk is properly pastuerized so that it will keep sweet for the farmers' calves. He must be careful never to let any sour milk run in along with the sweet as one can full of tainted milk is liable to spoil ten cans full of sweet milk when it gets into the skim-milk tank and is pastuerized. If any sour milk is received it must be left to one side until last and run through by itself, returning the sour skim-milk to the patron who brought the tainted milk.

The operator should inform himself how to raise good calves on separator milk, and should be able to explain how it can be done, he should procure for each one of his patrons a copy of bulletin No. 97 on "Skim-milk Calves," issued by the Kansas Experiment Station, which is the most practical work on the subject that I have seen. The operator should study this book carefully and should talk about it to his patrons, which will cause them to read it more carefully, and will open their eyes and show them that the separator milk is valuable when properly handled. It is also well to encourage the patrons to read dairy literature. I think Hoard's Dairyman or the Dairy Age should find its way to every patron patronizing a skimming-station. The operator should, of course, read these papers, and should call the patrons' attention to certain articles or rations that he might think would be interesting to them. In this way I believe, in fact I know from experience, that some very low stations have been worked up and are to-day running very successfully, and giving the best of satisfaction.

There is no reason why every station should not continue to gain and increase its receipts if properly run. Wherever we find a station that is going down rapidly we may rest assured that there is something wrong with the operating of that station; it stands to reason that if the business is properly run it will net the farmer more money to patronize a creamery than to make butter on the farm.

It has been well said that the prime need of the Kansas creameries is more milk. Allow me to add to this that the prime need of the Kansas skimming-stations, as well as the Nebraska skimming-stations, is for men that will understand how to run the stations so well that they will get what milk there is in the country. Let us hope that the young men leaving the Kansas State Agricultural Dairy School will prove to be such, and will make the business a success.

An Interesting Test.

The Kansas State Agricultural College has received 6 head of steers from the Kansas City Stock Yards that were selected by John Gosling to represent three different types of steers. Two of these (one grade Shorthorn and one grade Aberdeen-Angus), are well formed and represent profitable feeders that possess good development on the region of high price cuts. Two others (containing some Shorthorn blood), represent common average steers with lank, long bodies and long legs. The last two (one grade Jersey and one grade Holstein), represent the dairy type with arched thighs, cat hams, and pot bellies. These are expected to furnish plenty of kidney tallow. All these steers will be treated alike and fattened by next winter to be used in stock judging. After they have served this purpose in the judging room they will be slaughtered before the students and a study made of the percentages and quality of the different cuts. The meat will be served at the large boarding clubs, without the boarders knowing which is which, and their judgment asked as to which is the best meat. This experience alone will be worth more than the expense of a three month short course at the agricultural college.

Shelter the Cow and Economize Feed.

No doubt it pays to shelter a good dairy cow any winter that she is giving milk, but the high price of feed during the coming winter will drive the shelter problem home with much greater force than usual. A milch cow that is worthy of the name is concentrating her efforts in producing a large yield at the pail. If she must divert her attention from this noble purpose and spend her energies in keeping up the animal heat of the body, surely she could not be expected to do her best at the milk pail. To make the dairy cow profitable this coming winter no effort should be spared to keep her at the maximum production with an economical expenditure of feed. To do this, good, but not necessarily expensive, shelter should be provided.

The dry cows and young stock, on the other hand, do not need a great deal of shelter. A shed open to the south, situated if possible in a wood lot, will answer the purpose very well. Quarters of this kind will help to develop strong, hardy constitutions, a quality that is just as desirable in dairy as in beef animals. Last winter the agricultural college wintered a small herd of young stock that came through in excellent condition, and the only protection they had from the winter storms was an open shed, with no timber protection. These cattle received no grain. By wintering the dry cows and young stock in an open shed, more time and money can be spent in making comfortable quarters for the milch cows.

During these hot days of summer we little realize how soon the chilling breezes of fall and winter will be upon us. Now is the time to prepare for the change. Don't wait until the snow storm is in sight and then go out with hammer and nails and tack up a board or two and expect the cows to be comfortable. An experiment at the Kansas station in 1891-92 showed that steers that were sheltered consumed 844 pounds less corn during the one hundred and twenty-nine days under experiment than the same class of steers that were fattened in the open yard. This difference would be as great and probably greater with milch cows. With 10 head of cows the amount would be over 4 tons of corn. At present prices this would represent a handsome sum. With dry cows and young stock, that are not being fattened and which require little or no grain, we would not find this saving. "To be forewarned is to be forearmed," and let those of our readers who are not already prepared for winter lay their plans to make comfortable shelter for their cows and thus economize feed, which, to say the least, will be high. D. H. O.

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A square means 100 square ft. Write for Free Catalogue No. 61 on General Merchandise. Chicago House Wrecking Co., West 35th and Iron Sts., Chicago, Ill.

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The Poultry Yard.

Preserving Eggs.

With a view of testing the relative value of lime and salt mixtures and water-glass as egg-preservatives, we pickled about 60 dozen eggs in two lots. The mixtures were:

No. 1—Lime, fresh, 3½ pounds, salt 4¾ pounds, water 8 gallons.

No. 2—Water-glass, 1 part water-glass to 18 parts water.

These eggs remained in the solutions for about six months. When examined the water-glass was found to be the best pickle, although the lime and salt served its purposes very well; still the whites of the eggs preserved in this mixture were much more watery than the whites of those preserved in the water-glass. These were difficult to distinguish from fresh eggs since the white was quite firm and yolk stood up upon it just as though fresh. Another advantage in the water-glass is that it does not seem to affect the shell of the egg as the lime mixture, eggs from the lime and salt mixture being much liable to crack, either in cooking or handling. We consider this matter of preserving eggs of great importance in this State since prices are so high for eggs in the winter season. We do not for a moment advise the selling of preserved eggs for fresh laid, but we have no hesitancy in saying that when the market finds that these preserved eggs seem almost as good as the fresh eggs, it will certainly be willing to pay a price which will leave a good cash margin in favor of pickling. Water-glass, or sodium silicate is a liquid of rather a smooth, slippery consistency, readily soluble in water. It may be obtained through any druggist at a cost of about 75 cents a gallon. In using it we would advise the use of stone jars or crocks. The water used should be quite pure, and if not it must be boiled. The jar should be covered to exclude any dirt, and kept at the temperature of a cool cellar. Sometimes the specific gravity of the solution is greater than that of the eggs, in which case the tendency will be for them to float, when they may be forced down by a plate or similar arrangement with a weight on top.—Bulletin 26, Montana Agricultural Experiment Station, Bozeman, Mont.

Wood Ashes for Lice.

J. J. H. GREGORY IN AMERICAN AGRICULTURIST.

Years ago I had the trouble from vermin so common among poultrymen; vermin everywhere of the blood-gorged sort that crowd every small opening or crack along the roosts. It was impossible to do any work that brought one in contact with the platform which received the droppings without carrying away half a dozen lice. My great remedy was kerosene, poured liberally over the roosts and diligently worked into every crack and hole. This, of course, killed all that it touched, but the remainder made almost as great a nuisance as before.

Another step in the way of improvement we made by sprinkling a little insect powder among the hay of the nests. This helped to kill the body lice, so that when I plucked the dead fowls I found them comparatively free of them. About five years ago I introduced into their scratching boxes a mixture of half sifted coal and unleached wood ashes. The result was so strikingly beneficial in almost or quite exterminating all vermin, that I made a trial of pure unleached hard wood ashes.

For the past four years I have used this in their scratching box and have not found a louse of any kind. I have had tests of its efficiency under exceptional conditions. A tenant at my summer home, on my seed farm, divides with me a poultry house, his half being separated from mine by a partition made of thick roofing paper, not so tight but that vermin might readily find their way from his section into mine. While I have used wood ashes in the scratch box as a preventive, he has taken the usual precautions of whitewashing his coop and at times burning sulphur there with closed doors, with the result that while I have no vermin in my half he has always more or less in his, and at times has a great deal of trouble from them.

Poultry will not thrive upon an exclusive grain diet and this should be plainly evident to every thoughtful person, yet many breeders never give the birds anything except grain of various kinds and still they expect thrifty stock and a large egg yield.

Read Our Block of Two Offer. Take Advantage of It at Once.

WEEKLY WEATHER CROP BULLETIN.

Weekly weather crop bulletin of the Kansas Weather Service, for the week ending August 15, 1901. prepared by T. B. Jennings, Station Director.

GENERAL CONDITIONS.

The temperature has been cooler, averaging for the State 6 degrees lower than last week. Good rains have fallen over nearly the whole of the eastern and western divisions, and in the central counties of the middle. Good dews have been frequent.

RESULTS.

EASTERN DIVISION.

The improved conditions of last week have continued through this. Fodder cutting was discontinued as it was too green. Late corn has improved; it is tasseling and silking in Shawnee. Prairie grass has started, and is growing rapidly, giving promise of a good second crop of hay. Pastures are greatly improved. Late peaches and winter apples are improving. Home grown peaches are now on the market. Grapes are growing well in Morris and Shawnee. Gardens are improving. Forage crops are growing rapidly. The ground is generally in fine condition, and plowing is being pushed. Wheat and rye have been sown for pasturage, and forage crops for feed.

Errata: The chart should show rainfall in Montgomery County between two and three inches instead of less than one inch.

Allen County.—Everything changed for the better; corn cutting has stopped and plowing for wheat begun; some fields of corn will make from 10 to 20 bushels per acre, while many fields will yield no corn; a large acreage of forage has been sown.

Anderson.—The rains have kept the ground in good condition, and grass growing; some corn coming out nicely, but most of it past help before the rains came.

Atchison.—Cooler; rain not sufficient for plowing; fodder keeping green; pastures need more rain to start sufficiently for stock; late corn may make a little with more rain soon, but with best conditions possible crop will be small; apples will be light.

Chautauqua.—Rain sufficient; stock water abundant; new potatoes, peas, beans, and all other garden vegetables growing rapidly; plenty of forage for cattle for winter.

Cherokee.—Ground in fine condition; fall plowing will progress rapidly; acreage of wheat will be largely increased; a good cutting of prairie hay will be secured; corn does not promise over one-third crop; late peaches promise well.

Coffey.—Conditions much improved; corn greatly revived and will make some grain yet; all fodder crops growing rapidly; pastures good, but little stock water; will be plenty of feed to winter stock; much Kaffir-corn and cane planted since the rains; ground fine for plowing.

Crawford.—Rains put the ground in fine condition and started growth of vegetation; corn fodder is growing; apples and peaches improving; pastures beginning to grow; plowing for wheat being pushed.

Elk.—Pastures improving; some wheat sown for pasture; will be some winter apples.

Franklin.—Crops doing well.

Greenwood.—Pastures have improved greatly; fodder crops growing rapidly; rye and wheat being sown and large acreage of turnips put in for winter feed; late corn doing well.

Jackson.—Some plowing being done, but ground rather dry; fodder remains green, late corn fodder will be the best; not much late forage planted.

Jefferson.—Favorable week for growing crops; may have half a crop of corn; pastures and all vegetation growing rapidly.

Johnson.—Everything planted since the rains growing finely; pastures in a short time will be in fine condition.

Lyon.—Pastures showing effects of recent rains; unused fields being prepared for late fodder crops.

Marshall.—Conditions better in northern than southern part; ground in fine condition for plowing north, too dry south part; in north, late corn will make fair crop, prairie hay much improved, and peaches and apples fair crops; in south, pastures and late sown fodder crops benefited, some home-grown peaches on market, good quality, small size, much rye and wheat being sown for fall and spring pasture.

Montogomery.—Pastures and all forage crops in fine condition; fruit much improved; a large acreage of wheat land has been plowed, soil fine for it.

Morris.—A fine growing week for all crops; apples and grapes growing finely; alfalfa very fine for a fourth crop; pastures very good; ground in good condition and being prepared for wheat.

Nemaha.—Vegetation growing; pastures in good condition; meadows green; late corn improving, prospects of a considerable yield.

Neosho.—Ground in fine condition, but stock water not increased.

Osage.—Corn looking well; grass growing rapidly; plenty of stock water; second crop of hay promises better than first; millet doing finely.

Pottawatomie.—Will be plenty of rough feed, and one-fourth corn crop; pastures improving; prairie meadows will yield one-half crop; plowing for wheat progressing; late sown forage crops are doing finely.

Shawnee.—Late corn greatly benefited, is tasseling and silking; late listed corn for forage is up and will make fine fodder; pastures green; stock water abundant; cattle in good condition; apples, peaches, and grapes growing well.

Woodson.—Late corn coming out much better than hoped for; some early corn being cut; late hay good; late gardens being planted; apples, peaches, and pears plentiful.

Wyandotte.—Corn greatly improved; ground in fine condition for fall plowing; pastures improving, but much grass is dead; but few potatoes, and they are rotting in the ground.

MIDDLE DIVISION.

There has been little general improvement in the condition of corn this week, though it has improved in a few counties; it is being seriously injured by chinch-bugs in Jewell and Saline. Thrashing continues with good results. Plowing is progressing in several counties, but over much of the division the ground is too dry yet. Forage crops continue green in many counties, and are starting nicely in Phillips; pastures are starting well in Phillips, and are improving in several counties, but in Jewell they are in bad condition. Grapes are being marketed in Reno.

Barton.—Thrashing over half done; third crop of alfalfa cut; too dry for plowing; everything suffering for rain, which is promising at close of week.

Cloud.—Continued dry weather; no change in condition of corn.

Cowley.—Rain needed; plowing for wheat progressing; fruit doing well, but rain would help.

Dickinson.—Most farmers cutting corn for fodder, a few plowing for wheat; wheat acreage will be largely increased this fall.

Harper.—Good week for fall plowing and thrashing; ground in fine condition; corn crop estimated at from a tenth to a quarter of a full crop; plenty of roughness in sight.

Harvey.—Plowing for fall crops progressing rapidly; some alfalfa will be sown; the rains will help pastures and fruit considerably, but corn as a rule is past recovery.

Jewell.—Chinch-bugs swarming over the corn, and it will have to be cut to save the fodder, practically will be no corn; pastures as poor as ever; third crop alfalfa not growing much.

Kingman.—Thrashing interrupted by rain; plowing progressing; pastures improving; prospect for some corn yet.

Lincoln.—Cooler, but dry; hay makes about a fourth of a crop; corn being cut up; pastures dead; some feeding stock; good rain in south part of county.

McPherson.—Good showers, but not sufficient yet to make plowing good; pastures will be improved, rye sown for fall and winter pastures and turnips for winter feed; some corn fodder being cut; potatoes not worth digging; no garden truck.

Ottawa.—Not enough to materially change conditions.

Phillips.—The light showers are reviving such crops as are not dead; grass, sorghum, Kaffir-corn, and alfalfa are starting finely; stock water still scarce in localities; stock doing fairly well.

Pratt.—Continues dry; corn a very light crop; wheat thrashing out from 15 to 40 bushels, oats 20 bushels per acre.

Reno.—Dry and warm; thrashing continues with wheat still showing good yield and quality; corn condition remains about the same, most fields are green, some drying, not much cut yet; cane and Kaffir continue green; peaches and apples in good supply, and grapes coming into market; potatoes and tomatoes very scarce.

Rice.—Cooler week; thrashing has continued; week closes with rain in sight.

Rush.—Somewhat cooler; showers in parts of county; south half still too dry to plow; thrashing progressing and grain being marketed.

Saline.—A few showers and slightly cooler; too dry to plow; chinch-bugs killing the corn, if not cut in a few days will yield but small crop of fodder.

Sedgwick.—All corn not good is being cut for fodder, corn binders being run far into the night.

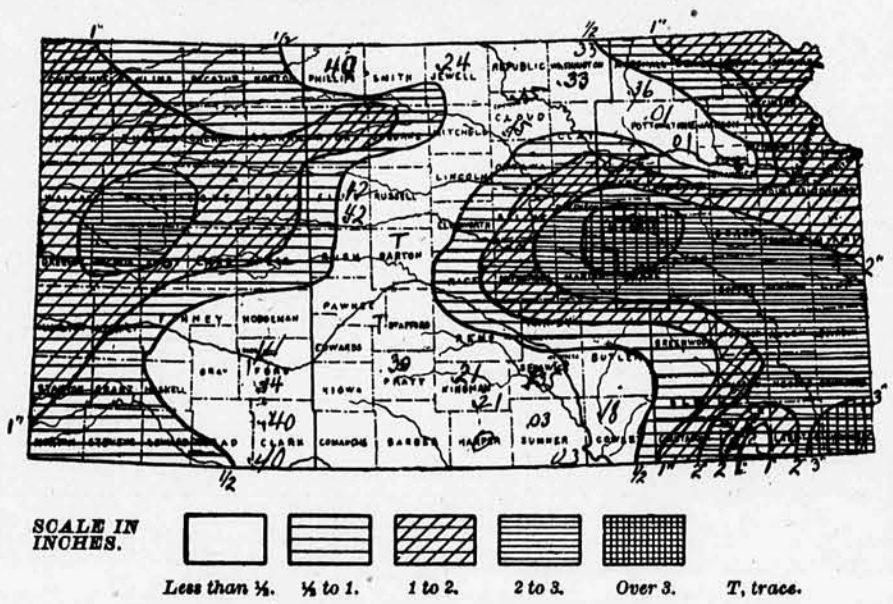
Smith.—Good shower, other conditions same as last week.

Stafford.—Continues very dry; stock doing fairly well.

Sumner.—Everything growing rapidly; ground in fine condition for plowing, which is progressing rapidly; thrashing from stacks in progress.

Washington.—Much cooler, with light showers; prairie hay being cut; a few peaches on the market; corn not hurt by

RAINFALL FOR WEEK ENDING AUGUST 10, 1901.



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Belgian hare fry beats chicken, and a good breeding pair of hares will keep you supplied all the year round. I can supply you in the finest breeding stock at $3.50 per pair; $5 per trio, until further notice.
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Believing that fresh cut Green Bone is one of the greatest aids to successful and profitable poultry raising, the publishers of this paper will pay a cash **Prize of $10** for the best article, not exceeding 500 words in length, on
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CONDITIONS.
The article must be written by one who has had actual experience in the cutting and feeding of bone.
The name of any special bone cutter must not be mentioned in the article. The article must be in our hands on or before August 15.
Announcement of the prize winner will be made in our first issue in September.
Articles submitted will become the property of this paper.

$100 CASH PRIZE. Other agricultural papers are making the above offer. Each paper will award one $10.00 Cash Prize. The articles winning these $10 prizes will then be submitted to a committee of competent judges (to be announced later), who will select the best article of all, for which a Grand Prize of $100 will be paid. Every one of our readers who is familiar with the use of cut green bone stands a chance of winning these prizes. Send in your article at once.
Address GREEN BONE PRIZE, Care KANSAS FARMER.

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chinch-bugs, will make good fodder if August continues cool and wet.

WESTERN DIVISION.

The favorable conditions of last week continued through this, at the same time extending over the northern counties. Late corn has improved, giving promise of some grain, now, in Gove, Norton, and Thomsas; roasting ears are plentiful in Ford. Forage crops are improving and promise sufficient roughness. Grass is good in Ford, improving in Ness, growing well in Trego and Decatur, and getting green in Thomas. The alfalfa seed crop is being cut in Ford. In Morton a few have begun cutting hay, but it is a light crop.

Clark.—Local showers have helped crops in places; no general rain yet.

Decatur.—Conditions considerably improved, but the general estimate is one-third crop of corn, with favorable weather; grass growing; fodder improving.

Ford.—Seed (third) crop of alfalfa being cut; range good, stock in fine condition; watermelons and roasting ears plentiful.

Gove.—Good rains this week; crops look very much better; some corn.

Greeley.—Local showers in county; some places doing well, others suffering.

Kearney.—Cooler; rain revived all forage crops; sorghum, Kaffir-corn, millet, etc., making good growth; late corn growing well; third cutting of alfalfa progressing; alfalfa seed crop very promising.

Lane.—General rains during the week; the forage crop promises fair to good.

Morton.—Good showers and cooler; more rain needed; a few have begun cutting grass, but it is very light; forage crops improving, but will be late.

Ness.—Cooler weather, good local showers; pastures improving; stock doing well; forage crops looking better, taking second growth where burned by the drouth.

Norton.—Two good rains during the week have greatly improved conditions; there will now be plenty of roughness and some corn; a large area of wheat and rye will be sown.

Scott.—The rain was general and insures a good crop of fodder.

Thomas.—Fine rains greatly improving cane, Kaffir-corn, late corn, and range grass, the last is getting green again; will be some corn and plenty of rough feed; cattle doing well.

Trego.—Good rains and cooler weather; plowing in progress; prairie grass growing well; feed sufficient for all stock will be raised; thrashing delayed some by rains; wheat turning out above estimates.

Kansas Fairs in 1901.

Following is a list of fairs to be held in Kansas in 1901, their dates, locations, and secretaries, as reported to the State board of agriculture and compiled by Secretary Coburn:

Allen County Agricultural Society—C. H. Wheaton, secretary, Iola; September 10-13.

Brown County Fair Association—G. W. Harrington, secretary, Hiawatha; September 17-20.

Butler County Fair Association—H. M. Balch, secretary, Eldorado; October 8-11.

Chautauqua County—Hewins Park and Fair Association—N. G. Marsh, secretary, Cedar Vale; September 25-28.

Coffey County Fair Association—A. L. Hutchens, secretary, Burlington; September 10-13.

Cowley County—Eastern Cowley Fair Association—J. M. Henderson, secretary, Burden; dates not yet chosen.

Finney County Agricultural Society—D. A. Mims, secretary, Garden City; August 21-23.

Greeley County Fair Association—J. C. Newman, secretary, Tribune; September 6-7.

Harvey County Agriculaural Society—John C. Nicholson, secretary, Newton; September 24-27.

Jackson County Agricultural and Fair Association—S. B. McGrew, secretary, Holton; September 24-27.

Jefferson County Agricultural and Mechanical Association—Edwin Snyder, secretary. Oskaloosa; September 3-6.

Jewell County Agricultural Fair Associaion—C. F. Horne, secretary, Mankato; September 17-20.

Marshall County—Frankfort Fair Association—J. D. Gregg, secretary, Frankfort; September 17-20.

Miami County Agricultural and Mechanical Association—W. H. Bradbury, secretary, Paloa; September 24-27.

Montgomery County—Coffeyville Fair and Park Association—R. Y. Kennedy, secretary, Coffeyville; August 13-17.

Morris County Exposition Company—M. F. Amrine, secretary, Council Grove; September 24-27.

Neosho County Fair Association—H. Lodge, secretary, Erie; August 27-30.

Neosho County—Chanute Agricultural, Fair, Park, and Driving Association—A. E. Timpane, secretary, Chanute; September 3-6.

Ness County Agricultural Association—H. C. Taylor, secretary, Ness City; October 2-5.

Norton County Agricultural Association—J. L. Miller, secretary, Norton; September 18-20.

Osage County Fair Association—C. ... Curtis, secretary, Burlingame; September 17-20.

Reno County—Central Kansas Agricultural Fair and Live Stock Association—Ed. M. Moore, secretary, Hutchinson; September 2-6.

Rice County Agricultural Association—C. Hawkins, secretary, Sterling; September 11-14.

Riley County Agricultural Society—R. T. Worboys, secretary, Riley; September 24-26.

Rooks County Fair Association—J. Q. Adams, secretary. Stockton; September 10-13.

Sedgwick County—Wichita State Fair Association—H. G. Toler, secretary, Wichita; October 1-4.

Stafford County Fair Association—John W. Lill, secretary, St. John; August 28-30.

Sumner County—Mulvane Agricultural Society—John A. Reed, secretary, Mulvane; September 27-28.

Wilson County—Fredonia Agricultural Association—J. T. Cooper, secretary, Fredonia; August 20-23.

$13 to Buffalo Pan-American and Return, $13.

Tickets on sale daily via the Nickel Plate Road, good returning ten days from date of sale. Especially low rates for 15 and 30 day limit Chicago to Buffalo and return. Tickets at lowest rates to all points east. John Y. Calahan, General Agent, 111 Adams St., Chicago. Chicago City Ticket Office 111 Adams St. (No. 18.)

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 order. Stamps taken.

CATTLE.

FOR SALE—Ten high-grade yearling Red Polled bulls; also a few high-grade Red Polled cows and heifers, bred to a registered bull. Address I. W. Poulton, Medora, Reno County, Kans.

FOR SALE OR TRADE—Forty head of dairy cows with or without the dairy business; also 80 head of stock cattle. Address C., care of Kansas Farmer, Topeka, Kans.

FARMS AND RANCHES.

FREE A book of statistics, information, and 200 E. Kans. farm descriptions. Write G. E. Winders Realty Co., Ottawa, Kans.

RANCH WANTED—We want a ranch of from 640 to 1,000 acres of land with some improvements, situated near railroad station and good schools. Will go as far west as Dodge City for a desirable place. A part must be in alfalfa or good alfalfa land. For a ranch that suits we will give choice rental property consisting of three good houses in Topeka, and a suburban tract of 12½ acres fine fruit and garden land. The cash value of our property is $5,500; is clear and perfect title; cash income is nearly $400 per year. If interested, write for full description of property. John G. Howard, Topeka, Kans.

FARM WANTED—To rent for next season, in central eastern Kansas, about 200 acres. Cash rent or on shares. Improvements and land must be good. N. S. Griffith, Le Loup, Kans.

FOR SALE—In Ottawa County, Kansas, 80-acre farm, good, deep soil, 5-room house, outbuildings, 2 wells, 60 acres under cultivation. $1,500, easy terms. Write H. L. Thomas, Geneseo, Kans.

FOR SALE—400 acres of land—150 in cultivation, 250 under fence, 32 head of cattle. 7 horses, 300 chickens, good house and stables, plenty of water, 2 miles from town, cheap for cash. Mrs. W. Kleist, Oakley, Kans.

HORSES AND MULES.

FOR SALE OR TRADE—Full-blood Shire stallion, 2 years old, 4-year-old black jack, 4 Mammoth black jennets. Exchange for cattle or desirable land in Kansas. G. K. Scott, Toronto, Kans.

THOROUGHBRED SHETLAND PONIES For sale; your choice of 20 beauties. I. T. Marshall, Ophir Hill Farm, Concordia, Kans.

WANTED TO TRADE—One Mammoth Spanish jack for cattle. Come or write. Address James A. Carpenter, R. F. D. No. 2, Carbondale, Kans.

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The Stray List.

Week Ending August 1.

Cowley County—Geo. W. Sloan, Clerk.

PONY—Taken up by John J. Hutchings, in Spring Creek tp., (P. O. Maple City), one dun mare pony, 5 years old, branded on left shoulder, wire mark on right hip; valued at $18.

COLT—Taken up by same, one roan male colt, 2 years old; valued at $6.

COLT—Taken up by same, one dun male colt, 1 year old; valued at $1.

Shawnee County—J. M. Wright, Clerk.

MARE—Taken up by Plezzie Anderson, in Topeka (P. O. 1601 Lane Street, Topeka), July 25, 1901, one brown mare, 4 years old, star in forehead, long tail and mane, apparently unbroken.

Coffey County—W. M. Palen, Clerk.

MARE—Taken up by A. U. Garrett, in Ottumwa tp., (P. O. Burlington), July 8, 1901, one flea bitten grey mare, 8 years old, weight about 800 pounds; roach mane, valued at $15.

Franklin County—J. A. Davenport, Clerk.

MARE—Taken up by Taylor Hays, (P. O. Pomona), June 23, 1901, one bay mare, 8 years old, black mane and tail, branded D on left shoulder; valued at $20.

Gove County—I. N. Carver, Clerk.

STEERS—Taken up by S. L. Thompson, whose residence is 4 miles east of Gove City, in Gove tp., July 17, 1901, two 2-year-old steers, one red. and one red roan, red one branded JA on side, red roan branded N M on side, and crop off left ear, medium sized; total value $40.

Coffey County—W. M. Palen. Clerk.

MARE—Taken up by E. G. Williams, in Hampden tp., May 20, 1901, one brown mare, 7 years old, weight about 900 pounds, branded A on left thigh; valued at $20.

Montgomery County—D. S. James, Clerk.

MULE—Taken up by J. W. Cooper, in Lawn Creek tp., (P. O. Coffeyville), one light bay horse mule, 2 years old, branded bar J on left jaw; valued at $30.

MULE—Taken up by same, one brown horse mule, 2 years old, branded bar J on left jaw, lame in left front foot; valued at $40.

Week Ending August 8.

Lyon County—H. E. Peach, Clerk.

MARE—Taken up by Fred Vincent, at Admire, Kans., July 19, 1901, one grey mare, 16 hands high, three white feet, scar in face.

For Week Ending August 15.

Graham County—R. B. Garnett, Clerk.

MARE—Taken up by J. F. Blackman, in Gettysburg tp., (P. O. Morland), April 5, 1901, one bay mare, about 5 years old, weight 1,000 pounds, star in forehead. Also one bay horse colt, about 1 year old, star in forehead; total value $40.

Montgomery County—D. S. James, Clerk.

PONY—Taken up by Enos Patchett, in Fawn Creek tp., (P. O. Deering), August 5, 1901, one light sorrel pony, 4 years old, four feet high, slit in left ear, small star in forehead.

Montgomery County—D. S. James, Clerk.

HORSE—Taken up by H. Hanson, in Rutland tp., July 18, 1901, one sorrel horse, 6 years old, both hind feet white, some white on left front foot. slit in end of left ear.

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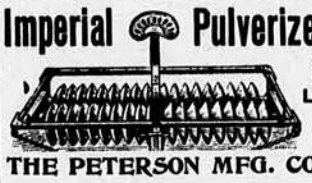

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As Others See Us.

It is well sometimes to see ourselves as others see us. Prof. John D. Quackenboo, of New York, at the great farmers' meeting at Hampton Beach, N. H., gave his impressions of the grange from the point of view of an outside observer. He spoke in part as follows:

I may be regarded as speaking impartially and dispassionately when I ask your attention to four lines of grange influence that have forcibly impressed me as an outside observer. Permit me to consider briefly.

1. The grange as an educator.
2. The grange as a spiritualizing agency.
3. The grange as a promoter of fraternal feeling.
4. The grange as a believer in the rights of woman.

Education literally means "drawing out"—calling into action latent efficiency, intellectual and moral and spiritual. The grange so interprets it, and gives essential shape to this conception in the instruction it offers to its members. Intellectual education implies the symmetrical development of the mental faculties—reason, judgment, imagination—and the gradual storing of the mind with serviceable as contrasted with merely ornamental knowleuge. When the Spartan king Agesilaus was asked what a child should be instructed in, he replied: "Teach him what will be useful to him when he becomes a man." The grange acts upon this principle, keeping sight also of the moral element in education, and strengthening its members against that combination of appetite and opportunity which constitutes temptation. It believes that there is no soul in which God is not, that in every character there lies imbedded virgin gold which may be found for the seeking and wrought into exquisite shapes. A conspicuous purpose of the grange is therefore practical character-building—education along lines of manliness, inspiration to high resolve and noble endeavor. It provides as well for literary and aesthetic culture, without which in some degree the farmer's character must remain ill-rounded. It gives lessons in the art of graceful living, and emphasizes the beautiful as well as the worthy thing to do. It recognizes the imagination as a refining and moralizing instrumentality, and bids the patrons of husbandry find in beauty the companion of their waking thoughts, the angel of their dreams, realizing that sensitiveness to the aesthetic thrill equivalents susceptibility to the deepest and sweetest experiences of human life. With all this, while educating in intellectual discernment and power, the grange seeks to awaken a spirit of aspiration and achievement. The key-note of its teaching is progress—eager, enlightened progress—progress in intelligence, knowledge and charity, without sacrifice of Christian sentiment or Christian principle. It is the friend that makes the man do what he can. It preaches the gospel of self help. It urges each member to use the efficiency within him, and shows him how to do it. It concedes the fact that the human soul delights in a realization of its own power, and responds sublimely to whatever factor, in harmony with St. Paul, holds up before its vision that spiritual potency conferred on it by God as the means of accomplishing lofty purpose, as the way of escape from temptation. The doctrine of the utter helplessness of man, which is harped on so persistently by certain creeds and which has for centuries unsouled the Christian, is taught neither by Jesus nor Paul. God does not turn out mere sale-work; he does not create souls without good in them, without power in themselves to help themselves—a mistaken philosophy which every blade of grass controverts, every sun, every diatom. The grange in alignment with this principle labors to create a maximum efficiency in the human machine, and to evoke in each of its members that intellectual courage which clearly discerns ana that moral courage which grandly sustains. And this is optimism at its climax, the making the man acquainted with his own best self. And so the grange must be ideally all spirit and life—"the spirit that is ever struggling to express and realize itself in higher forms, that promises to the human race far more than it has as yet accomplished."

The grange recognizes also the spiritual nature of man, and thus the true oneness of the human and divine nature, man in God's image. As the handmaid of religion, it inculcates a higher realization of truth and a nobler conception of duty. It is a training school in which the soul is prepared for ascent, under Christian inspiration, to the summits of its being, where man recognizes himself as the miracle of miracles; knows himself in his three-fold nature, animal, rational and spiritual; and sets a value on himself as possessed of special aptitude for a higher than mere terrestrial life.

Thirdly, the grange fosters mutual understanding and coöperation; concerted action for common protection and advancement; and a good will among its members that intuitively prefers arbitration to litigation as a means of settling differences. Thus it stimulates a love of the visible brother which roots itself in a deeper love of God. My observation leads me to believe that grange influence inhibits the spirit of self-righteousness, of invidious distinction, of inordinate self-gratification which blinds our eyes to the right of others to be happy, of all readiness to listen to malicious insinuations, of all pleasure in receiving and retailing scandals. It operates somewhat in the line of Ruskin's appeal: "Do justice to your brother, whether you love him or not, and you will come to love him." I believe its altruism to be a religion of giving as opposed to getting.

Finally, the grange interprets the status of woman in harmony with the teaching of the Gospel. In common with the Saviour, it regards and treats her as the equal of man. Jesus accounted woman as much an individual as man, as much a unit in church and home and nation. Woman in the Gospel system is made the equal of man in every question of privilege; endowed by her Maker with power to choose her own course of action, with the right to the same consideration as a social and intellectual unit, to the same educational advantages, to the same opportunities of making a livelihood, to the same compensation for equally good work. I say it reverently, if Jesus Christ had walked among men, in this democratic age, He would, I believe, have given more positive expression to a tenent tnat is deeply imbedded in His divine philosophy, even universal suffrage at the polls of the nations—suffrage that does not exclude superior intellect and taxed property interests from their right to representation in the legislative chamber simply because in the province of God they happen to be the endowments of woman. The grange here is in accord with Christian teaching; for it importunes us to believe that each one of us, without regard to sex, is a self-conscious unit, capable of self-examination, self-criticism, self-consistency, cast in the image of the Mind Infinite, trammeled by no limitation to its development, with no horizon to the evolution of its deathless power. Assuredly, when we come to think of it, the natural force that has for generations been wasted in America is woman; and we have cause for rejoicing that at the beginning of this twentieth century, it has come to be recognized that no nation can be truly great in which the rights of women are not upheld, and her refined intellect is not respected as a directing agency and an impelling power. In its appreciation of the capacity and the sphere of woman, the grange reflects the spirit of the Christ, and, thank God, the spirit of the times.

In, then, that it educates along lines intellecutal, æsthetic, moral, and spiritual, and educates practically; in that it brings its members close together in the bonds of friendship and brotherly love; in that it acknowledges so emphatcially the worth and majesty of true womanhood; in that it pronounces the secret of that ideal training which makes a heaven of home to be the combination an coöperation of a manly, intelligent, unselfish, chivalric fatherhood, and a gentle, self-denying, patient, dignified motherhood, in and through a heaven-founded and heaven-blessed marriage union; in that it is anti-materialistic in its influence, and fearlessly proclaims its allegiance to a Supreme Being whom we can all implicitly trust and unreservedly love—I, as an outside disinterested student of its methods of the men and women whom it transforms, of the men and women who support it and believe in it, can, with high-minded sincerity, point you to the grange as an instrumentality second only to the Christian church and in full harmony with that church for the expansion of human minds and the ennoblement of human characters.

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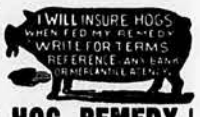

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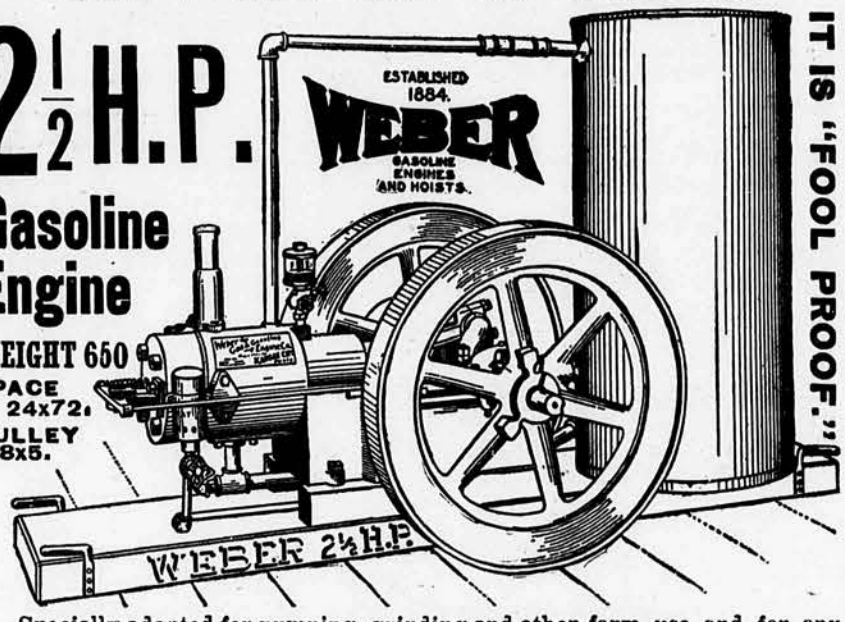

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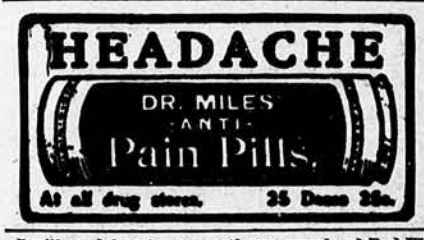

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