



Volume XLIII. Number 33

TOPEKA, KANSAS, AUGUST 17, 1905

Established 1863. \$1 a Year

KANSAS FARMER.

Established in 1863.

Published every Thursday by the
KANSAS FARMER CO., - - TOPEKA, KANSASE. B. COWGILL.....President
J. B. MCAPHER.....Vice President
D. C. NELLIS.....Secretary and Treasurer

SUBSCRIPTION PRICE: \$1.00 A YEAR

E. B. COWGILL.....Editor
I. D. GRAHAM.....Associate Editor
H. A. HEATE.....Advertising Manager

Entered at the Topeka, Kansas, postoffice as second-class matter.

ADVERTISING RATES.

Display advertising, 15 cents per line, agate (fourteen lines to the inch). Continuous orders, run of the paper, \$1.54 per inch per week.

Special reading notices, 25 cents per line.

Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per agate line for one year.

Annual cards in the Breeder's Directory, consisting of four lines or less, for \$16.00 per year, including a copy of the Kansas Farmer free. Special rates for displayed live stock advertising.

Special Want Column advertisements, 10 cents per line of seven words per week. Cash with the order. Electros must have metal base.

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

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

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

Every advertiser will receive a copy of the paper free, during the publication of the advertisement. Address all communications to

KANSAS FARMER CO.,

116 West Sixth Ave., Topeka, Kans.

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About one-fourth of the value of manufactured articles exported from the United States during the fiscal year closed June 30, are of iron and steel. We should all be happy over this showing, but the knowledge that many, perhaps most, of these articles were sold at lower prices to the foreigners than Americans are compelled to pay for like articles purchased from these same manufacturers.

Statistics just compiled by the U. S. Bureau of Statistics of the Department of Commerce and Labor show that the exports of manufactures in the year just ended amounted to \$543,620,297, as against \$452,415,921 in the preceding year; \$433,851,756 in 1900, and \$183,595,748 in 1895. The growth in exports of manufactures far exceeds the growth of population or the growth in commerce as a whole.

FINE CROPS OF ALFALFA.

We present herewith a photograph of an alfalfa field four miles west of Topeka. The soil had been well prepared and was in good condition and the seed was sown during the last half of September, 1904. A. H. Bates, the owner, would rather have sown earlier. A good stand resulted. The first cutting was made about the last of June, 1905, and resulted in something near a ton to the acre. The photograph was taken July 28, while the second cutting was in progress. The second crop was heavier than the first. The third crop will be ready about the time this number of the

implements including a mower, lister, several two-horse cultivators, corn-planters, etc., are offered for the best samples of yellow, white and mixed corn.

Now is the time to think about entering the contest, either to win or to find out why some other farmer's corn is better than your own. The corn should be selected as soon as mature or at least not later than when the crop is harvested. These choice ears which are selected should be carefully stored in some dry, airy place where they will suffer no injury from mice or other pests, as injured ears must take second place to ears not mutilated and otherwise just as good.

Prices are also offered for the best yield of corn of any variety grown upon an acre of land. The farmer must carefully measure the land and weigh the corn, assisted by a competent person appointed by the farm department of the college. One bushel must be sent to the college as a moisture sample so that all yields may be reduced to the same moisture basis.

As Kansas will make a big crop of

progress of the farmer. Then work in "the clearing" was the real, heavy work of each winter. The trees were cut down, a few of the best cuts were made into rails and such other useful articles as were needed on the farm, while the great work of rolling into heaps and burning tested the strength and endurance of the men.

Now, forestry is a matter of such importance that the Government has established a division of the Department of Agriculture to look after it. The great problem now is to preserve from unnecessary waste the remnant of the once great forest wealth of this country, and to so harvest the timber crop as to promote its reproduction. Another problem is that of establishing forests on treeless tracts, especially such as are of small value for other purposes. In these works the Division of Forestry cooperates with the owners of the lands, and in two instances—one in Nebraska, the other in Kansas—the title has been retained or acquired by the Government and systematic propagation undertaken.

The report of "Proceedings" above mentioned is a valuable book. It is published for the association by M. M. Suter Publishing Company, Washington, D. C.

FARM AND ORCHARD DISPLAYS AT THE FAIRS.

"Kansas being the foremost agricultural State no effort should be required to have the very best agricultural display at the State Fair, at Topeka," writes H. H. Kern, of Bonner Springs. Our hard winter red wheats are said to make flour equal to the best, but the Minnesota millers are said to be the better advertisers. We should, therefore, put forth a greater effort in the advertising line and furnish Kansas flour to all quarters of the globe.

In pure-bred corn, Iowa, Illinois, Indiana and Nebraska lead. We should make greater efforts in this direction and plant varieties which will give the very best results. We should select for exhibition the best specimens we have.

After the close of the fair or exposition, exhibits may be placed in the hands of the State Board of Agriculture or the Topeka Commercial Club and preserved for future expositions, or wherever it is deemed best to exhibit them. This applies to all articles of special merit. Nearly all States which make large exhibits save the best specimens from year to year, and after the close of the exhibitions, they are returned to the department from which they were taken.

In Kansas we have no place to keep these specimens, there being no room set apart for this purpose, and whenever we get a large collection we have to gather everything in one year. If it happens to be a bad year we feel the results. Some place should be provided for keeping them either through the Commercial Club or otherwise. Our Fair Association offers as large premiums as are offered in any adjoining State. We should all feel that we have something at stake and

(Continued on page 846.)



ALFALFA—SECOND CUTTING, FIRST YEAR.

KANSAS FARMER goes to press, August 16. Should the season continue favorable, a fourth crop and then some will be produced.

The land is a medium slope. It has been cultivated in corn longer than it ought. It raised a crop of millet last season. The soil was well prepared by plowing, disking, harrowing, etc., having been gone over nine times before seeding. Seed was sown at the rate of twenty pounds to the acre. The total yield of hay this season promises to be at least four tons to the acre or 100 tons from the 25 acres in the field.

CORN-GROWING CONTESTS.

Last winter at Manhattan was conducted the Kansas first annual Corn-Judging Contest and Corn Show. The second corn show will be held early in 1905, and plans have been made for a much larger show than last year. In order to encourage farmers to select their best corn to bring to Manhattan, valuable prizes of agricultural

corn this year every farmer who has a good yield of corn should make application to enter this contest before September 1, as all applications must be in by that date.

Further information regarding the rules governing this contest, list of prizes, etc., will be furnished upon application to the secretary of the Corn-Breeders' Association, Manhattan, Kans.

FORESTRY PROCEEDINGS.

The proceedings of the annual meeting of the American Forestry Congress make a volume of 474 pages. Beginning with an address by President Roosevelt on, "The Forest is the Life of a Nation," and closing with a note by Secretary Wilson on, "The American Forestry Association," the book is a compendium of the latest thought on what has become an important National problem.

Not a few persons still living remember when the forest, "the woods," constituted a great obstacle to the

Agriculture

Sowing Rye With Alfalfa.

EDITOR KANSAS FARMER:—I would like the opinion of the FARMER in regard to sowing rye with alfalfa in the fall for protection against the freezes. I prepared the ground for sowing early in the spring, but failing to get seed in time, decided to wait until fall. I have cultivated the field once during the summer and am now turning under quite a crop of weeds and grass. I would like to know when to seed, and whether the land should be turned again after this time. W. H. RALEY.

Boone County, Arkansas.

Your letter to the KANSAS FARMER has been referred to me for answer. I would not advise to seed alfalfa with rye. The land in question should make a suitable seed-bed for the fall seeding of alfalfa. I would advise not to plow again, but to cultivate at intervals of ten days or two weeks, by the use of the harrow, disk, or Acme, until about September 1 when the alfalfa should be seeded. The purpose of the cultivation is to conserve the soil moisture, keep the land free from weeds, and produce a firm-bottomed, finely-pulverized seed-bed.

There will be no advantage in seeding alfalfa with rye, even should you succeed in getting a catch of alfalfa by this method, since alfalfa seeded alone early in the fall will, if it starts well and makes a good stand, produce several crops of hay the succeeding year, while if planted with rye there is less chance of securing a good stand of alfalfa, and if a stand is secured the alfalfa will probably yield no hay crop the first season. The experiments carried on at this station indicate that as a rule it is much safer to seed alfalfa without a nurse crop. Seeded alone, on a well-prepared seed-bed you should succeed in getting a good stand of alfalfa.

A. M. TENEYCK.

"Alfilaria."

You will find enclosed a circular advertising "Alfilaria." Will you please publish an article in the KANSAS FARMER as to the merits or demerits of the plant. We know nothing of the plant here and are loathe to introduce it without some knowledge of its habits, fearing that it may prove to be a tenacious and obnoxious weed. Has it been grown successfully in Kansas?

JOHN C. BURNS.

Greenwood County.

The following is a copy of the circular:

"THE STOCKMAN'S FRIEND, 'ALFILARIA'."

"Do you want your pasture as green as a wheat-field during the months of February, March and April, furnishing your cattle and horses with a feed that outranks clover, alfalfa or any other known forage? If so, send one dollar to George L. Belcher, Globe, Arizona, and he will forward to your address a trial package of Alfilaria seed, or three 12-ounce packages for two dollars. Sow in September, October or November."

"I am what the stockman of Arizona depends on entirely from Christmas until the summer rains bring what people call 'six weeks grass.' If no summer rain comes I will carry your cattle on hay that needs no raking; simply maturing and laying on the ground. If I blow away, there will be a coating of seed left on the ground that will fatten your cattle for you. Yours truly, 'Alfilaria.'"

"References: First National Bank, Globe, Arizona."

"Mr. George L. Belcher:—In answer to your questions, I own the S. G. ranch on the Apache Indian Reservation, near Globe; have lived here 17 years; have six or seven hundred head of stock on same, all fat on Alfilaria. I depend on it entirely until the summer rains. If no rain falls, it keeps my stock until it appears again. I put up 20 or 30 tons of hay, and could have put up 200 or 300 tons. But what is the use? The cattle eat it off the ground until Christmas or later, and keep in good condition. The Alfilaria straw is

from two to four inches deep on all the flats around me. It was breast high to a saddle horse before it matured in June. I use no mower for what hay I put up—simply raked it with a steel rake. It would make about four tons per acre, which is better than alfalfa. I could have supplied Globe with hay for the next two years from this crop, but the Indian agent will not allow it to be hauled off the Reservation. Very truly yours, W. C. Hayes.

"Mr. George L. Belcher. Sir:—I have fifteen hundred head of steers on the Apache Indian Reservation and depend entirely on Alfilaria. My beef comes to the markets of Globe every month in the year. The hay is six inches deep on my range. I don't care whether you make any money sending out the seed, or not, but you will make money for some one. J. N. Porter, President First National Bank of Globe."

I have never before heard of "Alfilaria," and after consulting the latest bulletins of all of our Western State experiment stations I am unable to find any mention of such a forage plant. Doubtless this is some well-known plant which is being advertised under a new name; and whatever it is it may be a valuable pasture crop, but the advertiser should give the scientific name of the plant in order to disarm any suspicion of fraud. I have no doubt that seed of this plant, whatever it is, is being sold, and that the crop has some of the characteristics claimed for it.

From the description given in the circular the plant is likely to be the Burr clover (*Medicago maculata*). This plant has recently attracted much attention in California and some of the Rocky Mountain States, as a forage and pasture crop. As early as 1891, in the annual report of the United States Secretary of Agriculture, Burr clover is spoken of favorably; the statement is made that "This plant is well worth cultivating in all of the Gulf States, and is growing in favor with those who have tested its merits. It is essentially a winter grower, being at its best from February to May, after which it ripens its seed and soon disappears. Stock which are unaccustomed to its use do not always like it at first, but all soon learn to eat it, and many seem to prefer it to any other plant." Burr clover seed is already being sold quite widely under its proper name by several reliable seed firms. I have recently received a sample of seed from the Jessup-Wheelan Co., San Francisco, Cal., and intend to plant the same this fall and next spring in order to make a trial of the crop at this station. The seed is quite expensive, retailing at about 50 cents per pound. This is a little cheaper than the \$1 for a 12-ounce package, as advertised in the above-mentioned circular. I would not advise any farmer to purchase this seed at the price and under the conditions advertised. If the dealer has a valuable plant and wishes to introduce it, he should give its botanical name and should send it to the experiment stations for trial.

If "Alfilaria" is as valuable a forage crop as advertised, it will certainly be a desirable crop to grow, but we have gotten along without it up to this time, and we can do without the crop for a year or two until it is fully demonstrated that the crop is a valuable one to grow in this State. I have written to Mr. Geo. L. Belcher, Globe, Arizona, requesting that he send a sample of the seed to this station in order that we may make a trial of the crop.

A. M. TENEYCK.

Salt as Fertilizer.

Would you be kind enough to write me and telling me in what quantities salt to use as a fertilizer. I have rented a farm that has some poor ground on it—not poor but poorly farmed and run down. It has corn on it at the present time, and I am going to sow it to wheat. Corn ground, or wheat sown in corn stalks has given a very light crop in this part of Kansas for several years. It does not stool as it does in open ground, and sowing more seed to the acre seems to im-

prove it but little. I have read of salt being used as a fertilizer but do not know the amount used, nor how to use it. I shall first cultivate the ground thoroughly with a five-tooth cultivator, and expect to sow a bushel and a peck of selected seed per acre. As we have a salt mine in Lyons the salt will not cost a great deal.

Wheat in this county is thrashing out from five to twenty bushels per acre. Hail did a good deal of damage in this county. Quality of wheat is good, nearly all grades No. 2.

W. E. CASSINGHAM.

Rice County.

The discovery of salt in large quantities in Kansas in the 80's created much interest regarding the influence of salt as a fertilizer upon Kansas soils and crops. In order to satisfy the requests of farmers, E. M. Shelton, then professor of agriculture at this college, made some experiments in 1888 and 1889, in using salt as a fertilizer with wheat and oats. These experiments are reported in Bulletin 7. As a result of the trial of 1888 an increase of five bushels of wheat and 800 pounds of straw was reported for the salted plots. In the trial of 1889, "The plots treated with salt, as a whole, showed no increase of grain, and only a very slight gain in straw, over the unsalted." In 1889 the result of fertilizing oats with salt gave a gain in yield of three bushels of grain and 270 pounds of straw per acre. Three hundred pounds of salt were applied per acre, and in speaking of this Professor Shelton says: "I have reason to believe that 300 pounds per acre is nearly the largest amount that can be applied without danger from the destructive sterilizing of the mineral." "Certainly a dose applied at the rate of 450 pounds per acre has proved quite destructive to vegetation, in the case of certain small plots whereon it was tried." The experiments were not continued, but Professor Shelton's conclusion was that there was little or no profit in applying salt as a fertilizer to wheat or oats.

In some soils salt has an indirect fertilizing value, which is due to the fact that it has the power of changing unavailable forms of plant food into available forms; also, it is claimed that salt increases the power of the soil to absorb water. So far as experiments prove, salt furnishes no needed plant food. The sodium in the salt can not take the place of the potassium in the plant. Like lime and land plaster, salt may sometimes be applied with good results, especially to old land. The increase in crop, however, usually results from the first applications, and little or no benefit is derived from the continued application of salt. Really the effect of salt is to exhaust the plant food of the soil faster, but for a year or two a certain increase in crop often appears to result from the application of salt to old lands. It is not advisable to make very heavy applications, nor to continue them more than a year or two at a time, since the ultimate effect of applying large quantities of salt is the rapid exhaustion of the essential plant-food elements of the soil.

When it is necessary to apply chemical fertilizers the usual recommendation is to use those fertilizers which contain the plant-food elements, such as potash salts, phosphates, and nitrogen fertilizers. Probably a sufficient amount of common salt to supply the needs of plants growing in such soils is contained as impurities in the potash or phosphate salts which may be applied. In the experiments cited above, the salt was applied both in the fall and in the spring. In the fall salt was sown broadcast and harrowed in just before the time of seeding; the salt applied in the spring was sown broadcast on the growing wheat early in April.

Probably what your land needs more than anything else is thorough cultivation and rotation with legumes and grasses. After land has been farmed to wheat for a long period of years, the humus and nitrogen of the soil become largely exhausted, and the soil usually becomes compact in texture, resulting in a physical condition unfavorable to the growing of crops. If such land be cropped with cow-peas or

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soy-beans for a reason or two it will be benefited; or better, the land should be seeded to alfalfa and grasses. The land in question should be largely restored in fertility and tilth by growing alfalfa for three or four seasons; and seeding down to grasses for two or three seasons will largely restore the humus of the soil and improve its texture. Deep and thorough plowing and good cultivation of the soil will do much to develop the latent plant-food which it contains. Land which is cropped continually with wheat, and poorly farmed, becomes foul with weeds and the fertility is locked up in insoluble forms not available to plants. It usually takes two or three seasons of good tillage and weed-killing to bring such land back to a favorable condition of tilth and fertility.

There is no fertilizer which can be more profitably applied to the land in question than good barnyard manure, plowed under and followed with some cultivated crop, as corn, or Kafir-corn. Your method of following corn with wheat by drilling the wheat into the stalks without plowing is not to be recommended as a rule. Better follow corn with some spring grain crop, as oats or barley, if you can not use a legume or grass crop, plowing the land deeply late in the fall or early in the spring, then follow the spring grain or legume crop with wheat. If it seems necessary to seed wheat after corn, your method of cultivating thoroughly before seeding is to be recommended, and there would be no harm in giving a light application of salt to part of the land, and note results.

A. M. TENEYCK.

The Sowing of Speltz in the Fall.

I understand it is the custom in Potawatomi County, and other places in the northern part of the State, for farmers to sow speltz in the fall instead of the early spring, and that it not only does not winter-kill but the yield is greatly increased by so doing.

If you can give me any information on the subject I would appreciate it. Greenwood County. H. T. SCOTT.

It is not true that it is the custom to sow emmer (speltz), in the fall. Common emmer is a spring grain and will usually winter-kill when seeded in the fall. In the winter of 1903-04 we sowed several varieties in the fall, which entirely winter-killed—not a plant survived. Last fall we tried seeding again, with fair success, securing a good stand of emmer which made a fair yield of grain this season. By sowing this seed we will doubtless be able in time to develop a hardy winter variety, but I do not consider it advisable for farmers to seed spring emmer in the fall, except in small quantities in an experimental way.

M. A. Carleton, Cerealist U. S. Department of Agriculture, informs me that the Department has imported a winter variety of emmer, which has been distributed among a few of the experiment stations, including the Hays Branch Station, at Hays, in Ellis County, Kans. We have not grown the winter variety at Manhattan, and I do not think the seed has become distributed over the State, since it was only recently introduced.

This year emmer did not yield so well as barley or oats. I am informed that at the Hays Station the crop proved to be almost an entire failure; it would appear, therefore, that it is not yet advisable to seed emmer in too large area, since it is yet on trial and has not proved fully adapted to Kansas climatic and soil conditions. At this station barley has succeeded better than emmer as an average for three years' trial. The winter barleys appear to be especially hardy and productive; the spring barley is a surer crop than oats and perhaps a surer and more productive crop than emmer.

A. M. TENEYCK.

The Garden Web-Worm.

On July 22 I cut the third crop from a ten-acre alfalfa-field. The alfalfa was covered with a web-worm which made its appearance within the last few days—the entire field was affected. Will this worm injure the hay in any way or the stock that eat it? Are they

temporary or have they come to stay? I suppose this is the same worm that has been reported in different localities in the State as working on corn. Jefferson County. E. M. RECKARDS.

The question really belongs to the entomological department, and I have referred the same to Professor E. A. Popenoe, of that department. Will say, however, that in my judgment web-worms in the alfalfa hay will not injure the stock, although doubtless the quality and feeding value of the hay will be impaired.

A. M. TENEYCK.

Though I should have preferred to see specimens before hazarding a determination of the species, I have little doubt that the insect in question is the "garden web-worm" that has attracted attention earlier this season by its local attacks on a variety of field and garden plants. The present individuals no doubt represent the second brood of the season, and it is my opinion that they will do little real damage to the crop, though from the noticeable web that they spin as a protective structure they will seem more prominent than they are in fact.

It need not be feared that the plants attacked will be injured for hay any further than from the amount of foliage actually destroyed, as there can be nothing poisonous about the worm, or the remaining parts of the injured leaves. The attack will not last longer than two weeks in its greatest severity, as this is the length of the most aggressive life of the caterpillar, though early or late appearing individuals may operate to lengthen the general attack. The species need not be expected to be equally abundant every year, as its past history has shown it to be very irregular in its appearances, and we have been generally free from it.

E. A. POPENOE.

Hop Clover.

EDITOR KANSAS FARMER:—Mr. L. S. Clarke, of Wagoner, Indian Territory, in a letter dated July 11, sends two plants with request for their identification. He suspects that they belong to the clover family. One specimen was found growing in a bunch of white clover, and the other grows scattered over the pastures. Mr. Clarke wishes to know through the columns of the

KANSAS FARMER what these plants are, and whether they are noxious or otherwise. The specimen stated to have been found growing amongst the white clover is nothing more nor less than alfalfa, *Medicago sativa*. The other species is hop clover or black medic—*Medicago lupulina*. Both are members of the legume family, to which the clovers as well belong. Alfalfa is so generally well known that it is perhaps not necessary to speak at length regarding it. It is the only species of *Medicago* that is perennial. Its life is up to 20 years, or even, in some cases, much more. It forms a large, heavy, tap-root that penetrates the soil to remarkable depths. Its value as a hay plant is incalculable, and it has probably brought more money into Western acres than any one member of the vegetable world. The other specimen mentioned, though a very close relative, is not so valuable as alfalfa, chiefly through the fact that its life ends with the season. No annual forage plant, other things being equal, can compete in value with a perennial. A great deal of seed of *Medicago lupulina* has been distributed through the

How A. D. Blocher MADE \$750.00 IN TWO MONTHS WORKING FOR US



A. D. BLOCHER
Davison, Mich.

A. D. Blocher of Davison, Mich., is a farmer. He believes in turning his spare time into money. He read the advertisements of the Co-operative Society of the National Supply Co., and was convinced that the Society was a good thing for himself and his friends. He believed in co-operation, and he saw that here was a Society which offered something tangible, safe and profitable, in that line. He wrote us and later joined the Society, became an active, enthusiastic worker, solicited his neighbors to join, distributed several hundred of our catalogues among them, and induced a great many of them to become members. His compensation for distributing the catalogues; the membership fees on the persons he induced to join the Society, and commissions on the goods purchased by them paid him the handsome reward of \$754.20—all done in his

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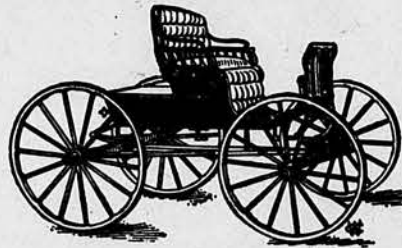
spare time, and every member thanked him for getting them to join the Society. What Mr. Blocher did you can do. Hundreds of others—men and women—have done nearly as well and are doing it today. Write us and we will explain it all. We will show you just how and why you can do as well or better. This is the opportunity of a lifetime and will only cost you the effort of writing us a postal card to learn all about it; and it will mean very little work on your part to make big money. Besides we will show you how you will profit by your membership in this Society every year as long as you live. Mr. Blocher made \$754.20 in two months, but that was not all the benefits he received—his membership made him a partner in a business that is saving him several hundred dollars every year. Write us a postal for full particulars. Do it now.

How You Can Save 10 to 20 Per Cent on Everything You Buy

To save 10 per cent to 20 per cent on the cost of your supplies, join the Co-operative Society of the National Supply Co. and buy everything you need to eat, wear or use on the farm or in the home, from the Society and you will save from \$10 to \$20 on every hundred dollars you spend for merchandise. The National Supply Co., of Lansing, Mich., and Chicago, Ill., is one of the largest mail order houses in the world—its prices published in plain figures in its large, free 1,000 page catalogue are as low and on many articles a great deal lower than any other mail order concern. Anybody can buy anything from them and save money by doing it. Members of the Co-operative Society get a special discount of 10 per cent from the list on everything they buy through the Society, which in the course of a year means a saving to members of many hundreds of dollars. The average farmer can save from \$100 to \$250 a year on his supplies—all on an investment of but \$10 for a fully paid up, non-assessable Life Membership in this

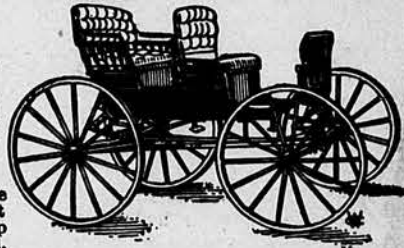
Society. Can you invest \$10.00 in any other way that will bring you even one-tenth the income that this will? Can you buy your supplies as cheaply any other way? Co-operation alone makes such a thing possible. You have everything to gain and nothing to lose by becoming a member. If you join the Co-operative Society of the National Supply Co., and your savings in discounts on purchases should not amount to \$10 during the year and you wish to withdraw, we will redeem your Membership Certificate by paying you back the difference between the amount of the discounts you have received and the \$10 membership fee, together with 6 per cent interest on the amount so paid back. Isn't this a fair offer, and doesn't it take away all risk from you? No other co-operative society ever made such a broad offer before. We invite you to join and we make it easy and absolutely safe for you to do so. Write today for particulars and full explanation of how this Society is able to make these extraordinary offers.

How We Can Sell this \$47.50 Jump-Seat Buggy for \$34.20 FREIGHT PAID



Furnished with Shafts, Car-pets, Storm Apron, Wrench, etc. Our regular price for this \$47.50 rig is \$38.00.

Price to Members is \$34.20



Here is a clear saving of \$3.30 to purchasers who are members of the Co-operative Society. This is but one item of many, but it shows what a membership in this Society is worth to you in dollars saved.

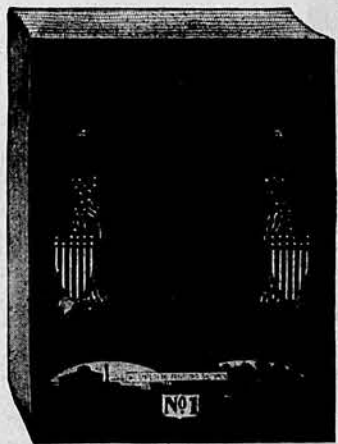
This National Jump-Seat Buggy is actually worth \$47.50 and you cannot duplicate it for less anywhere else. It is built for two or four passengers, made of good hickory, and is fully warranted in every particular—quickly changed from a single to a double seat without removing any parts. This is acknowledged to be the most convenient arrangement ever invented. It is very simple, making it possible to instantly change this rig from a two-seated buggy to a really desirable light market wagon—just what every farmer needs. Wheels are all hickory, Sarven or shell band, 1 1/4 inch steel tire. Gear—Axle, 1 inch, dust-proof, and cemented to hickory wood, rear king bolt, fifth wheel and double perch reach. Oil-tempered, elliptic springs, strong enough to carry four passengers. Body—white wood and hickory, strongly ironed throughout, and full length body loops 60 inches long and 28 inches wide. Cushions—green cloth, whipcord or imitation leather. Painting—body black with dark green gear, narrow stripe, high-grade finish. We are only able to make this remarkable offer by

taking the entire output of the factory, and saving all middlemen's profits—co-operation in this Society cuts out all needless expenses and profits between the factory and the member. Send us an order for a National Jump-Seat Buggy at once—\$38.00 is cheap for it. To make the bargain still better, send for an Application Blank, join the Society, and save \$3.30 extra—this extra saving will pay more than one-third the membership fee. Hundreds of members have joined the Society without it costing them a cent—the savings on their purchases paying the full fee and often leaving them a nice profit besides. We solicit you to join the Society now.

1,000 PAGE FREE CATALOGUE

We want every family in the United States to have one of our large, handsome 1,000-page catalogues. It is the greatest Buyers' Guide ever published. Is illustrated with thousands of beautiful cuts; every page is brimming full of genuine bargains not to be found anywhere else. We also want you to read the article in the catalogue on "Co-operation"—it's a treatise on the practical workings of genuine co-operation. It shows how this Society, composed of farmers all over the country, is fighting trusts and combines, and how its members are improving their conditions through the force of co-operation. The Society is willing to pay well to have the catalogue placed in the hands of men who will join the Society and help us to extend still further the influence of our co-operation. If you want to make good money in your spare time, or if you can devote your whole time to the work, write us for catalogue—we'll send it free—and we'll tell you how A. D. Blocher made \$754.20 in two months, and how you can do the same or better. Write today for the information, and begin the work at once.

CO-OPERATIVE SOCIETY OF THE NATIONAL SUPPLY CO.
LANSING, MICHIGAN CHICAGO, ILLINOIS



West in the last few years mixed with importations of medicago sativa (alfalfa) seed. In the case in hand it seems that both species have been scattered around in the neighborhood through accident, and it is probable that the hop clover seed came in mixed with some alfalfa seed, and that some of the lot became scattered where you found the plants growing.

H. F. ROBERTS.

Increase the Value of Your Crop Four Per Cent.

EDITOR KANSAS FARMER:—There are thousands of farmers in the United States who have in the last few years nearly doubled the work they used to do on their corn crop by harvesting the whole thing. Yet there are tens of thousands of other farmers who do not let that labor go to waste. Our State experiment stations tell us that the ears shrink in weight and value even when cut so late that the leaves are dry enough to blow away. They have demonstrated further that the ear increases in value if it is allowed to stand in the field at the mercy of the weather.

Let us suppose you have seventy-five acres of corn and are going to husk it in the field and your neighbor has fifty acres which he will cut. Here is the way it figures out. Suppose you both get thirty bushels per acre. Your seventy-five acres at 25 cents per bushel will bring you \$562.50, and 25 cents per acre for the stalk field, \$18.75, making a total of \$581.25. And the stock scatter the manure free of charge. His fifty acres of corn at 25 cents per bushel will bring him \$375, and his fifty acres of stover will bring him \$150 more, making \$525 in all, \$56.25 less from fifty acres than you get from seventy-five acres. But had he left his corn standing it would surely have yielded some more grain with less labor, and there are few farmers who would give \$2 per ton for long stover when they could get clover at \$5.

Shredding the fodder probably increases its value one-half and costs all it comes too, as a rule. The manure has to be hauled back, but the stalks are cut for next year, although the cutting was done just when most farmers would like to be putting in wheat.

These are not random figures; they are based on the statements and experience of some of the highest authorities in the country. For instance, a bushel of corn will yield about one hundred pounds of stover and these authorities place the value of long stover at less than one-half the value of clover hay. You might just as well have this extra profit by cutting your corn at the right time: when it is ripe. You cannot expect to get this stover profit if you leave it in the field and turn the cattle in, but hundreds of cattle go to the butcher from Kansas stalk fields.

Neither can you realize good results cutting it by hand. It is too slow and farm labor does not like to hug fodder. If you hire and use a corn binder, it takes four or five men and three or four horses to run it. Among the men will probably be one who likes to ride a spring seat, two who like to be early to meals, they will do to shock, and the last and best men will be needed to break their backs standing on their heads picking up the ears that the machine knocks off. If the corn is light one man may stand it.

If the four men are willing to walk and shock and talk to a horse apiece they may each hitch a horse to a sled that cuts and piles on a low platform the armfuls of fodder. Few ears are broken off and most of them fall on the platform. The knife is near the back part of the sled and has noses running forward much like those on the binders, so there is no danger of the horse or man getting against it; and it must be kept very sharp. I got both of mine second-hand; I suppose they would cost four or five dollars apiece new. We never break our stalks until we feed them, so we do not want any little bound bundles. We load the shocks with a team onto a low wagon and set them up again in a lot, if we do not want to feed them as we bring them in. We feed in a small lot with enough stalks or straw in it to keep it dry.

When the fodder is gone we grain our hogs in that lot; they work the litter over until it is fit to handle with a fork. The cost of cutting and shocking is about the same as husking standing corn. A man can go one-fourth of a mile and get five shocks on a low wagon with a team and tip them off, standing them up in the lot as straight as they were in the field if he is handy, and can do the work in an hour. It will take twice as long to husk out of the shock as it will out of standing corn. I am confident that there is less moisture in the ground of a fodder field than in a stalk field; it catches less snow and more wind and sunshine. We can sow oats earlier on the fodder field. Stover is much like what the Dutchman fed his fat horse. When asked about it he said he fed the horse just oats-straw and it was not very well thrashed at that. C. A. B. Brown County.

Horticulture

Sugar Beets.

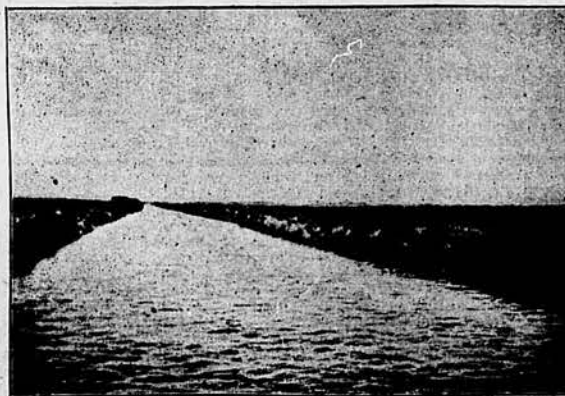
The growing of sugar beets for the manufacture of beet sugar promises to become an important industry in the irrigated section of Southern Idaho. In the summer of 1903 a large plant, costing \$1,000,000, was erected at Idaho Falls, in Burgham County, for the manufacture of beet sugar. This year three more plants are in course of construction and will be prepared to take the beet crop for 1904. One of these sugar factories is located at Sugar City, midway between St. Anthony and Rexburg on the St. Anthony branch of the Oregon Short Line Railroad, and will cost \$750,000. One other plant is in course of construction at Black-



"BEFORE TAKING" IRRIGATION—NOTHING BUT SAGE BRUSH.

foot, in Bingham County, that will cost \$500,000. An auxiliary plant to the Sugar City factory is being erected at Parker, in Fremont County, about six miles back from St. Anthony. Great activity is being shown in other sections of the State over prospective plants. At Caldwell, in Canyon County, efforts are being made to secure the necessary acreage for cultivation of sugar beets to insure a factory at that point, and it is believed the effort will be successful.

Last season the factory at Idaho Falls bought the beets that were grown on about 5,000 acres of land, paying the farmers \$4.50 per ton for them. The yield of beets in many instances reached twenty tons to the acre, but ten to fifteen tons was more common. In all cases where the farm-



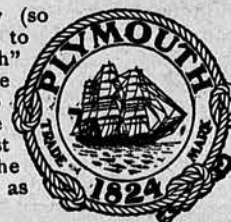
TETON CANAL, ST. ANTHONY, EIGHTY FEET WIDE.

The Rope that Lasts

There are no foreign substances to deceive the farmer's eye in the world-famous "Plymouth" brand of rope. "Plymouth" is made on honor and has been sold on honor for over 80 years.

It is "the rope that lasts"—the rope that gives a farmer full face value for his money. It is the rope of quality from start to finish.

French clay (so largely used to give weight to rope) has no part in "Plymouth" rope—neither has inferior fibre—no mixture enters into "Plymouth" at any stage of the making. The world's largest cordage factory guarantees the "Plymouth" brand exactly as represented—the best.



Sold by best dealers. If not by yours, write to the company.

"Plymouth" Brand

PLYMOUTH CORDAGE COMPANY, North Plymouth, Mass.

er understood how to undertake the cultivation of the beets and pursued the proper cultivation, the results were profitable and satisfactory. The soil and climatic conditions of Idaho seem to favor the growth of beets, and the industry promises to develop into large proportions and to become very important and profitable.—Selected.

Corrects Some Mistakes.

EDITOR KANSAS FARMER:—In publishing in your issue of July 27 my paper on "Berry Growing," as read before the Shawnee County Horticultural Society two mistakes have been made in the eighth paragraph: "Burning." "Common sense teaches us that it is wrong to 'mow and burn,' it should not be done, as it destroys all material that should go to make runners in the soil." Now, right here the word "humus" should appear in place of the word "runners;" and in the next line,

Grange Department

Grange Notes.

Oak Grange has taken hold of the subject of the Parcel Post in a way to prove its earnest determination to secure results. Every subordinate grange in the State is requested to make this a subject of special attention, working unitedly and harmoniously together, each grange preparing fully signed petitions with which to bombard our Congressmen must surely result in the securing of the benefits to the rural community of the Parcel Post. Sister granges, do not turn this down. Use your splendid energies to secure this needed legislation.



"AFTER TAKING" IRRIGATION—ALL THE COMFORTS OF HOME, FRUIT, FLOWERS, SHADE.

which reads "So practically all the berries we the ashes of vines, or of mulching, if there be any, would not the winds blow it away?" the words "nitrates in" should appear in place of the words "berries we."

I hardly think that these mistakes appear in the paper as read before the Horticultural Society, but they may be there. I am not mistake-proof. I make them every day. Just yesterday I made the mistake of going on top the kitchen roof on ladders to paint the gable end of my house and fell and split the paint all over myself and the kitchen roof. No bones were broken but I lost paint enough to pay for the KANSAS FARMER for two years. Shawnee County. J. M. KENNEDY.

The following is cheerfully given a place in the grange column. May it be a beacon light to all pomona granges as showing the worth of a definite program laid out by the up-to-date lecturer for the workers under his leadership.

SCRANTON, KANS., July 22, 1905.

Minutes of Osage County Pomona Grange:

The grange met in K. of P. Hall and opened in form in the fourth degree with Worthy Master Albert Radcliffe in the chair. The minutes of the meeting of April 8 were read and approved. The following officers were appointed to fill temporary vacancies: Overseer, J. S. Plackett; Steward, A. P. Stenger; Gatekeeper, J. L. Kingsland; Lady



\$1,000,000 SUGAR-BEET FACTORY NEAR ST. ANTHONY, IDAHO.

Assistant Steward, Sister Hanson.

The roll of officers and delegates was called, and upon motion it was voted to allow granges to substitute any members present for absent delegates.

Delegates were substituted as follows: Antioch Grange, Mrs. Grace Hanson; Burlington Grange, O. L. Tabor and wife; Highland Grange, Thos. Rody and Miss Arley Nicholay; Pleasant Valley Grange, Ralph Montgomery and Wayne Montgomery; Hurricane Grange, Slater Beard and Sister Coffman; Carbondale Grange, Brother Widau; Richview Grange, Joseph Allison, Sister Allison, and Sister Barnard; Junction and Summit Granges not represented.

Reports of committees were called for. Brother Joseph Allison reported that the committee to purchase binding twine had not done much business. Discussion brought out the fact that the subordinate granges had sent in local orders for twine instead of ordering through the purchasing committee of the pomona grange.

The Master reported for the telephone committee, that, owing to differences of opinion among the farmer lines, it had not been deemed expedient to try to form a country organization of rural telephone lines at this time. The report of the committee was accepted and the committee continued.

Upon motion it was voted that a committee of three be appointed to confer with the officers of the Osage County Fair Association regarding the conduct of the county fair. The Master appointed Brothers C. H. Wile, A. Oveson, and H. N. Hills as committee.

Upon motion, it was voted that the arrangements for the fair exhibits be left to the committee.

Upon motion it was voted that the pomona grange pay a premium of ten dollars to the subordinate grange making the best display at the county fair and a premium of five dollars to the grange making second best display.

Upon motion it was voted that the grange display include horticultural products.

Upon motion it was voted to employ a member of the pomona grange to be custodian of the grange display at the fair.

Upon motion it was voted to send the Worthy Master, Albert Radcliffe, as a delegate to the annual meeting of the Grange Insurance Company.

A resolution offered by Brother Joseph Allison condemning the effort made at the last session of the Kansas State Grange to raise the age of admission to the subordinate grange from fourteen to eighteen years, and the initiation fee from one dollar to three dollars, was adopted by a unanimous vote.

Moved, That the pomona grange pay the custodian of the grange display at the county fair two dollars per day. An amendment was offered, including necessary expenses. Motion carried as amended.

At this point the grange was turned over to the lecturer. The lecturer gave a reading followed by a declamation by Brother Ulrich, who responded to an encore. Mrs. Blackwell gave a song, followed by a song by Brother Ulrich. The grange then sang No. 129, "No Time Like the Present."

Brother James Hilkey gave a temperance oration, and responded to an encore with a recitation. This closed the lecturer's program, and the patrons indulged in a spirited discussion on the policy of buying from mail order houses. This discussion brought out quite a diversity of opinion. Some of the patrons thought that where a considerable saving could be made by ordering from the mail order houses, it was the proper thing to do, while others thought that the retailer was not getting much more of the good things of this world than the farmer, and that he was entitled to our trade.

It was voted to send a delegate to the State Good Roads Convention, the delegate to be appointed by the Master.

Places for the next meeting were called for. Lyndon was named, and upon vote was selected as the place of the next meeting. It was voted to hold this meeting on the third Saturday in October.

The Master announced that he had appointed Brother O. L. Tabor as delegate to the Good Roads Convention, and Brother Ralph Montgomery as custodian of the fair exhibit.

It was voted to confer the fifth degree during the afternoon session of the next meeting of the pomona grange.

The minutes of the meeting were read and approved.

It was moved by Brother W. T. Dickson that the Secretary send a copy of the minutes to the KANSAS FARMER for publication; motion carried.

The grange then closed in form.
H. N. HILLS, Secretary.

When Will Oil Burners Be Ready?

EDITOR KANSAS FARMER:—I have been interested in all that has been said through the FARMER on the subject of "Oil for Fuel." I, like many others, would like to heat my home with oil instead of coal if it can be done at the same expense or less. I use furnace and fireplace, and would like to prepare now for the coming winter by installing a plant if there is one on the market that is a success. I would like to be in communication with parties who are ready to supply this demand. I am sure there is a host of people in and out of Kansas who are watching and waiting anxiously, just as I am.
A. L. EVERS.

Dickinson County.
To take care of the business offered for the coming fall, manufacturers will have to move rapidly. They should be ready to print their announcements by September 1 at farthest.

Protect Your Hogs.

EDITOR KANSAS FARMER:—Farmers, do you remember my articles on rational hog raising, causes, systems and care of hog-cholera?

If not, better read the book, "No Hog Cholera Any more." For 25 cents you get information of the disease, prescriptions for remedies which any farmer can prepare at little cost and practical instructions for raising, feeding and care of hogs.

The present season of the year is when the general foundation for hog cholera is laid. Green corn is on hand and ready to feed to hogs and soon the newspapers will be reporting outbreaks of hog cholera. And how can the farmer prevent the disease and avoid heavy losses? Make your hogs cholera proof and insured against the disease. If you are a close observer you will notice when and wherever there is a big corn crop there is a greater prevalence of hog cholera.

And Kansas will have a bigger corn crop than ever this year. How much money will you make if you can turn your crop into money at the rate of 50 cents a bushel? And how much money will you lose if your hogs lay down and die and you sell the crop for 25 cents or less per bushel? Quite a difference, my friends. The hog is the best machine to convert a big corn crop into money and to run the machine successfully with big profits. The farmer must be an expert in hog raising. Let my book be your guide. The book "No Hog Cholera Any More" is sent prepaid on the receipt of 25 cents with the understanding that the money is refunded if you are not satisfied after you have read it. Albert Theyson, author, Wilsey, Kans. Address all orders to KANSAS FARMER COMPANY, Topeka, Kans.

The report comes from Shelbyville, Indiana, of the organization of the Shelbyville Sweet-o Co., with a capital of \$12,000—for the manufacture of a substitute for sugar. This substitute is said to be in the form of a small tablet, about one-half the size of a lead-pencil, and is said to be 12 to 15 times as sweet as sugar.

City Niece—"What kind of a chicken is that, Uncle Josh?"
Uncle Josh—"That is a Leghorn."
City Niece—"How stupid of me! Of course I ought to have noticed the horns on his legs."—Chicago News.



Amatite ROOFING

Send to-day for free sample

The best Ready Roofing for all purposes. Cheap, durable and sightly. Easy to lay, and wears longer than any other. The defects in others have been avoided—their good qualities improved.

To all who write at once we will send a free sample and booklet posting you on the roofing problem.

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THE "PERFECTION" Cleaner, Separator and Grader of Seeds and Grain

You Can Sow **20%** Less of Seed



And Can Reap **20%** More of Grain

The "PERFECTION" is not an ordinary machine; but is more of an improvement over the ordinary Fanning Mill than the Cream Separator is over the old time Skimmer. The prosperous farmer plants only the best of seed or grain. Why not belong to that class and plant only the first grade of seed, saving the foul, undeveloped and cracked grains to feed your hogs and chickens? The "Perfection" is the only machine that will absolutely leave wheat free from all rye, cheat, oats, etc., clover, alfalfa and millet free from all buckhorn and plantain, and the only machine on the market that will make THREE GRADES of the cleaned grain. We guarantee every machine to clean, separate and grade any and all kind of seed and grain with the greatest accuracy and if a "Perfection" which you purchase from us will not clean, separate and grade seed more to perfection than you could even suppose possible and your entire satisfaction it can be returned to us without one penny of cost to you. Every machine is made from the very best of material and we therefore can sell them on time if time is desired; because we know that they will stand every test. Drop us a line stating what kind of grain you raise and we shall be glad to send sample of same kind of grain, showing THE WAY A "PERFECTION" DOES ITS WORK. Also to quote prices and to furnish other valuable information regarding the "Perfection." Don't miss the opportunity of making 20 per cent more out of your crop, but write us at once. It has paid others many times over. It will pay you.

THE LEWIS-TUTTLE MFG. CO., Topeka, Kans

The EAGLE KAFFIR CORN HEADER



THE ONLY MACHINE MADE THAT WILL SUCCESSFULLY HEAD AND ELEVATE KAFFIR CORN

Write for Prices and Agency and Mention The Kansas Farmer

EAGLE MFG. CO., Kansas City, Mo., and Dallas, Texas.

WHY BUY A CORN-BINDER

FULLY PROTECTED BY PATENTS

When You Can Purchase a Sled-Cutter for One-tenth the Price.



Runs easy, and cuts and gathers corn, cane, Kaffir corn, or anything which is planted in rows

Ask your Implement Dealer for it or send \$12.00 to

Green Corn Cutter Co.

TOPEKA, KANS.

The Stock Interest

THOROUGHbred STOCK SALES

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

September 1, 1905—Poland-Chinas at Bennington, Kans., C. N. White.
 September 7, 1905—Aberdeen-Angus Cattle, E. J. Hewett, Eldorado, Kans.
 Sept. 12, 1905—Shorthorns at Kansas City, T. J. Wornall, Liberty, Mo.
 October 3, 1905—S. J. Marcum, Council Grove, Kans., Poland-Chinas.
 October 5, 1905—W. H. Lawler and N. N. Ruff, Marshall, Mo., Shorthorns, Red Polls and Polled Durhams.
 October 9, 1905—Poland-Chinas, E. E. Axline, Oak Grove, Mo.
 October 11, 1905—American Hereford Cattle Breeders' Association sales at American Royal, O. E. Thomas, Manager, Kansas City, Mo.
 Oct. 12, 1905—American Galloway Breeders' Association sale, Kansas City, Mo.
 October 13, 1905—American Aberdeen-Angus Breeders' Association, Aberdeen-Angus, Kansas City, Mo., W. C. McGavock, Manager.
 October 13, 1905—Herman Arndt, Alta Vista, Kans.; sale at Manhattan, Kans.
 October 18, 1905—Fancy Poland-Chinas at Osborne, Kansas, by F. A. Dawley, Waldo, Kans.
 October 18, 1905—Poland-Chinas, W. B. Van Horn, Overbrook, Kans.
 October 19, 1905—Poland-Chinas and Duroc-Jerseys at Coffeyville, Kans. H. E. Bacheider, manager, Fredonia, Kans.
 October 19, 1905—Chris Huber, Eldorado, Kans.
 October 19, 1905—Poland-Chinas, M. S. Babcock, Nortonville, Kans.
 October 20, 1905—Shorthorns and Herefords at Coffeyville, Kans. H. E. Bacheider, manager, Fredonia, Kans.
 Oct. 24, 1905—Jno. W. Jones & Son, Delphos, Duroc-Jerseys.
 October 26, 1905—Herman Arndt, Alta Vista, Kans.
 October 31, 1905—Polled Durhams and Red Polls for W. H. Lawless and N. N. Ruff, Marshall, Mo.
 November 9, 1905—Will H. Rhodes, Phillipsburg, Kans., Hereford cattle.
 November 9 and 10, 1905—Poland-Chinas, Duroc-Jerseys, Shorthorns and Herefords at Fredonia, Kans. H. E. Bacheider, manager, Fredonia, Kans.
 November 11, 1905—Shorthorns and Herefords at Blackwell, Okla. J. P. Cornelius, manager, Braham, Okla.
 Nov. 14, 1905—S. H. Lenhart, Hope, Kansas Poland-Chinas.
 Nov. 16, 1905—S. H. Lenhart, Dispersion Sale of Shorthorns.
 Nov. 16-18, 1905—Registered stock at Arkansas City, Kansas by the Improved Stock Breeders' Association of the Wheat Belt. Chas. M. Johnson, Sec'y, Caldwell, Kans.
 December 5, 1905—Nathan Brooks and others, Burden, Kans., Shorthorn cattle.
 December 6, 1905—Marshall Bros., and J. F. Stodder, Burden, Kans., Duroc-Jerseys.
 December 7, 1905—Marshall Bros., and Harry E. Lunt, Burden, Kans., Poland-Chinas.
 December 7, 1905—American Aberdeen-Angus Breeders' Association, Aberdeen-Angus, Chicago, Ill., W. C. McGavock, Manager.
 December 7 and 8, 1905—Poland-Chinas, Duroc-Jerseys, Shorthorns and Herefords at Wichita, Kans. H. E. Bacheider, manager, Fredonia, Kans.
 Dec. 8, 1905—American Galloway Breeders' Association sale, Chicago, Ill.
 Dec. 12 and 13, 1905—Imported and American Herefords, Armour-Funkhouser sale at Kansas City, Mo. J. H. Goodwin, Manager.
 December 21, 1905—Poland-Chinas, A. P. Wright, Valley Center, Kans.
 February 15-17, 1906—Third Annual Sale of the Improved Stock Breeders' Association of the Wheat Belt at Caldwell, Kans. Chas. M. Johnson, Sec'y.
 February 21-23, 1906—Percherons, Shorthorns, Herefords and Poland-Chinas at Wichita, Kans. J. C. Robison, Manager, Towanda, Kans.

The Origin of Speed in Horses.

BY CASPER L. REDFIELD.

Every breeder knows that the qualities of the sire and the dam are transmitted more or less perfectly to the foal, and that this transmission takes place according to certain mysterious principles called "the laws of heredity." It will be evident that if we can clear up some of this mystery by explaining the exact nature of these principles, the breeder will be able to bring these laws under his control and produce at will such results as he pleases. We will endeavor to do this by the examination of such evidence as every horseman is familiar with and the facts of which he may readily verify.

Heredity is properly treated under two heads: First, Structural Heredity, which relates to inert qualities, such as size, form and color; and second, Dynamic Heredity, which relates to active qualities, such as force, endurance, intellectual power in man and speed in horses.

The present discussion will be confined strictly to the second branch of heredity, and particularly to the conditions under which speed is developed from generation to generation. With these conditions known to the

breeder he can cause them to exist when and where he pleases, and thus greatly increase the certainty with which he obtains the desired results.

In tracing the operation of dynamic heredity in the human family it was found that men of great intellects were nearly all sons of very old men. Thus Aristotle, Augustus, Bacon, Cuvier, Benjamin Franklin, Samuel Johnson, Leibnitz, Pitt and Seneca, all men of very great intellectual ability, were sons of men over 50 years of age. In tracing the matter further it was found that great men are invariably the product of a series of slowly moving generations, that is, they were born an unusually long time after their grandfathers and great-grandfathers. Lord Effingham was born 93 years after his grandfather; Handel, 104 years; Franklin, 108 years, and Fox, the statesman, 122 years. Occasionally this long time is not divided equally and we have an eminent man who is son of a comparatively young man, but never of a very young man. Thus Lincoln was the son of a man of 31, but he had back of him, in both his father's family and his mother's family, long spans of years, and these two breeding together produced Abraham Lincoln. The same thing is true of Alexander, Mohammed, Asa Gray and many others.

If we take any of the early New England settlers who had several sons and a large number of grandsons, and examine the records to see what grandson became the most prominent, we find, with great regularity, that it was the last one, or nearly the last one born. If, however, one of the sons, to the exclusion of the other sons, had a college education, then the sons of this college man are among the prominent grandsons irrespective of the order of their births.

The obvious inference to be drawn from this last fact is that the mental development acquired by a college education was transmitted to the sons. It will be readily understood that this might be, but why should the same results come to the sons of old men who did not have a college education? A little consideration will show that it is simply a different phase of the same thing. In the ordinary affairs of life a man's brain becomes developed without the aid of a college education, so that at the age of 45 or 50 the man of fair natural ability is the mental superior of the young man who is just out of college. Both are cases of mental development, the only difference being that one is comparatively rapid development and the other comparatively slow development. It does not require any lengthy argument to show that if acquired mental development is transmitted to children this development must occur before the children are conceived, and not afterwards. It is quite certain that a child already in existence will not inherit any mental development that the father may acquire at a later date. Hence, it is that children born to old parents average better than children born to young parents.

One of the laws of heredity, first laid down by Darwin, is that whatever is developed before the age of puberty is transmitted alike to children of both sexes; whatever is not developed until after puberty is transmitted only to children of the same sex as the one in which the development first occurred. This may be illustrated by the beard in man, which is not developed until after puberty

and is transmitted only to the male sex. A man may inherit from his mother the kind of beard his father had though she had none herself. The good milking qualities of a cow are transmitted through her son to his daughter. This law of transmission by sex is found to hold true in dynamic heredity. While an eminent man cannot be the son of a very young father he may be the son of a very young mother without detriment. Burns, Chatterton, Goethe and Schiller all had mothers less than 20 and fathers over 36, and part if not all of these mothers were daughters of old men. The mother of Washington was the daughter of a very old man.

Dynamic heredity differs from structural heredity in that characters developed after puberty are transmitted indirectly to the opposite sex. A parent who acquires a large amount of power, mental or physical, before reproduction produces a son who develops power rapidly. Part of this extra development due to heredity occurs before puberty and that which thus develops before puberty is transmitted to the daughters of this son. The evidence for this kind of transference from one sex to the other is not so complete as for other matters, still there is a good deal of this indirect kind and the theory that there is such transference is based on reason.

These facts in relationship to dynamic heredity in man are based upon an investigation of the ancestries of nearly 1,000 of the most eminent men in the world's history; upon an examination of genealogies of American families having records of nearly 100,000 individuals; upon the operation of primogeniture in the British nobility; upon a comparison of the different races of men; and upon various minor and collateral investigations.

Age in Relation to Development.

It is now the intention to examine horses for the purpose of determining whether the same laws govern the production of speed, and, if so, to what extent. At the outset it is proper to remember that the thing looked for is the amount to which sires and dams for several generations have exercised their trotting muscles prior to the time they got their foals. As there are no records telling us what this amount is it becomes necessary to resolve the amount of trotting done by horses into its factors and then study these factors.

The amount which a horse has trotted, and consequently the extent to which his muscles have been developed and hardened, will depend upon the amount of trotting he does per day and the length of time he has lived. Other things being equal, an old horse will have trotted more than a young horse, and a horse highly trained or used continually as a roadster will have trotted more miles than one not trained or driven to only a limited extent. One of the factors to be looked for is, therefore, the ages of sires and dams at the time their foals were dropped, and the other factor is the trotting records that they have obtained as given in the Trotting Register. The records for both of these factors are reasonably complete, and from them we can obtain a fairly accurate idea of the amount to which the ancestors of different horses have become developed before their foals were produced.

Some horses have been trained severely, but only for a short time at an early age or a late age, others have been driven moderately for many years, while still others have not had their trotting capabilities developed in the least. It is therefore evident that we cannot tell how much a horse has trotted by a mere statement of his age though, when there is nothing known to the contrary, we may fairly assume that a very young horse has not trotted much and that an old horse has trotted a good deal. The fact that a horse has trotted a mile in 2:30 or better may be taken as good evidence that his trotting qualities have been developed by regular training, but the fact that a horse is without a record cannot be taken as conclusive evidence that he is wholly undeveloped. A horse may have been moderately

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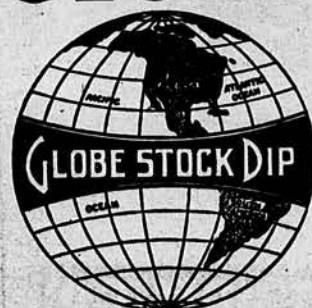
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trained, but not raced, or he may have been used for a long time as a roadster without any thought of racing him. In either case he would acquire endurance by a gradual process and, as we shall see later, endurance in one generation is the parent of speed in the next.

From the foregoing it will be evident that the mere fact that the sire of a fast horse was old or young, had a record or had no record, is not of itself evidence of anything, as any one of these things may be true and yet not be contradictory of the law that great speed in one generation is the offspring of great development in previous generations. To read this riddle it is therefore necessary to have recourse to the study and analysis of averages. If, in examining the pedigree of fast horses, we find that the sires and dams for several generations back have averaged unusually young, then we may know that there is nothing in the theory that acquired development is transmitted because we know that in many cases development is attained only through the lapse of much time, and this fact must have some influence if the theory is to hold. If, on the other hand, we find that the sires and dams of fast horses average much older than the sires and dams of horses less fast, then we may be sure that the age added to the sire and dam is a benefit to the foal. If we also find that where age is absent extra training is present, and where training is absent extra age is present, then we may be sure that both age and training in the parent are of advantage to the offspring and that one is, in a measure, a substitute for the other.

Birthrank and What it Means.

With the foregoing as a preliminary explanation we will proceed with our investigation, which will begin with an examination of the pedigree of all of the horses in the world which have trotted a mile in 2:10 or less.

There were 134 of these at the end of 1901, but the pedigrees are lacking in two cases, so that the examination is for 132 horses. These consist of 49 stallions, 49 mares and 34 geldings. These are the fastest horses in the world and the conditions upon which speed is produced should appear in their pedigrees.

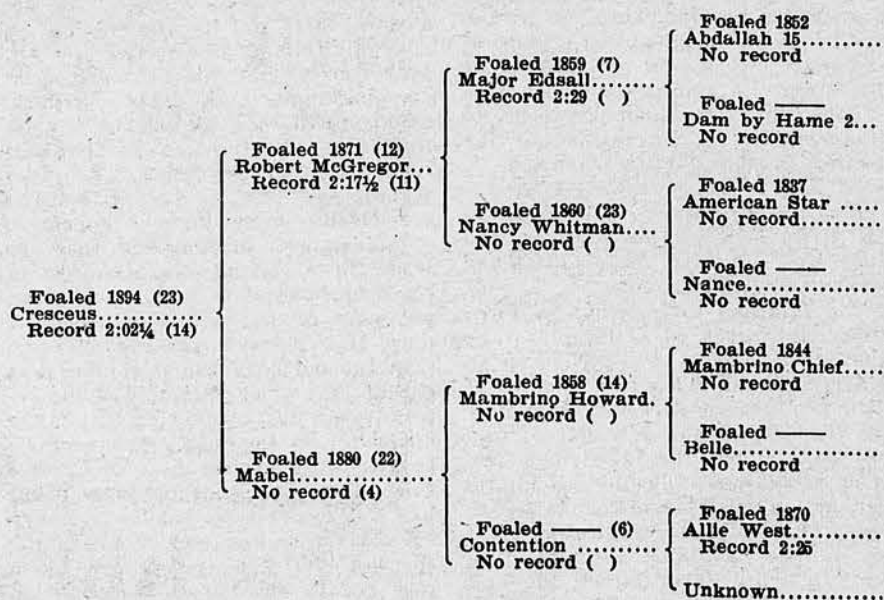
A diagram like that shown for Cresceus was made for each one of the 132 horses, except that in the majority of cases it was carried much farther. In some cases some branches of the

same term may be retained here. When attached to the name of an individual they indicate his inheritance from his parents. When but one figure is attached to a name, and there is nothing to indicate the contrary it means the age of the sire. When it is desired to indicate both birthranks it may be written either Cresceus (23) (14) or, Cresceus (²³₁₄).

It will be noticed in the diagram that the date of the foaling of Contention is not given, and hence that her birthrank and the maternal birthrank of her daughter are not known. As there are only ten years between Allie West and Mabel, we may estimate these birthranks and know that the possible error is small. The reason for doing this is that we know that there are small birthranks at this point in the pedigree of Cresceus and that if we neglected to record them our averages would not represent the true condition of things. The date that the dam of Major Edsall was foaled is also unknown, and although it is known that her sire was foaled in 1823, no attempt is made to estimate the maternal birthrank of Major Edsall, because there is room for an error of as much as ten years and an error of this amount would seriously affect averages. In all probability this birthrank is not far from (15), and hence its omission has a tendency to diminish rather than increase averages. Where the length of time between grandparent and grandchild is excessive, estimates have been made. Thus, in one case a period of forty-five years is divided into (25) for sire and (20) for dam on the theory that the possible error is less than the error that would occur from omitting these figures.

From the diagram we may find that the average age of the seven sires given in the pedigree of Cresceus is 15.3 years, and that three of these sires had records better than 2:30. The sire of Cresceus was 23 years old, as was one of his great-grandfathers. Besides this, one of his grandsires was 22. These are extreme ages and very few horses have three ancestors of such ages so near to him. The trotting records given were taken from Wallace's Year Book, and as only about one in fourteen of the standard stallions there recorded has a record, it will be seen that the progenitors of the fastest horse in the world were more than ordinarily trained. It will also be seen these extreme ages and these records belong only to the sires, a fact that

PEDIGREE OF CRESCUS.



pedigree were extended for more than a century of time. The immediate discussion, however, will be confined to seven sires and seven dams in the pedigree of each horse. As these are not all known certain blanks occur in the pedigrees of nearly all horses. The figures in parenthesis () represent ages of sires and dams. Thus the (23) and (14) adjacent to Cresceus indicates that his sire and his dam were respectively 23 and 14 years old when he was foaled. Likewise the (12) and (11) for Robert McGregor indicate the ages of Major Edsall and Nancy Whitman when Robert McGregor was foaled. In examining the ancestries of men these figures have been called "birthranks" and for convenience the

is corroborative of the theory that acquired speed is transmitted by sex.

In the case of Directum, the second fastest stallion in the world, the average age of the five known sires is 14.8 years, and two of these had records. No dams had records. In this case the sires are very uniform in age, the youngest being 12 and the oldest being 17.

Gossip About Stock.

R. F. Norton, owner of Orchard Hill Herd of Duroc-Jersey swine at Clay Center, Kansas, took a bunch of hogs over to the Riley County fair last week and captured every blue ribbon in the Duroc Jersey rings. More than this, his herd boar, Kanho Chief, won first over an American Royal prize-winning boar. All these blue ribbons were won in close competition, and Mr. Norton has a right to

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feel a little "chesty" over the results. His entire herd is in the finest condition and those youngsters now ready to sell were mostly sired by his great herd boar, Norton's Wonder 24836, and all are from mature sows. There is good money for some one in this bunch of Durocs. Order early and the choice.

Herewith is shown a picture of one of Dr. O. L. Kerr's prize-winning O. I. C. swine. Those who were present at the Louisiana Purchase Exposition will remember that Dr. Kerr won practically all the World's Fair prizes that were worth having in the O. I. C. rings. Dr. Kerr lives at Independence, Mo., just a nice little ride on the trolley cars from Kansas City, and he has a fine lot of young hogs of this World's Fair blood for sale. His advertising card is on page 840.

with abundant rainfall and that the alfalfa is about ready to cut for the third time. This will be the third heavy crop of alfalfa this season. All crops are good, but corn and alfalfa especially so. The apple crop is good and some peaches were raised. The pasture was never better. Mr. Morrison has just shipped a handsome Red Polled bull to Henry Ficken, of Bison, Kans., who visited the Phillips County herd and made his own selection. After an inspection he announced himself very much pleased with the entire herd, which proves that it is no trouble to sell good cattle, especially good Red Polleds, if you can get the buyer to look at them. There are still thirteen bull calves under one year for sale that were sired by Actor 771. In addition to the large herd of Red Polled cattle which are all in fine condition, Mr. Morrison has



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A. G. Dorr, of the Osage Valley herd, Osage City, Kans., places before the reader his ad of his great herd of Duroc-Jerseys. Mr. Dorr is a breeder of fourteen years experience, and has built up one of the good herds in Kansas. He has left nothing undone and buys the best both in breeding and individuality. He has at the head of his herd Orion McBrilliant Jack, and Teddy Chief. These sires come from such blood as Orion Brilliant, Ohio Chief and Top Notcher, the best prize-winning blood known to this breed. His herd now numbers 150 head of early spring boars with long body, broad backs, growthy, heavy, with good strong, straight feet, fancy heads and ears and from matured sires and dams. He guarantees everything as represented and sells at fair prices that are within the reach of all.

Mr. Chas. Morrison, owner of the Phillips County herd of Red Polled cattle and Poland-China swine, writes that Phillips and adjacent counties have been blessed

a choice lot of Poland-Chinas of the heavy-boned, lengthy type so much valued by western farmers. A nice bunch of February and March pigs are now ready for shipment and the buyer who gets there first will get them as Mr. Morrison has never succeeded in raising enough to go around.

M. Waltmire, & Son, Carbondale, Kans., reports they have some Shorthorns for sale bred to the Scotch Missle bull, Lord Uhlir. In recent years they have sired two bulls sired by Imported Thistletop, one by Lord Mayor, and one by Sir Knight. They have also bred some of their dairy Shorthorns to the Flat Creek young Mary bull, Mary Hamilton Duke, No. 167676. No better blood can be found in Kansas than that of these sires. Thistletop is a Harris bull that once belonged to the Kansas State Agricultural College, and Lord Mayor is the bull that made the herd of T. P. Babst famous. Write for prices or go and see these cattle.

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for WORMS in your growing shoats. There are very few pigs at this season of the year that are free from intestinal worms. The first thing you know your pigs will be sick. They will begin to die. You will think they have the Cholera. They may have it, but in forty-nine cases out of fifty the losses are due to WORMS. The poison that gets into the circulation from worms will cause congestion of the lungs and kidney trouble.

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John Schmieder of Remsen, Iowa, writes as follows:
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Enclosed find \$5 for which send me some more Iowa Worm Powder. I know it has done me good and I can't say too much for it. It will get the worm from pigs.

FREE—To any person who has never fed any Iowa Worm Powder, we will send a \$1 package free, on receipt of 20 cents in stamps for postage and packing. Address Department E.

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A Song of Kansas Land.

Tune: Yankee Doodle.

We'll sing a song of Kansas land,
With pride we will begin it;
For Kansas is a fine old State,
And the finest folks are in it.
Then let your voice ring out with joy,
And be not slow to raise it;
For Kansas is our happy home,
And we delight to praise it.

From East to West four hundred miles,
From North to South a half that,
Our glorious Kansas land is one
That no one needs to laugh at.
It goes straight down four thousand miles,
A million up, 'tis true, sir;
And the best old State it is for me,
And the best it is for you, sir.

'Tis a land of corn, but not of wine,
With milk and sorghum flowing;
Of mighty crops through flood and drought
And playful cyclones blowing;
A State of hopes that bud and bloom,
(Though sometimes doomed to blasting);
Of forging on in calm and storm
With purpose firm and lasting;

A State of ores and fossil things,
(With human fossils fewest),
Of oldest old things to be found,
And novelties the newest;
A State of coal and oil and gas,
And just a mite of "gassing";
And a State that lofty Eastern folks
Are pretty fond of "gassing."

There's hardly any sport on earth
The sun so fondly beams on,
For when it goes to gleaming once
It gleams and gleams and gleams on.
And few the places anywhere
The rain so likes to rain to,
For when it rains, it rains and rains,
'Till there's scarce a place to drain to.

The world thinks Kansas is a freak,
Quite bent on deeds imaginary;
But maybe, now, the world's a freak,
White Kansas just acts sanely.
We'll teach this old world something yet,
If she's not too dull to learn it;
And if the world has aught for us,
We surely will not spurn it.

We'll sing for Kansas long and loud,
The name is worth the singing;
We'll shout for glories to the world,
With voices full and ringing.
For Kansas is our happy home,
The State we love with fervor;
And we give our voices and ourselves
And all we have to serve her.

—J. E. Everett.

Severy, Kansas.

Tangier—Morocco.

ANNA MARIE NELLIS.

The steamer, Bibel-Tarick, was waiting for us a half mile or so out in the Mediterranean, to take us from Europe to Africa. Our party, consisting of seven ladies and two gentlemen, was eager for the start, but hesitated somewhat because of the inhospitable appearance of the water, occasioned by sundry winds and rain which seemed inclined to make the voyage very interesting for us.

For some reason, not explained to us, no large steamers or ships of any sort, except of course Great Britain's fleet, are permitted to approach the wharf at Gibraltar, but must "lay to" a half mile or so from the shore.

As upon our arrival at Gibraltar, there were hundreds of boatmen, with their little boats, all anxious to row us out to the steamer, and they were even boisterous and very rude in their attempts to gain our commands. I, however, selected Number Eight's boat for myself and sister, and the balance of our party did the best they were able to do to get a safe transport to the ship.

It was raining hard, the second rain which had visited Gibraltar during the past six months, so they told me; the wind was high and the water exceedingly rough. The boatmen seemed to think their oars were useless in the storm, so they unfurled their little sails, and away we went. We seemed to be as helpless on the water as a leaf would be on that sea.

Our little boat would rock away over to one side until it would dip the water, and then, for a change, it would careen over to the other side for a similar purpose. I concluded we never would reach the steamer, but after a half hour's tossing between the sky and the bottom of the straits, we were dashed against the side of the Gibel-Tarick, but could gain no hold on the ship so that we could board it gracefully. We waited until a wave washed us up as high as the railing, and then two Moors on the gang plant grabbed us and politely let us fall in a miscel-

laneous heap on the bare deck. It was an experience, truly, but one such experience is amply sufficient for a lifetime.

The passage from Gibraltar to Tangier may sometimes be very pleasant and enjoyable. The Spanish coast on the one side and the African shore on the other, may sometimes warrant the many beautiful things that have been written by sundry ladies and gentlemen about this voyage. But our experience led us to fear that those writers had possibly overdrawn the miscellaneous beauties and which might be observed on the trip. I have never made but one voyage so bad as this one was, and that was on the Baltic Sea from Denmark to Germany.

In pleasant weather it is possible to sail from Europe to Africa, at this point, in one hour, but we were five hours on the journey, and, indeed, it seemed like a century or two to me. The steamer was small and had but one small cabin for all on board, and all were ill—very ill indeed.

We could not remain on deck, for it was raining terribly, and the ferocious rocking of the small ship soon put every passenger on the dangerous sick list. After a seeming term of suffering years, I felt some men pick me up, and when I opened my eyes, two stately Moors of some sixty-two summers each, were putting me in another small boat. The sun was shining brightly, and I saw the beautiful sight of "Tangier-on-the-Bay."

Tangier rises from the sea like a huge, white amphitheatre, with glorious coloring on the minarets of the mosques. There are no trees in the city proper, nor grass, nor plants of any kind; but the beautiful green trees, and flower gardens in the back-ground, and at the tops of the hills outside, with the Atlas Mountains still beyond and around the sides of the city, made a fascinating picture long to be remembered.

On the wharf we saw more stately Moors in their white turbans and white capes, and black, shiny Sudanese in their brown capes—every grade of European civilization, and every type that was represented on the "Pike" at St. Louis in 1904. It made one feel as if in a huge Midway Plaisance larger than exhibited at the Chicago World's Fair in 1893.

One stately Moor, in very fine dress, asked me: "Continental Hotel?" and I nodded in answer, for I had not yet recovered my voice. He immediately took charge of us all, or I am sure the whole regiment of loiterers would have besieged us. Our venerable guide's name was Staffi, and he conducted us to our hotel. I had asked for a carriage, as I felt very weak from the effects of sea-sickness. He brought me a poor, little donkey, which had a gunny-sack strapped on its back for a saddle—the only thing which serves in Morocco for transportation of personage or merchandise in the cities. I refused the kind offer with very great thanks, as I preferred to walk rather than ride on the little animal which would have been whipped at every step.

I never saw a dirtier, or more fascinating city than Tangier; the streets are mere lanes, no two of them apparently going in the same direction. The word "crooked" is scarcely strong enough to correctly describe their appearance, and they are paved with cobble stones, which might have been originally laid by Moses just prior to his engaging in sheep-farming with old Uncle Jethro.

In our walks along the streets we found that no good, religious Mohammedan will step out of the way to let a poor, miserable Christian pass by, and besides the many of these whom we had to creep around, there were swarms of little donkeys blocking the narrow way. These poor beasts were usually heavily loaded with merchandise, with a man or boy behind whipping unmercifully, and crying: "Arrah" (Get up).

The hotel was about a ten-minutes' walk from the wharf, and we reached it in about ten days—so it seemed to me. Upon arrival I disappeared and did not join our crowd until dinner time. Sleep never seemed so good to

me, and surely I never recovered health after sickness so rapidly as I did in the half hour of sleep before meal time, which was 7:30 p. m., the regular time for dinner in the cities of Morocco—that is, for people who have a single thing to eat, and I afterward learned that thousands of them every day have to go without eating.

After dinner we started out to "do" the city by moon-light. The moon was full, and, shining on the white houses and streets, made them appear quite fairy-like and obscured the filth and dirt which showed so terribly in daylight. I saw many bags of meal lying close to the houses and some even in the street, while many were snugly laid close to a mosque we passed. I started to step on one, but was prevented in time by the American doctor in our party, who is a resident of Tangier, and was kindly showing us the sights of his adopted city. He informed us that these were simply good, religious Moors, who had retired for the night, and were sleeping closely tucked in their rough capes, which served as their couch at bed-time.

Where the Pilgrims Landed.

HENRY COLLINS WALSH.

Provincetown, situated at the extreme end of what Thoreau styled "the bared and bended arm of Massachusetts," is at last going to assert itself and take its proper place in history; for to it in reality belongs the honor, generally accorded to Plymouth, of being the first landing-place of the Pilgrims. To commemorate this important fact, and to give honor where honor is due, the spot where the first landing was made is to be marked by a high shaft of granite. Money has been appropriated by the Massachusetts Legislature to meet part of the expense, and the rest is being raised by popular subscription.

After their long and tempestuous voyage, the Pilgrims, doubtless with joyful hearts, cast anchor in the practically land-locked harbor of Provincetown on November 11, 1620. On this day, in the cabin of the Mayflower, a compact for the government of the Colony, a primitive form of republicanism, was drawn up and signed by the men of the company, forty-one in number. The original document is preserved in Pilgrim Hall, at Plymouth. It is brief, but it contains the root from which sprang the Constitution of the United States, for it embodies the first true democratic idea of government. When this document was drawn up, Plymouth, of course, had not been thought of as a place of settlement, for it still remained to be discovered. A granite tablet has been erected by the Commonwealth of Massachusetts to commemorate the signing of the Pilgrim compact in what is now Provincetown Harbor. It stands in the center of a lawn before the Town Hall in Provincetown, and upon it is engraved the compact and the names of the signers.

The Pilgrims cast anchor in Provincetown Harbor on a Saturday; the next day, Sunday, was given up to prayer for this haven of rest after their tempestuous voyage, and on Monday the first landing was effected. After ascertaining that the immediate country was not suited to agricultural purposes, a party started out in a shallop, a small boat, to explore the coast for a more favorable location. The party included John Carver, the first Governor of the Colony, William Bradford, his successor, and Miles Standish. On December 11 the expedition made its famous landing at Plymouth.

Through an error in punctuation in the old record known as "Mourt's Relation" (Mourt probably was George Morton, who procured the publication of the diary kept by William Bradford), the landing of the party is made to read as taking place December 10, instead of the eleventh, which was evidently intended. Consequently, in 1769, when the practice of celebrating the day began in New England, the days were added to the old style of date appearing in the record in order to accommodate it to the Gregorian style then newly adopted in England, and thus the day is wrongly celebrat-

ed on December 20, and is known as Forefathers' Day.

This day is associated in the minds of people generally with the day when the entire company landed and planted their home in the new world. But the Mayflower did not leave Provincetown harbor until December 25, new style, and it was not until January 4, that the first general disembarkment from the ship took place.

Meanwhile two important events occurred while the Mayflower was lying at rest in Provincetown Harbor—a birth and a death. By some mischance the young wife of William Bradford missed her footing on the deck, fell overboard, and was drowned, and, as the quaint record runs: "It pleased God that Mistress White was brought abed of a sonne, which was called Peregrine." And so, off the spot where Provincetown now stands, the first little pilgrim was born to begin its progress in America.

There are no records as to when a settlement was first made in Provincetown, but it is the general opinion that the first permanent settlement was made in 1680. In the early days the Pilgrims claimed the right of possession of the fishing privileges in the waters around Cape Cod, and the use of the land for curing their fish. During the summer season they would go there to fish, and return to Plymouth in the fall. Sometimes they would sell the privilege to other parties to fish for mackerel, bass or cod, and to use the land for curing purposes, at a rate above the tax that was paid by the Colonists, always reserving their right to land on account of their first landing and occupying the place. Thus the harbor and the land of this extreme end of the cape became a source of revenue to the Pilgrim Colony. So, Provincetown itself was first a collection of little summer residences for the squatter fishermen, and was not incorporated and called Provincetown until 1727.

To-day the town is a long, rambling collection of wooden buildings, many of them quaint and old-fashioned in appearance. It lies mostly right upon the water, for its main street comprises the greater part of the place, and this is close to the water's edge, there being only a little beach. There is another long street back, higher up among the sand hills, and these two streets are intersected by frequent narrow, little lanes containing dwellings. What is known as the West End of the town has a distinct foreign appearance, for there dwell Portuguese settlers from the Azores Islands, who constitute nearly half the population. As you walk through this section you will hear scarcely a word of English spoken, and numbers of dark-eyed, dark-skinned children will stare at you from the trim little gardens that surround nearly every house. The Portuguese and their descendants and the descendants of the Pilgrims appear to get along well together, for they are bound by a community of interest in the fisheries, and as Provincetown can not boast of the fertility of its soil it must draw its resources from the sea.

In the old days when whaling was perhaps the most profitable of the enterprises engaged in in capturing the denizens of the sea, Provincetown boasted of a whaling fleet of fifty-six sail. To-day it sends out only about half a dozen vessels, which are mostly engaged in seeking and capturing the sperm-whale. But sometimes by a rare chance the mountain seems to come to Mohammed, for schools of blackfish, a species of whale, have been occasionally driven ashore. It has been estimated that about twenty thousand dollars worth of oil was extracted from the last lucky visitation of this kind.

There are few of the picturesque and old-time whalemens left in Provincetown to-day, but many whaling stories still linger about, and are told and retold when certain salty-looking individuals gather to discuss subjects of importance of past and present. But one can rely fairly well upon the fish stories that are told at such gatherings, for Provincetown is a local-option town, and its citizens seem to have a decent regard for the truth.

(Concluded next week.)

For the Little Ones

The Audacious Kitten.

"Hurrah!" cried the kitten, "hurrah!"
As he merrily set the sails;
"I sail o'er the ocean to-day,
To look at the Prince of Wales!"

"O kitten! O kitten!" I cried,
"Why tempt the angry gales?"
"I'm going," the kitten replied,
"To look at the Prince of Wales!"

"I know what it is to get wet,
I've tumbled full oft in palls;
And nearly been drowned—and yet
I must look at the Prince of Wales!"

"O kitten!" I cried, the Deep
Is deeper than many palls!"
Said the kitten, "I shall not sleep
Till I've looked at the Prince of Wales!"

"O kitten! pause at the brink,
And think of the sea-sad tales."
"Ah, yes," said the kitten, "but think,
Oh, think of the Prince of Wales!"

"But, kitten," I cried, dismayed,
"If you live through the angry gales,
You know you will be afraid
To look at the Prince of Wales."

Said the kitten, "No such thing!
Why should he make me wince?
If 'a cat may look at a king,'
A kitten may look at a prince."
—Oliver Herford.

Elizabeth's Doll.

It was not really a doll, and it was not really Elizabeth's, but "Elizabeth's doll" is what Dr. Andrew Kent calls it to this day.

It happened one spring morning that Elizabeth was summoned hastily from the schoolroom and driven across the city to her Uncle Andrews. Her own little trunk was on the back of the carriage, and as they rode Elizabeth's mother explained that she was called out of town for a few days, and that Elizabeth was to stay with Uncle Andrew and be very, very good.

Then Elizabeth and the little trunk were left at Dr. Kent's, with a hurried good-by, and mother rode away to catch her train.

Elizabeth felt quite dazed as she sat watching Uncle Andrew's housekeeper unpack her trunk—it was so sudden! Then, as the last little garment was lifted out, Elizabeth made a discovery, "Mrs. Lane," she cried, with quavering voice, "mother didn't pack one—single—doll!"

Mrs. Lane did not seem to feel the full horror of the situation.

"You're only going to stay with us a few days, you know, my dear," she said, comfortably, "and your mother was called off in a hurry, it's a wonder to me she remembered your clothes! I'll find some old magazines and you can cut out and dress some pretty paper dollies."

Elizabeth played with paper dolls for two whole days. She could not go to school, for the distance was too great; Mrs. Lane was kind, but busy; and Dr. Kent, though the jolliest uncle in the world, was not much comfort, because he was at home so little. Elizabeth tried to be contented, but she did long for a real doll to talk to.

On the third morning of her stay at the big house, Elizabeth was standing at the hitching-post, feeding lumps of sugar to Uncle Andrew's black horse, when an idea struck her—an idea so bright that it brought smiles out all over her face.

"Uncle; oh, Uncle!" she cried, as Dr. Kent ran down the steps and sprang into the carriage, "may I play with the hitching-post?"

Jerry, the black horse, started off at a run, but Dr. Kent leaned back to wave a hand at his little niece. "Yes! yes!" he called, and to himself he added: "Is it as forlorn as that for the poor baby?" and made a note in his little red book.

Elizabeth skipped up-stairs to Mrs. Lane.

"Please, Mrs. Lane," she said, "may I have a big, big piece of old white cloth? And may I go to the corner store and buy some colored crayons?"

Mrs. Lane found a big bundle of white cloth, and, gently patting Elizabeth's hand, handed it to her.

"You're the best child to amuse yourself!" the kindly housekeeper said admiringly; and then Elizabeth ran

out to the hitching-post and set to work to make herself a doll.

It took her a long time to carry out her plan, but she finished at last, and then hurried into the house, brimful of laughter, to call Mrs. Lane. That lady, in a state of great excitement, met her in the hall.

"Elizabeth," she exclaimed, "I have something important to tell you; your mother's come home! She telephoned, and she wants me to bring you home this minute, and I'm going to spend the day with you. Put on your other jacket, quick! I've sent word to the doctor—and we will go out the back way; it's nearer the car."

And so they hurried off, and Elizabeth in her rejoicing never gave another thought to the new and unusual doll that she had left standing at the curbstone before the door.

As Dr. Kent drove toward home that afternoon, he wondered why so many acquaintances smiled broadly as they nodded at him.

As he neared his door he saw a curious figure in a fluttering blue frock standing motionless at the curbstone. Jerry tossed his head nervously, but the doctor urged him closer still—and then, on beholding the unique figure, leaned back in the carriage to laugh and laugh, while the passers-by smiled sympathetically.

Surely such a hitching-post never was seen before; it had been transformed into a rag doll of giant proportions. The iron framework was swathed in the white cloth received from Mrs. Lane, and then attired in a blue dimity dress of Elizabeth's, with empty sleeves dangling helplessly; the round white head had brilliantly colored cheeks, lips and eyes, shaded by an enormous sunbonnet of Mrs. Lane's.

When the doctor could draw a long breath, he called a little boy to hold Jerry while he divested the hitching-post of its strange apparel. Then he went into the house and telephoned to Elizabeth's mother.

Elizabeth herself, with all her dolls gathered about her, wondered what her mother found so amusing at the telephone.

When the conversation was over, her mother, still smiling, said, "Elizabeth, Uncle Andrew wants me to tell you that he has adopted a doll—a very superior, well-dressed doll, he says—and that the next time you come to see him you won't be reduced to playing with the hitching-post!"

"Oh!" exclaimed Elizabeth, "I had forgotten the hitching post! It was rather a pity," she added seriously, "to take it to pieces!"—Hannah G. Fernald, in *Delineator*.

A Vast Agricultural Empire.

The agricultural bulletin of the principal crop yields of the States and Territories on the tributary to the Union Pacific Railroad for the year 1904, just issued by the advertising department of that road, is full of interesting information. The bulletin covers seventeen States and Territories west of the Missouri River, six of which are in the territory of the Southern Pacific and eleven on the Union Pacific and its auxiliaries. These eleven States only a few years ago were a comparatively unproductive wilderness. Now they are the major portion of the granary of the world.

The total acreage, yield and farm value of the seventeen States and Territories for the past year were 79,095,358 acres, 1,675,077,451 bushels of grain and potatoes and 22,477,076 tons of hay and a total farm value of \$907,390,248.—*World Herald*, April 27, 1905.

Well Meant.

"My husband is so poetic," said a well-dressed woman to her seat companion in the street car the other afternoon.

"Have you ever tried rubbin' his j'int's with hartshorn liniment, mum?" interrupted a stolid-looking woman with a market basket at her feet, who overheard the remark. "That'll straighten him out as quick as anything I know of, if he ain't got it too bad."—*Albany Journal*.



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Wet Weather Talk.

It ain't no use to grumble and complain;
It's jest as cheap and easy to rejoice;
When God sorts out the weather and
sends rain,
W'y, rain's my choice.

Men giner'ly, to all intents—
Although they're ap' to grumble some—
Put most their trust in Providence,
And takes things as they come;—
That is, the commonality.
Of men that's lived as long as me,
Has watched the world enough to learn
They're not the boss of the concern.

With some, of course, it's different—
I've seed young men that knowed it all,
And didn't like the way things went
On this terrestrial ball!
But, all the same, the rain some way
Rained just as hard on picnic day;
En when they rally wanted it,
It maybe wouldn't rain a bit!

In this existence, dry and wet
Will overtake the best of men—
Some little skiff o' clouds 'll shet
The sun off now and then;
But maybe, while you're wonderin' who
You've fool-like lent your umbrell' to,
And want it—out'll pop the sun,
And you'll be glad you ain't got none!

It aggravates the farmers, too—
They's too much wet, er too much sun,
Er work or waiting round to do
Before the plowin's done;
And maybe, like as not, the wheat,
Jest as it's lookin' hard to beat,
Will ketch the storm—and jest about
The time the corn's a jintin' out!

These here cy-clones a-foolin' round—
And back'ard crops—and wind and rain,
And yit the corn that's wallered down
May elbow up again!
They ain't no sense, as I kin see,
In mortals, sich as you and me,
A-foolin' Nature's wise intents,
And lockin' horns with Providence!

It ain't no use to grumble and complain;
It's jest as cheap and easy to rejoice;
When God sorts out the weather and
sends rain,
W'y rain's my choice.

—James Whitcomb Riley.

The Holidays.

The following words by F. B. Meyer, the great English divine, are good to read, whether one goes far away to spend a vacation, or passes the long days at home:

Summer holidays are here. There is something in our blood that cries out for rest and change, for a climb on the hills, a ramble through the lanes, a cycling tour, long, lazy days on lake, river, or sea, a glimpse of fford, or Alp, or midnight sun. It is not laziness, however, that prompts us, or distaste of work, or desire to emulate the Chinese nobleman in the growth of the little finger-nail. We may love our home, our work, our chance of doing our share in the toil of this workaday world, and yet pine for respite and rest as an imprisoned forester for the smell of the woodland, or the crackle of dry twigs under the tread.

Why is this? Some say it is the result of the law of heredity, of which we hear so much, which is made accountable for so many sins. Our ancestors, after being pent up in their cave dwellings for the long, dark, winter months, longed for the coming of the spring, and gladly left their imprisonment for the pasture-lands, the open rivers and waters, and the glorious hills. Their families moved forth with them, inheriting their love for nature, and transmitting it. I suppose this is why our lessons seemed so intolerable in those far-away days when through the open window of the schoolhouse came the waft of honeysuckle and the drone of bees; and why we save our money, all that we can spare, for our summer outing.

But, howsoever we received this blessed love of nature, it is one of our most sacred heritages from the love of God. Be very careful of it; almost reverence it; for it closely binds the heart of the child to that of the great Father, who made all. It is part of the original likeness to God in which man was made. The impulse that empties the big, black city and scatters us through all the world is, so to speak, the voice of God, saying, "Come away, children, be glad with me; come, see my flowers; come, taste the air that I have flavored in its passage over clover-fields and gorse and heather; come,

look at my paintings, in flower and cloud, in purple sunsets, and iridescent bow cresting the torrent-fall." Yes, to love nature is a good gift of God. It seems to me as if nature must be His daughter, as if there were some spirit beneath the mantle of the changing seasons, to love which demands, as it indicates, a heart capable of refined and holy emotion. There is hope for the man who loves flowers. Never despair of any one that turns from the blare of the orchestra to the music of the bluebells, and from the glare of the ballroom to the tender lights and shadows that lurk in forest glades.

Be very careful to keep your zest in nature uncoarsened. Never use those stupid, inexpressive words, with which superficial sightseers interlard their talk. They use the same phrase of a sunset as they do of a good stroke at tennis, and do not hesitate to break the spell of holy reverie caused in the soul by the lighting of beacon-fires on a ridge of snow-capped Alps at the hour of sunrise. Never litter the woodland glades with loose paper or the remnants of your meals; I would as soon strew the abbey pavement with the contents of my waste-paper basket. Never be satisfied with the admiration of the soul till it be joined to the adoration of the heart. Of what use is it to emulate the phrase of a Ruskin, unless you have the seer's eye to discover the traces of God's recent presence amid his works?

Be sure to get time alone in your summer vacation. If you go with a friend, let there be an understanding that he should not count you churlish if you should say to him, "For at least an hour a day I must be alone with myself and God." It is a great mistake always to be in the presence of another. The soul must be still. There are thoughts and desires in it which keep as close as squirrels and rabbits and the live things of the woods do when heavy steps crush through the corpse and merry voices fill the air; they show themselves only when the intruders have withdrawn. There are accents in the voice of God so deep and still that the breathing of a companion will make them inaudible. You have so little time for close fellowship with the best and rarest of all companions that it is a thousand pities not to snatch some hours on that Highland hill, on that Alpine summit, by the sea seen through a corpse, on the moor. Do you wonder that Paul sent off his companions and walked round the promontory to Assos by himself?

But, for all that, it is delightful to have a choice companion. It is not desirable for him to be the echo and duplicate of yourself. In fact, it is better when there is no absolute identity in your points of view, your interests and pursuits. But he must be in sympathy with you on the best points. If you love nature, so must he. If you delight to take out your pocket Bible, and read a Psalm, he must not count it tedious to listen. If you feel inclined to erect an altar, and break an alabaster box in absolute surrender, he must not imitate Judas in chalking up the exact amount of the cost.

Then the book. It must not be too heavy; a book of theology does not quite befit a knapsack. It must not be too frivolous; else it will relax the girdle of the soul, which must always be kept tight, especially in hours of ease. A biography, a journal, a fragment of religious history, books of meditation and devotion, are the kind that help one most, when away from the ordinary routine of life, amid the suggestive commentary of natural beauty or grandeur.

We must be unselfish, if we would really enjoy our holiday. The usual crowd of holiday-makers is supremely selfish. It is so difficult to resist the temptation to rush for the best seats, to get the first serving, to obtain the best possible return for our money, and a little over. It is, of course, tantalizing to feel that we are being outdone by others, because they scheme better than we can, or know short cuts of which we are ignorant. "Every one for himself," is the cry, when the train draws up in the station of the foreign

town, and is timed to wait there just ten minutes for dinner. But it does not pay. The fever and fret of it all takes away from the enjoyment and benefit of our trip, and I am sure that we come off so very much better than others. Lately I have tried to abide in God amid these agitating circumstances, asking him to arrange and plan for me, and I have found it is a most blessed secret of rest and health. He is as anxious as you can be that his children should have a good time; he will perform all things for them, and, if he selects something other than you wished, look into it, and you will find it really better. Always believe that God is doing the best possible for you.

Always think of some one else—the short Zacchaeus who cannot see over you, the little child that loves to be by the window of the carriage, the invalid that cannot stand the draught, the mother with the children, the timid girl. Look out for daily opportunities for showing the meekness and gentleness, the sweetness and unselfishness, of Jesus. "He that loveth his life shall lose it; he that loseth his life shall save it."

London, England.

Lights and Shades on the Plains.—Harvest.

ELSIE S. TAYLOR.

Mr. Greatheart leaned back in his chair at the close of breakfast. It was a morning in the latter part of June. He looked like a man who has something to say which would be disagreeable to his hearers but must be said, nevertheless.

"Guess I'll have to go to town and get some hands. The wheat isn't very ripe yet but I've got to begin as early as I can, I've got so much to cut. We may lose a lot of time if we have as much trouble as we did last year."

"They will be here for dinner then?" queried Mrs. Greatheart.

"I suppose so, if they don't quit before then."

Gertrude pouted. "I wanted to go to town to-day," she said.

"What for?" asked the brotherly Roy.

"To pick out my new dress. All the pretty things will be gone by next week."

"Father, father, get Gert's new dress when—"

"Hush children this minute," said Mrs. Greatheart. "You'll worry your father to death with your silly talk."

"What you want?" called Mr. Greatheart from the porch.

"Nothing," said Mrs. Greatheart, shortly. "Go on."

"Roy, you curry and harness all the horses and patch up that old header-box. I've fixed the other. Put some oil in the can on the header. You want anything, Lou?"

"Come in before you go and I'll have the list ready."

Mrs. Greatheart and Gertie slayed and fried and baked in preparation for the impending but necessary evil, while Roy curried and harnessed eight horses, fitting the harnesses to them with great care. He was especially considerate of his team, the young colts that had never worn harness till that spring.

"I'll drive you myself," he said confidentially to the fine head that rubbed against his arm. "I'll not have you all galled up. Not muchee!"

Towards the middle of the forenoon the women saw Mr. Greatheart drive up with five men. They drove to the barn and then began the hurry and bustle of the first start into the harvest field. There was hitching of teams, much calling back and forth, the carrying of canvas, filling of water-jugs and clattering of pitchforks thrown into header-boxes. Mrs. Greatheart and Gertie saw them trail past, the two boxes and last the clattering header on which stood Mr. Greatheart trying to keep a tight rein on six mettlesome horses.

Roy hitched his team at the front gate and ran up the walk. He poked his head in at the door.

"Say, we've got a college graduate with patent leather shoes and necktie and Derby hat and a suit-case and—"

Doctor Brigham Says

MANY PHYSICIANS PRESCRIBE

Lydia E. Pinkham's Vegetable Compound

The wonderful power of Lydia E. Pinkham's Vegetable Compound over the diseases of womankind is not because it is a stimulant, not because it is a palliative, but simply because it is the most wonderful tonic and reconstructer ever discovered to act directly upon the generative organs, positively curing disease and restoring health and vigor.

Marvelous cures are reported from all parts of the country by women who have been cured, trained nurses who have witnessed cures and physicians who have recognized the virtue of Lydia E. Pinkham's Vegetable Compound, and are fair enough to give credit where it is due.

If physicians dared to be frank and open, hundreds of them would acknowledge that they constantly prescribe Lydia E. Pinkham's Vegetable Compound in severe cases of female ills, as they know by experience it can be relied upon to effect a cure. The following letter proves it.

Dr. S. C. Brigham, of 4 Brigham Park, Fitchburg, Mass., writes:

"It gives me great pleasure to say that I have found Lydia E. Pinkham's Vegetable Compound very efficacious, and often prescribe it in my practice for female difficulties."

"My oldest daughter found it very beneficial for uterine trouble some time ago, and my youngest daughter is now taking it for a female weakness, and is surely gaining in health and strength."

"I freely advocate it as a most reliable specific in all diseases to which women are subject, and give it honest endorsement."

Women who are troubled with painful or irregular menstruation, bloating (or flatulence), leucorrhoea, falling, inflammation or ulceration of the uterus, ovarian troubles, that bearing-down feeling, dizziness, faintness, indigestion, nervous prostration or the blues, should take immediate action to ward off the serious consequences, and be restored to perfect health and strength by taking Lydia E. Pinkham's Vegetable Compound, and then write to Mrs. Pinkham, at Lynn, Mass., for further free advice. No living person has had the benefit of a wider experience in treating female ills. She has guided thousands to health. Every suffering woman should ask for and follow her advice if she wants to be strong and well.

"Shut that screen door," snapped Gertie. "There's ten thousand flies come in while you've been standing there trying to get your mouth off."

"My land! but you're getting quick at figures!" Roy remarked earnestly. "You ought to be a bookkeeper. And," he went on, "a kind of a preacher or some kind of a freakish thing."

"That will do," said Mrs. Greatheart, calmly.

"And a new married man and a man that's got a girl. Good day, ladies. Gertie, get dinner. I'm hungry now. Oh, yes, there's another one that don't say much. Don't know what he is."

At noon Gertie scrutinized each one as they went into the dining-room. First came a tall, bold-looking fellow with a very lordly air, then a small, fat, bow-legged individual with a constant smile which rose and fell but never went out, and bright red hair mopped across his head. Then a tall, blond fellow with a very erect carriage; then a pompous, middle-aged man with a very condescending air; and lastly a slight, wiry fellow with a very thoughtful and slightly worried expression.

"Which will you have," asked Gertie of the tall, dark man, "ice tea or coffee?"

He hesitated. There is nothing like making a good impression at the outset.

"Beer, Miss," he said, boldly and looking around the room for applause.

There was a loud laugh and Gertie with a flushed face went on to the next.

"I don't know how long I'll stand this," said the college man, plaintively.

"Oh, you're not so sick as you look; not near, Professor," remarked the dark one again.

"How do you think you'll like the work?" asked the red-headed man of the preacher.

"I think I'm better fitted for work in an intellectual field. Any one can do this kind of work."

"What do you think, brother?" asked the Professor of the silent man.

"I think, therefore I say nothing here," was the terse reply.

When the men had finished and gone out and Roy and his father had finished the noon chores and come in, Mrs. Greatheart began very impressively: "Now, Roy, you know you made some trouble among the hands last year by saying too many plain things. I want you to see if you can't be more careful this year and if there's any trouble it won't be your fault!"

"Um, huh! I'll try if they don't get too fresh."

"Well now, their freshness don't hurt you any."

"That black fellow will stir up trouble. The stacker always thinks he's the boss of all creation. They call him 'Mouthy Mike.' They call the short one 'Reddy,' and that one that sat up there 'Silence.' The preacher they call 'Preacher,' behind his back and 'Say' to his face. Then, there's the Professor and your son and your husband. Gert, give me that pie quick now. I've got to harness my horses."

"I'll bet you won't harness those horses for three days after a while," said Gertie.

"Father, when you take the quitters to town I wish you'd get a brake for Gert's mouth."

"Roy," said Mr. Greatheart, "finish your dinner and then hunt up that old milk-can and put a chunk of ice in it and fill it about half full and then try to remember to take it along when we go out to work. Stay away from the men and let them alone."

Roy started for the barn but was soon back again.

"Father!" he called.

"Keep still," said Gertie, "Father's lain down."

"Well, they're breaking the windows all out of the workshop, so they are."

"Oh, well, they've got to amuse themselves some way. Don't say anything to them. Now, sir, not a word. Let father manage them."

"Just as you say, my dear." And he was off again, whistling loudly.

That night when Roy came in his mother looked at him anxiously.

"My, but you do look tired," she said.

"You're going to play out I'm afraid."

"Oh, fudge! Say, mother, the Preacher and Reddy had a scrap this afternoon. Reddy got to sassing the Preacher because he didn't drive to suit him. He kept at it and they'd just got their box full and I was driving up to get under the elevator and Reddy took a big forkfull of wheat and slammed it down on the Preacher's head. It knocked him down and before he could get up he'd just buried him. Every time he'd see the Preacher's head or hand he'd slam on another forkful. I thought he'd smother him. But pretty soon the Preacher just lunged out of that wheat and grabbed Reddy and shook him and threw him out of the box. I wouldn't have missed it for anything. I didn't suppose that Preacher could get so mad. I heard him say last night that he never got mad. Father's going to put the Professor in with the Preacher and let the Silent Man manage Reddy. Have they begun to kick about the grub yet, mother?"

"I haven't heard anything yet."

The next day was Sunday. Monday morning after breakfast Gertie saw her father and the Preacher standing together in close conference. About ten minutes later Mr. Greatheart came in and made a hasty change of clothing.

"Preacher's quit. Afraid he'll have to work Sunday. No religious privileges—too much swearing among the men—and so on. Got to go to town and hunt another. Have dinner early."

When dinner-time came again Gertie watched for the new one. He was a boy about sixteen years old, short and chubby with twinkling eyes.

"He's a brick," whispered Roy; "a farmer's boy. We'll keep him."

By night the Boy, as he was called,

and Roy had become good friends and Roy had introduced his colts and extolled their good points with great animation.

"Toll you what," said the Boy, as the two ducked their heads in the trough on the way to the house, "there's two going to quit to-morrow, Reddy and the Professor."

"What's the matter with them?"

"Oh, Reddy's got a girl down East and there's another fellow trying to go with her and he's heard of it some way and he's got to go right down and see about it."

The boys laughed over this but Roy looked serious again.

"What's the matter with the Professor?"

"Oh, he says he can't stand it. He's going to start out selling something."

"Are you sure?"

"That's what they said."

"Well, if I was in father's place I'd fire them to-night before supper."

So the next morning the stage went again and brought back two miners from Denver. One possessed the luxury of a small valise which he placed in one corner of the loft with great care. Roy always went to the barn after supper to bathe the horses' shoulders and fill their mangers for the night. As he came near the barn he heard some very loud and uncompromising language from Jim, the tall miner. The men were sitting about in the loft and Jim was on his knees in front of his valise and ransacking it furiously.

"I'd like to know what business you've got in my valise," he cried hotly.

"Aw, you lie," sneered Mike, "I never touched your old truck."

In about two seconds Mike found himself head-first in the manger. The astonished horses reared back and Roy rushed in just as Mike regained his equilibrium. Roy managed to preserve a wise neutrality and hastened back to report. In the morning as Roy and his father were watering their horses at the trough Jim came up and stated his case and then Mike.

"Well now, boys," said Mr. Greatheart, "if I were you I'd just drop it. I don't see any use in getting mad over it." After some sullen hesitation the men went on to work.

Affairs went on quite smoothly until the Fourth of July. The invitation to work on this day the men unanimously declined and furthermore demanded the use of a team and wagon for the day.

"No," said Mr. Greatheart, "I would not have my team knocked around like that for a good deal. You can walk down to the next neighbor's and go with his hands. They'll go anyhow."

So they started out, and many were the anxious speculations as to their return. Late at night they began to straggle back, those world-weary prodigals. Roy and the Boy had spent the day fishing and indulged in a moderate display of fireworks in the evening. They decided to leave the milking of the two cows until the last thing and so were just setting out with their pails when they heard a loud and boisterous whoop. In a moment they saw the stacker walk uncertainly across the driveway. When the boys came in to supper all of the men were at the table except Mike; but the Denver gentleman groped uncertainly for their coffee cups. Roy looked quizzically at Jim as he put three spoonfuls of gravy into his coffee. The boys ate their supper quickly and hurried out to see what had become of Mike. They found him up in the barn loft groaning and tossing about. The boys came up and stood looking at him.

"What's the matter with you, Mike," asked Roy after a while.

"Aw I've got such a horrible headache. Bring me a cup of coffee, can't you?"

"I'm not going to start in carrying coffee to drunk men," said Roy with much dignity.

"How many bottles did you drink?" asked the Boy.

"Six. I beat the other fellows. I've got one left."

It was a listless crew that slouched out to work the next morning. At noon



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the Silent Man came to Mr. Greatheart and said:

"Boss, I must quit. Do not ask me why. I can not tell you. I am sorry to quit you but I can not help it. I got a letter to-day which changes all my plans very much."

This was a very long speech for the Silent Man and there was something in the demeanor of this strange man that stopped Mr. Greatheart's expostulations and he paid the man and watched him out of sight down the dusty road.

(Concluded next week.)

Club Department

OFFICERS OF THE STATE FEDERATION OF WOMEN'S CLUBS.

President.....Mrs. May Belleville Brown, Salina
Vice-President.....Mrs. L. H. Wishard, Iola
Cor. Secretary.....Mrs. N. I. McDowell, Salina
Rec. Secretary.....Mrs. W. D. Atkinson, Parsons
Treasurer.....Mrs. H. B. Asher, Lawrence
Auditor.....Mrs. Grace L. Snyder, Cawker City

Our Club Roll.

Mutual Improvement Club, Carbondale, Osage County (1905).
Give and Get Good Club, Berryton, Shawnee County (1905).
Women's Literary Club, Osborne, Osborne County (1905).
Women's Club, Logan, Phillips County (1905).
Domestic Science Club, Osage, Osage County (1905).
Ladies' Crescent Club, Tully, Rawlins County (1905).
Ladies' Social Society No. 1, Minneapolis, Ottawa County (1905).
Chautau Club, Highland Park, Shawnee County (1905).
Cultus Club, Phillipsburg, Phillips County (1905).
Literature Club, Ford, Ford County (1905).
Sabbath Club, Mission Center, Shawnee County, Route 2, (1905).
Star Valley Women's Club, Iola, Allen County (1905).
West Side Forestry Club, Topeka, Shawnee County, Route 8, (1905).
Fortnight Club, Grant Township, Reno County (1905).
Progressive Society, Rosalia, Butler County (1905).
Pleasant Hour Club, Wakarusa Township, Douglas County (1905).
The Lady Farmers' Institute, Marysville, Marshall County (1905).
Women's Country Club, Anthony, Harper County (1905).
Taka Embroidery Club, Madison, Greenwood County (1905).
Mutual Improvement Club, Vermillion, Marshall County (1905).
Friends Reading Club, Cawker City, Mitchell County (1905).
Cosmos Club, Russell, Kans.

[All communications for the Club Department should be directed to Miss Ruth Cowgill, Editor (Club Department).]

Art Study Program.

Sir Joshua Reynolds.

Roll-call—Quotations about children.

I. Characteristics of Reynold's style.

II. The Royal Academy; its beginning and later history.

III. Anecdotes about Reynolds.

IV. Some famous friendships.

I. In this, the completion of the Reynolds study, a somewhat close and careful study should be made of the painter's general characteristics, so that one might be able with some little confidence, to identify one of his pictures whenever seen.

II. One of the most interesting of English institutions is the Royal Academy of artists. Its fame is known all over the world. A very interesting mention is made of it in the "Great Artists' Lives," and more can be found in an encyclopedia or other reference books.

III. Among the most sources of information about people is the anecdote. From such stories and incidents as come to us about great people we obtain a clearer and more illuminating glimpse of their personality than from any other source.

IV. For the general topic in this program, the subject of "Famous Friendships" is chosen. From David and Jonathan to the well-known comradeship of some of the public men of to-day, there is a wide field to draw upon for material.

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FARM AND ORCHARD DISPLAYS AT THE FAIRS.

(Continued from page 835.)

use our best efforts to make a great success in whatever department interests us.

The prospects for a really fine horticultural display at the State Fair are growing brighter every day. The superintendent of this department assures us that he is kept busy sending out premium lists and answering calls for space and that where one man heretofore has been interested, ten are now asking for ample room for displays.

PEACE IN SIGHT.

The peace envoys of Japan and Russia have been holding meetings for several days at Portsmouth, N. H. The views of the Japanese were presented in a statement embodying the several conditions on which they would like to have the settlement made. The Russian reply indicated that most of the terms were such as Russia expected and would concede. Strenuous objections were made to the proposal that the island of Sakhalin should be ceded to Japan. It was also stated that Russia never had paid and never would pay a war indemnity.

Japan had avoided the term "indemnity," but had provided for the same thing under the term "reimbursement" for the cost of the war.

The Japanese envoys replied to the Russian note proposing that the conditions they had named be taken up one by one for the purpose of ascertaining how far the terms could be agreed upon. Thus was an abrupt termination of negotiations avoided.

At this writing three of the articles have been accepted, as follows:

1. The Japanese are to exercise a protectorate over Korea.

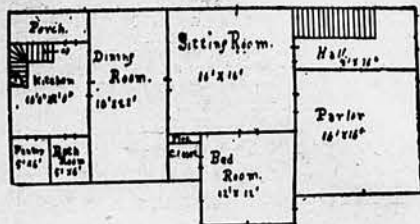
2. Both Russia and Japan are to evacuate Manchuria, turning that province over to China and guaranteeing the "open door."

3. The railroad from Harbin south to Port Arthur, which was built by Russia, is to be turned over to China.

It is intimated that China will be willing to "reimburse" Japan for the cost of the railroad, something like \$100,000,000. It is barely possible that the shrewd Japs may by such indirect plans secure indemnity for her expense in bringing Russia to time. What other schemes these wise little people may have for securing substantial compliance with their terms without compelling Russia to exactly break her precedents, can not now be guessed. It is fairly safe, however, to assume that peace will be concluded before the conference shall disband and that Japan will have accomplished that for which she planned at the beginning of the war. Incidentally, she has become mistress of the Eastern seas, and has vindicated her right to recognition as one of the great powers of the world. Possibly she will soon enter upon a dictatorship of Asiatic policies.

SOMETHING ABOUT HOUSE PLANS

EDITOR KANSAS FARMER:—Knowing that you are willing to help a Kansas farmer in his plans for the future, I am taking the liberty to ask your assistance in planning a house that we contemplate building. I enclose a



(Fig. 1.) MR. CLARK'S SKETCH.

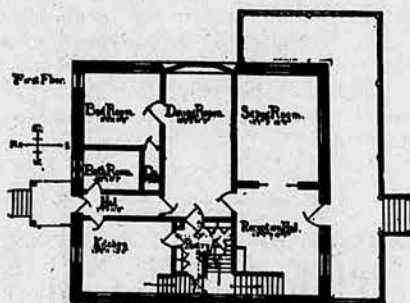
rough sketch of what we think will be a convenient house, first floor. We would like to add to this, second floor with four bedrooms. We would like to have front and back stairs to second floor. We expect to use furnace for heating and will want some cellar room, beside room for furnace and coal or oil, and can put cellar under all if in judgment of the architect it is thought best.

We intend to build of native rock. With cellar dug and rock and sand on the ground, we would like to keep expense inside of \$2,000.

We will be satisfied with plain, hard-pine finish and can get along without finishing the up-stairs and parlor below.

Ottawa County.

This correspondent's letter and sketch show that he means to provide a commodious and pleasant home for living and family. He will warm this home with a furnace. If this is to be a warm-air furnace, it will be necessary to bear in mind the fact that warm air is difficult to convey to a considerable distance horizontally. With hot-water, and especially with steam heaters this difficulty is not so serious. We suggest that Mr. Clark make his house more nearly square. This will cheapen the construction.



(Fig. 2.) PLAN FOR FIRST STORY.

In the modified plan proposed by the editor, the reception hall shown in Mr. Clark's plan is omitted and the front stairs are placed in the parlor. There are two reasons for suggesting this change. The narrow hall with the open stairs is the most expensive and the least useful room in the house. It is just as pretty if enlarged into a parlor in which the results of the expense can be enjoyed by the family and the company. The second reason for suggesting this change is that it is becoming fashionable to have the stairs, at least the first flight, in the parlor.

It will be observed that the front stairs reach a landing which is just back of the partition. The back stairs reach the same landing, starting from the kitchen. This arrangement saves space, gives a half-way resting place, and is entirely satisfactory in the using. A door should be placed on the landing to shut off the back stairs. Another door to shut off the front stairs is frequently used.

The use of the furnace makes it unnecessary to place the bathroom adjacent to the kitchen, although it is better to locate it near the kitchen, so as to simplify as much as possible the plumbing problem. The bathroom should always open into a hall if the house can be so arranged. We suggest a back hall between the kitchen and the bathroom. This will be found a good place for the men and boys to hang their hats and work clothes.

It is preferable to have the bedroom open from the sitting-room, rather than from the dining-room, but this plan does not admit of such arrangement.

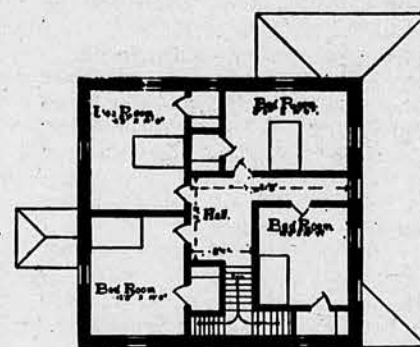
The pantry adjoins the stairs, the kitchen and the dining-room. There may be an outside door under the stair-landing and opening upon the cellar-stair. Such doors are placed in many of the recently-built houses in Topeka.

The chimney is placed in the corner of the pantry and as near the center of the house as possible. So placed, one chimney serves for both the furnace and the cooking range. No other chimney will be needed unless open fires are wanted in some of the rooms.

It will be well to make the cellar under the whole house. To prevent unequal settling it is necessary to give the walls rather deep foundations, so that but little is saved on stone work by making a small cellar. The house will be more elegant in appearance and more healthful if the first floor is placed well above, rather than close to the ground. The excavation of a big cellar can be done, to a large extent, with the scraper, so that the difference in expense in favor of the small cellar is not great. A well-ventilated, well-lighted cellar is very useful.

It is quite practicable to place the laundry in such a cellar and to dry the clothes there in stormy weather.

Do not fail to have a big porch, at farthest, when the house is finished.



(Fig. 3.) PLAN FOR SECOND STORY.

The second story divides very nicely into four large rooms with a closet for each. The hall will give ventilation for all of the rooms and may be used as a sewing room. If desired, this plan may be modified so as to provide a bathroom up stairs.



(Fig. 4.) FRONT ELEVATION.

With the cellar dug and stone and sand on the ground, this building can probably be enclosed and a part of it finished for the sum stated. If, however, it were in Topeka, more of it would be unfinished than finished. But building is cheaper in almost any other part of Kansas than in the city of Topeka. If desired, the dormer windows can be omitted. The home will look better with them, but will present a good appearance without them. They can be put in later at somewhat greater expense than at the time of building. The house will look well with a gable roof, if that is preferred, and there will probably be little difference in cost.

Before building such a house all parts should be drawn to scale, carefully studied and changed until each member of the family is satisfied that the best has been found for the available money. In case of irreconcilable differences of opinion, refer the matter to the editor of the KANSAS FARMER with explicit explanations.

For a Big Fair.

EDITOR KANSAS FARMER:—The fourth annual State Fair will be given at Topeka, September 11 to 16 inclusive, by the Kansas State Exposition Company.

This Exposition Company was organized in 1902 for the sole purpose of reviving the annual State fairs and to endeavor to place this yearly event on such a footing as it deserves, with the end in view that the State will ultimately have full charge of the fair, as is the case in Missouri, Illinois, Nebraska, Iowa, Minnesota and other States.

In working to this end the Kansas State Exposition Company has cooperated with the various live-stock and agricultural societies of the State, which have gone on record time and again as unqualifiedly favoring a State fair under patronage of the State.

It is with the hope that the next Legislature will see the necessity of a well-equipped State fair, under the control and management of the State as a means of encouraging and improving the agricultural, horticultural, live-stock mining and manufacturing interests of Kansas, that the Kansas State Exposition Company is continuing the Topeka Fair; and although the fairs held during the past three years have left no deficit in the

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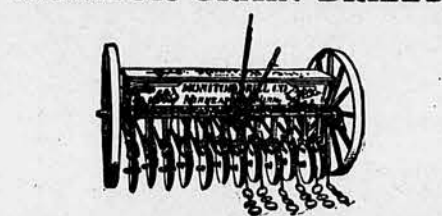


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treasury, they have not been conducted with the view of making money and those who are promoting them have given their time and endeavors without compensation.

The fair managers this year will offer \$1,500 in prizes for individual and county agricultural displays, \$7,000 for live-stock exhibits and \$1,000 in the horticultural department.

From time to time news of the fair will be sent you and the management will be grateful if you will use such as you deem proper in your paper.

The Kansas State Exposition Company extends a cordial and earnest invitation for yourself and family, and representatives of your paper, to visit the fair at Topeka next September. Ample provision will be made on the grounds for the entertainment of the representatives of the press, headquarters will be maintained and special courtesies will be extended. Before the opening of the fair complimentary tickets will be sent to you and to any one else from your paper who wishes to attend.

Thanking you for past favors and hoping that you will attend the fair I am,
C H SAMSON, Secretary.
Topeka, Kans., July 20, 1905.

How Copper Purifies Water.

Henry Beach Needham writes, in the Country Calendar for August:

"The toxic effect of metallic copper upon typhoid bacteria in water gives some hints as to prevention of the disease, by the use of copper tanks. This should not altogether take the place of the boiling of the water; it is useful in keeping it free from contamination, although water allowed to stand in copper receptacles for a period of from twenty-four to forty-eight hours at room temperature would be effectively sterilized, no matter what its contamination and no matter how much matter it held in suspension. But in order to insure such results, the copper must be kept thoroughly clean. This polishing is not, as was popularly supposed, to protect the consumer from copper poisoning, but to prevent the metal from becoming so coated with foreign substances that there is no contact of the copper with the water, hence no antiseptic quality.

"Dr. Henry Kreamer, of Philadelphia, proved that, within four hours, typhoid germs were completely destroyed by the introduction into the polluted water of copper foil.

"Granting the efficiency of the boiling of water for domestic purposes, I believe that the copper-treated water is more natural and more healthful. * * * The intestinal bacteria, like colon and typhoid, are completely destroyed by placing clean copper foil in the water containing them.

"Pending the introduction of the copper treatment of water on a large scale, the householder may avail himself of a method for the purification of drinking water by the use of strips of copper foil about three and one-half inches square to each quart of water, this being allowed to stand over night, or from six to eight hours at the ordinary temperature, and then the water drawn off or the copper foil removed."

"Although a splendid antiseptic, copper in weak solution is not harmful, no more so than the old copper utensils used by our forefathers were harmful. Undoubtedly they were of benefit, and the use of them prevented the growth of typhoid and other bacteria. People of to-day might well go back to copper receptacles for drinking water."

At the markets of Chicago, Kansas City, Omaha, St. Louis, and St. Joseph total live stock receipts during the month of June amounted to 2,874,600 head, as against a similar inbound movement in 1904 of 2,705,668 head, and in 1903 of 2,544,391 head. During the first six months of the current year 17,240,165 head of live stock were received at these five markets, a number approximately 600,000 head greater than that for a like period in 1904, and over two million head greater than for 1903. The present year's movement was divided into 3,429,844 cattle, 277,

530 calves, 9,029,118 hogs, 4,289,758 sheep, and 215,915 horses and mules. As compared with the 1904 figures, gains were made in the arrivals of calves, hogs, sheep, horses and mules, but a slight loss occurred in receipts of cattle.

Hope, Kans., will hold a fall fair this year. Officers have been elected and the arrangements are being pushed rapidly. C. N. White, Zennington, Kans., who holds a Poland-China sale September 1, writes that his gilts are doing nicely, and are safe for September and October farrow to his World's Fair prize-winning boar, Confidential 87935. Write for catalogue and watch the Farmer columns for further particulars.

Sunnyside Stock Farm of Duroc-Jersey swine, Shropshire sheep and Scotch collies have a record that can be excelled by few herds of hogs in any country. Every brood sow on the place has won a blue ribbon in hot competition and some of them have won as many as twelve blue ribbons. This is certainly a prize-winning herd. They exhibit regularly at the Kansas State Fair and at many county fairs in the State and are always prize-winners. This breeding farm belongs to H. H. Hague & Son, Route 6, Newton, Kans., who are strong believers in a combination of good hogs and good alfalfa. Their herd of Duroc-Jerseys has free range on a large alfalfa pasture and are consequently very growthy. This explains the reason for their always winning in the show ring. They do not keep their hogs fat but in the finest of condition and the best of health so that when they are sold they are in the best possible shape to take on flesh rapidly. The first comers will get the pick of the herd and buyers may be sure that the prices are right. It is not often that a buyer can have an opportunity to purchase from a herd where every brood sow is a first-prize-winner. Write them, visit their farm and be sure to see their exhibit at the fairs.

The Lewis and Clark Exposition Live-Stock Show.

The dates fixed for the live-stock exhibits at the Lewis & Clark Exposition are September 19 to 29 inclusive. About \$50,000 in prize-winning money will be distributed at this time among the winners. As the Pacific Northwest is a new field it is very attractive to the breeders of all classes of live-stock who will hope to open up a new and very profitable market for the product of their breeding farms. Perhaps the most attractive exhibit that will appear at the Exposition will be the wonderful showing of Percherons that will be made by McLaughlin Bros. of Kansas City, Columbus and St. Paul. McLaughlin Bros. have lately purchased every champion and first-prize winning Percheron stallion at all the great National and municipal horse shows in France and these magnificent animals are now in their stables awaiting the opening of the Exposition. McLaughlin Bros. will be invincible this year.

J. Crouch & Sons, Lafayette, Ind., and Sedalia, Mo., will show 50 head of their peerless coach-horses and it is predicted that they have their share of ribbons practically won already. In addition to the western exhibitors of Short-horn the famous Tebo Lawn herd headed by Choice goods and the herd of D. H. Hanna of Ohio and E. W. Brown of Delphi, Ind., will be shown. The latter will show the invincible Fair Queen.

A large exhibit of Holsteins, Jerseys, Guernseys, and Ayrshires is already arranged for and the sheep- and goat-men are very active in providing for their exhibits.

Canadian breeders will be present in full force and contest with exhibitors from the States for honors. It will be a great show and none can predict its value to the great Northwest.

Publisher's Paragraphs.

Most poultry keepers take their losses in young chicks as a matter of course. They expect a certain percentage to die, and if the whole hatch goes it does not seem so much a matter of loss as to what caused it. Many remedies have been tried, foods are changed, coops and locations are changed—all with more or less unprofitable endeavor.

Now, as a matter of personal curiosity, if nothing more, why would it not be well to investigate the merits of Dr. Hess Poultry Pan-a-ce-a as a life-saver in young chicks, as well as a profit-maker among the layers. This well-known tonic has been used by successful poultry-men in all parts of the country as a preventive of diseases, including cholera, roup, gas, leg weakness and indigestion. As tonic for growing chicks it has saved thousands, and the cost is so trifling that no poultry-keeper can afford to get along without it. It is so indispensable that the wonder is that the demand does not force a prohibitive price. But as it costs only a penny a day for 30 to 60 fowls, no poultry-raiser who values the life of his chicks should be without it a moment. Now why not start in to-day. Have all the conditions right. Change foods if you think it will help. Do everything for the betterment of your flock that may suggest itself. But by all means secure from your dealer a box of Dr. Hess Poultry Pan-a-ce-a. Give it according to the printed directions, following the instructions carefully and accurately. Then if your losses continue without abatement, write to the company or go to your dealer and your money will positively be refunded.

Dr. Hess Poultry Pan-a-ce-a is recommended as a tonic for all poultry. While its chief use is to establish health and prevent disease, it is an egg producer without equal. Pan-a-ce-a is not a food, but a tonic that forces egg production by acting on the egg producing organs, strengthening them and building up the general health as well.

With such a remedy at hand there is no excuse for great loss at any stage of the development of chicks or lack of profit in old fowls. The fact that it is the common remedy among thousands of suc-

cessful poultry-keepers and farmers should be recommendation enough in itself. But personal experience is needed to clearly demonstrate the value of Pan-a-ce-a, and the guarantee is so fair that all may try it. The makers, Dr. Hess & Clark, are so enthusiastic regarding their tonic that they are willing to guarantee 1000 per cent profit in increased egg production alone.

It is surprising how careless we are when purchasing something that we know little or nothing about.

Take tools, for instance. Who can absolutely determine the quality of a hatchet or axe by merely looking at it?

Furthermore, when we buy an ordinary one, it is not ground, and no one knows what flaws or soft spots may develop when we grind it.

When we buy a defective axe, the only recourse known to some of us is to buy another and trust to better luck next time.

The dealer will never guarantee a nameless tool, but will merely say that it is the best he has.

A neighbor may have had an axe that gave perfect satisfaction, but how do we know that another axe of the same make will be as good?

In fact, we are careless. We say to the dealer, "Give me the best you have," and rely upon him to give us a good one.

Other classes of goods are trade-marked and guaranteed—why not tools?

Thirty-six years ago one concern realized the need of trade-marked tools and perfected a complete line, every one trade-marked "Keen Kutter" and guaranteed. This guarantee authorizes the dealer to refund the money on every unsatisfactory tool, so there is absolutely no risk of defective material.

This naturally means unusual care in their manufacture and excellence of quality that has made "Keen Kutter" tools the standard for the past 36 years, and won for them the grand prize at the St. Louis Exposition.

It is now possible to get an entire set of tools marked "Keen Kutter," with the absolute assurance that they will give perfect satisfaction or the money will be refunded.

This line includes not only edged tools, but tools of all kinds.

If your dealer does not keep them, the Simmons Hardware Co., St. Louis, Mo., and 298 Broadway, New York, will see that you are supplied.

On another page in this issue will be found the advertisement of the Dempster Mill Mfg. Co., Beatrice, Neb., showing the qualities of their gasoline engines. These engines are made in all sizes and styles from 3/4 to 30 H. P., both stationary and portable. They are ready for business at any time. They use no fuel until the work begins. The expense stops when the engine is shut off and they are good for any duty where safe and reliable power is required. The Dempsters manufacture both single cylinder and double cylinder two-cycle types. The latter is made up to 30 H. P. and is especially valuable for operating electric light plants or any other duty where a steady, even, reliable power is wanted. They also made a 2 H. P. engine of the four-cycle type which is ideal for any work where this power is sufficient. It is splendidly adapted to pumping water and can be fitted with a strong, serviceable pumping jack. These engines are all of great durability, are easily managed and reliable at all times. This firm issues a special gasoline engine catalogue handsomely illustrated which will give full information and the guarantee of the engine. There are no valves in the cylinder to clog up, leak or burn out. A temperature of 10 degrees below zero does not effect the efficiency of the engine as the air in the supply-pipe is kept hot by the exhaust. Write to Dempster Mill Mfg. Co., Beatrice, Neb., for one of these catalogues and you will be sure to buy a Dempster Gasoline Engine.

Mr. C. A. Stennard, owner of the famous Sunny Slope farm at Emporia, Kans., who for the past six years has bred and sold more registered Berkshire hogs than any other individual or firm in America, is offering a choice lot of bred sows and boars of serviceable ages. The breeding herd at Sunny Slope is made up of probably the best lot of sows owned in the country. They have been carefully selected from this large herd, saving a few of the best each year, until to-day there is not a sow in the herd that is not a show sow.

One of the best judges of hogs in the country, lately pronounced the herd the best lot of hogs he had ever seen of any breed.

Special attention has been given to the head and ears and nowhere can a handsomer lot of heads be seen.

The herd boars would be hard indeed to improve upon, headed by Berrington Duke 72946, a litter brother to Masterpiece and the choice pig of that litter, he is a boar that it would be hard to improve, a deep, long body set on short legs, with extra heavy bone, the best hams ever seen on a boar, and a head that is simply perfect. The dam of this great boar Duchess CXXI 56257 is still in the herd and is one among the best of the grand lot of sows. The sire, Black Robinhood, died last year, but there are

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STOLL'S STAY-THERE EAR MARK.

The best and cheapest ear-mark made. It possesses more points of merit than any other make. Send for samples. N. C. Stoll, Beatrice, Neb.



NEWTON'S Horse, Cough, Diarrhoea and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per can, of dealers, or Exp. prepaid. The Newtons Kennedy Co., Toledo, Ohio.

SUNNYSIDE HERD OF DUROC-JERSEY SWINE.

Aged sows, yearling sows, spring boars and gilts for sale cheap. Our brood sows have all been prize winners in hot competition. Our spring pigs are sired by Burrells Hague 21469 and Sunnyside Prince 31699. Hague & Sons, Route 6, Newton, Kansas. Phone on farm.

World's Fair

CHESTER-WHITE HOGS

Shorthorn cattle, Oxford sheep and Peafowls. I won 13 prizes on 14 head of Chester-Whites at World's Fair, 1904. Four herd boars in use.

W. W. WALTIRE, Peculiar, Mo.

ANGUS BARGAIN.

I want to sell my herd of registered Aberdeen-Angus cattle, consisting of nine, two and three year old cows, and one bull. Will give some one a bargain.

C. A. LONG, Fredonia, Kan.

HALCYON HOME STOCK FARM

Polled Durhams

Offer some fine blocky bulls about one year old.

C. J. WOODS,

Chiles, Miami County, Kansas

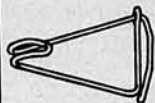
CAN YOU AFFORD IT?

You certainly cannot afford to have horses lame from Spavin, Ring Bone, Splint, Curb, when they may be cured by simply using

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It cures all these and all other forms of lameness. Think about it and then act. Price \$1.00 for 60. As a liniment for family use it has no equal. All druggists. Book "A Treatise on the Horse" mailed free. Address

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THE HOOSIER FODDER TIE

Three for 25c at dealers, or postpaid on receipt of price. J. E. FAUGHT, Mfr., Columbia City, Ind.

CANCER

The only absolute cancer cure in the world and we challenge its contradiction. The cure is permanent or money is refunded by Our Responsible Incorporated Institution. We do not use the Chloride of Zinc formula in the minutest form, such as is in practice by all cancer specialists of Chicago, Kansas City and elsewhere, and which treatment removes the growth but not the disease, and is therefore worthless, as it makes all cases so treated worse, the disease always returning at a more dangerous location. Our remedy and treatment is original in every detail, and here we again challenge contradiction. We do not use the knife or administer chloroform or ether. Write for book or testimonials and information. We warn you against the X-Ray treatment.

DUBUQUE CANCER SANITARIUM. Dubuque, Iowa

many grand good ones left in the herd to his credit. Mr. Stennard takes great pride in this grand herd of Berkshires and says he expects each year to improve the herd, although that is a task that looks almost impossible when looking over the grand lot of matrons now collected there. See add on page 856.

From Factory to Farm

NO AGENTS NO MIDDLEMEN

See what it means.

14 in. Steel Beam Plow, Double Shit best that money can build, only

12 in. \$9.75

14 in. \$12.00

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Sulky Plow \$25

Gang Plow \$35

1000 other articles

See Catalogue

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Buggies, Harness,

Steel Ranges, Best Walking Cultivator, 4 shovel, \$12.00.

Claws, \$15.25. Improved Riding Cultivator, 4 shovel, \$18.00.

\$25.00. Corn Planter, complete, 30 rods wire, \$27.75.

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HAPGOOD PLOW CO.,

(Only plow factory in the United States selling direct to farmers at wholesale prices.)

64-Tooth Lever Harrow \$28.15

64-Tooth Lever \$12.45

14-in. Imp. Lister \$17.75

14-in. Sulky

Lister \$31.55

8-ft. Rake \$16.00

Sowing Machine \$9.00

Best Sewing Machine

Gr. equal to any \$30

machine \$17.50

Steel Range with Res. \$19.70

Fine Top Buggy \$33.50

12-16 Disc Harrow \$17.00

Best Walking Cultivator, 4 shovel and Eagle

Improved Riding Disc Cultivator, 6 Disc,

Address

574 Front St., ALTON, ILL.

In the Dairy

Dairy Queries and Answers.

Inquiry.—When 35 pounds of cream churns 8 pounds of butter, what is the per cent of butter-fat?

Answer.—Assuming that butter contains 82 per cent butter-fat, and also accounting for the fat left in the buttermilk, cream should contain 18.9 per cent of fat.

Inquiry.—Will you please give me the number of tons of ensilage in a square silo, 16 feet deep, 14x18, and its value per ton, with about one-third corn on stock, as compared with clover hay?

Answer.—If after settling there is 16 feet in depth of silage, its average weight per cubic foot will be approximately 30 pounds. A block of silage 14x18x16 feet will contain 4,032 cubic feet. This sum, multiplied by 30, the number of pounds in each cubic foot, gives 120,960 pounds, or in round numbers, 60 tons. In the mere matter of digestive nutriment, clover will contain about 3½ times as much as silage, but silage has, by reason of its succulency, more or less of an increased value and we should count it worth at least ½ as much as clover hay. Really the two ought to be fed in connection, as they supplement each other admirably.

Inquiry.—What sized silo would be best for me? I have five cows and one bull, and intend to have twenty cows in a year from now. Would a silo 12x30 feet high be better than 14x25?

Answer.—There is not much choice between the two sizes you suggest. The one 12x30 would hold two or three tons more than the other, but it would be somewhat more difficult to fill. This, however, would be largely, if not wholly, compensated for by the greater depth, as increased depth is conducive to better keeping of silage. O. EBF.

Milk Fever Treatment.

The KANSAS FARMER has given many times the air-injection treatment for milk fever, but it is yet unappreciated by many. A speaker at a recent Eastern dairy meeting referred to its importance as follows: "Every farmer ought to have a bicycle pump fixed with the tubing, and on the end of that he can put a small milking-tube or goose-quill. Put your bicycle pump in boiling water and let it remain there five minutes, so as to sterilize it in order that no bacteria may be carried into the udder. With this pump you inflate one-quarter of the udder until it is fairly well distended, then the next quarter, and repeat this until all four quarters are fairly well distended; then give the udder a thorough massage, rubbing it well. I forgot to mention that all the milk from the udder should be removed before any air is forced into it. Rub the udder thoroughly and that is all there is to it. You do not need to do anything else. If you can remove the excreta, well and good. If the cow does not get up in an hour, repeat the injection. I have never known of a dairy farmer

who has tried that treatment without having great success. It is a very simple treatment."

White Specks in Butter.

In reply to query, Hoards has the following:

The cause of white specks in butter is usually overripe cream. When cream sours too far before churning, the curd in the cream is hardened by the continued souring and contracted into small white specks which may be retained in the butter if not removed by washing. As a rule, butter of this sort is more commonly made in farm dairies than in creameries, because at the farm dairy, cream is collected for several days and the first lot of cream is likely to be very sour before the mixture of several days' cream is churned. This separates the curd and although it is mixed quickly and thoroughly through the cream during churning, the harder specks are apt to be left in the granular butter and not washed out with the buttermilk.

Butter made from cream containing this kind of curd can be freed from these white specks by washing the granular butter in the following way: When the butter breaks and the granules are about the size of wheat grains, draw off the buttermilk, then fill the churn about half full with cold water, revolve it a few times and let the churn stand until the granular butter rises to the surface of the water; the curd being heavier than the butter will sink to the bottom and may be drawn off through the draining plug at the bottom of the churn. By repeating the washing of the granular butter in this way, one can separate the hard specks of curd very readily and thus prevent their appearance in the finished butter.

Get Good Cows.

The substitution of high-class cows for low-class ones is one of the tasks facing the American farmers. Each farmer must perform his part of the great task for himself. The man who is losing money regularly on his dairy of twenty or thirty scrub cows can begin to breed up his herd now. In a year or two he can get a start at little or no extra expense. In three or four years his improved young stock will give him more income. In eight or ten years he can reduce his twenty scrub cows to ten cows above the average. He will then spend one-half as much for feed and work, and he will get 50 to 100 per cent more milk. In other words, he will have cut his costs of production in two, and he can sell his milk at a profit even at the low rates that prevail in the glutted markets.

This is what is being done by the milk-producers who are called "model producers" or "model farmers." There is not a thing done by these men that can not be done by any man who can weigh a can of milk. There is no mystery at all in the work. The steps are short, plain, and easy. The high-class cow is the only cow that can make money for her owner.

Now a practical word or two as to what should be done.

1. The farmer must make up his mind to read more and know more than he has known about the true meaning of this business.

2. He must breed better; stop buying poor, cheap bulls and the production of poor cows. The fountain head of better quality in the cow is the character of the sire.

3. Create better conditions in the stable. Give the cow better air to breathe, better food to eat, good water to drink and cleaner conditions to live in.

Holding Back Milk.

According to Professor Stewart, the following is the explanation why cows sometimes hold up or keep back their milk. The production of milk is due to a nervous action by which the glandular substance of the udder is broken down into milk whenever the cow is influenced by sufficient excitement of the right kind. It depends upon the structure and function of the udder just as much as the sections of other

glands do, which we know are wholly subject to a set of nerves controlling this distinct function. The udder is not a mere vessel for holding milk that is supposed to be secreted continually and gathers in the udder, as one may suppose a constant dripping of any fluid would fill any other receptacle. On the contrary, it is a gland, made up of cellular substance, which grows by separation (from the blood) of the matter required. When it has attained maturity, or when the necessary nervous action occurs, it breaks down into a special product—milk.

Several experiments have been made with the udders of cows in milking condition that have been slaughtered, and an examination has been recorded of the udder of a cow accidentally killed on the railroad when going home to be milked, when she would have given the usual ten quarts. The microscope showed the minute globules of the tissue swollen and distended, but the udder contained practically no milk, except a very small quantity that drained from the divided tissue when cut across.

We perceive that this function of the cow is wholly nervous in its action, as, indeed, every other function of the animal is, and if the due nervous excitement is absent, there is no functional action. It is wholly due to the right influence on the nerves that the milk is produced and flows from every ultimate globule of the udder down through all the ducts, small and great, to the teat. Then, if all goes well, and the cow is in her natural, easily excited, nervous condition, as soon as the milker begins to touch the teats the cow lets down the milk—that is, she does not exert herself to oppose the action of the nerves of the mammary glands.—American Cultivator.

Miscellany

Ants and Spiders.

BY ELBERT S. TUCKER.

Museum Assistant in Systematic Entomology, University of Kansas, Lawrence.

"Ants thrive here in California. There are all kinds of them, large and small, young and old, black and red, fat and lean; some are laced in the 'Pinch-in' corsets and some are without corsets—by the way, those without corsets are the most industrious, which goes to prove that corsets are not healthful. (See remark 1.) Ants are more intelligent than some of the animals called 'man' whom I have seen. They outwit me every day. They have no respect for this animal called 'man'; they wade right through his food and even devour and carry away all of it, if possible, before being found out. They form long lines of march and invariably embrace or salute each other when passing; I do not know what they call the ceremony as I do not understand their language, but they invariably touch heads except when a bone has been picked in dispute. (See remark 2.) Those of inferior station prostrate their faces on the earth, or the kitchen table as the case may be, when meeting those of superior birth. (See remark 3.) These same little creatures are re-

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All Others Combined

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vengeful. An army of much greater numbers than Togo and Rojestevenky ever had together threw up breastworks and built a fortress over the whole of our back yard. We did not resent it at first, but in time they became unwelcome, and, thinking I could destroy the whole army at one grand movement, I poured the teakettle full of hot water down their tunnels, which action probably caved them in and certainly disconcerted the ants and made them wrathful. They immediately took revenge by building new and secret channels of entrance and exit and formed a new line of march into the house above the coal-oil rags along the edge of the floor.

"I studied their maneuvers for a while, then taking a so-called coal-oil rag, wiped every ant in sight out of existence. I knew that no ants would march that way again soon, but recruits would probably form a new line some two or three feet above the wall and across the doors, which they did, for the goal was a pantry shelf on which some canned fruit and jelly were stored. While these ants were working here, many others were at work in every other part of the house, for they were retaliating by attacking our fort.

"The next morning they had formed a new line of march across the doors and wall two feet above the coal-oil road. (Our kitchen is sealed, not papered.) I immediately destroyed the recruits by coal-oiling them and their way and in a few hours looked for their second new line which I found at the top of the wall. I treated them as before, and nothing daunted, in four hours they had formed an irregular line at the top of the door as some had not yet understood their generals who ran here and there giving directions.

"I think they may as well be allowed to feed on preserves on the outside of the can as on the sugar and syrup in the cupboard or the stray crumbs on the floor. They will be fed even if only in the coal bucket on the sack that had prunes in it, or on the cornmeal in the bin, or the baking powder in the can, but they do not feed on the latter more than once. They may well be compared with the Japs for persistence."

While the letter is written in a spirit of pleasantry, pardon is asked for making corrections to misleading statements.

(Remark 1.) The thread-like waist or stem of the abdomen, which gives

(Continued on page 851.)

Sharple's TUBULAR CREAM SEPARATORS

Will you buy a bad separator because the agent is a "good fellow?" Some people do. They should read this.

If You Have a Brand New Separator

not a Tubular, put it in the garret. We guarantee Tubulars to make enough more butter than any other separator, and from the same milk, to pay 25 per cent yearly interest on their cost. You test them free side by side. Your decision is final. Carnegie is using investments paying 6 per cent; here is a guaranteed 25 per cent to you. The waist low supply can—simple bowl—enclosed, self-oiling gears—are found only on Tubulars. Catalog T-165 explains it.

THE SHARPLES SEPARATOR CO.
WEST CHESTER, PA.
TORONTO, CAN. CHICAGO, ILL.

DON'T KEEP COWS

Make Your Cows Keep You.

With an Easy Running Empire Cream Separator

Your cows will not only keep themselves, but will bring you dollars in profits. A postal to us will bring the proofs.

EMPIRE CREAM SEPARATOR CO., Bloomfield, N. J.
311 Temple Block, Kansas City, Mo.



CLEVELAND

This Cleveland Cream Separator is sold on the fairest and squarest plan ever devised. A fair trial on your own farm under your own conditions. The easiest to clean, the easiest to run, the best skimmer. We can save you from \$20.00 to \$30.00. Write and we will prove it to you. We will also send you a free book, telling just how the Cleveland is made and how it is sold. Write to-day. The Cleveland Cream Sep. Co., 34 Michigan St., Cleveland, O.

Miscellany

Official Kansas Facts.

SECRETARY F. D. COBURN.

The fact that Kansas produces more wheat than any other State or country in the world naturally causes much earnest watchfulness and discussion of its acreage, condition, prospects, yield and quality, at home and throughout the grain, milling, transportation, breadstuff, banking and commercial centers of civilization. This would naturally persuade those without knowledge of the facts to suppose that wheat is by far the State's main and foremost crop; yet compared in importance and value with her corn, wheat is a side issue, and but one of various secondary items the worth of which must be aggregated to even approach the value of corn.

In the past ten years the value of Kansas' corn crops has been \$106,000,000 more than that of the wheat produced in the same period, which included three of the State's largest wheat crops and one of the smallest of corn. In the preceding ten years the corn was worth nearly \$200,000,000 more than the wheat. The Kansas corn crop was worth over \$6,000,000 more than all other products of the soil in 1902, and in two preceding seasons corn outvalued all the other field products, wheat included.

Great as the wheat crops have been, for 25 of the 43 years of which there is record, statistics reveal that the aggregate value of the corn crop was more than double that of the combined yields of winter and spring wheat, and in but few years has the value of the wheat crop approached or surpassed that of the same year's corn. The value of the corn alone in each of 15 years of the past 20 has been greater than that of all other field crops together, wheat omitted, and in only one year (1901), of the past decade did corn fail to outvalue the same crops. In other words, in each of the past 10 years, save one, the annual corn crop was of greater worth than the same year's oats, rye, barley, buckwheat, Irish potatoes, sweet potatoes, castor beans, cotton, flax, hemp, tobacco, broom-corn, millet and Hungarian, sorghum, Milo maize, Kafir-corn, Jerusalem corn, prairie hay, tame hays, alfalfa, and horticultural products marketed.

In 1899, according to the Government's reports, the Kansas corn yield was greater than that of all the New England States, New York, New Jersey, Delaware, Michigan, Virginia, South Carolina, Florida, West Virginia, Maryland, Minnesota, North and South Dakota, Montana, Wyoming, Colorado, New Mexico, Utah, Washington, Oregon, California and Oklahoma. Five years later, in 1904, in spite of her destructive floods, Kansas produced more corn than all New England, Pennsylvania, Minnesota, and thirteen additional States and Territories. In almost any year three or four of the more northern of the State's 105 counties produce more corn than the entire Dominion of Canada. In 1889 the yield of corn in Kansas was 273,888,321 bushels.

The value of the Kansas corn crop of 1902, from only 13 per cent or her area, was sufficient to more than five times cover the cost of the entire Louisiana Purchase, and nearly eleven times as much as the United States paid for all Alaska.

The value of her corn grown in the past twenty years is \$100,000,000 more than that of all the wheat crops grown by Kansas since her beginning.

The three or four States excelling Kansas in total corn-production are her immediate neighbors of the prairie. Of these she is neither jealous nor envious; and to overcome any deficit in meat-making foods caused by a decrease in corn she has only to utilize one of her three, four, or five cuttings of alfalfa harvested each year.

Missouri, for example, is admittedly one of the world's foremost corn States; yet Uncle Sam's reports show

that Kansas in 1896 and 1899 raised more corn by 40 per cent than was raised by Missouri.

Uncle Sam's reports point out that in the five-year period ending with the year 1900, the combined value of Kansas' corn and wheat exceeded that of the same crops of any other State in the Union. Illinois came next, but fell behind Kansas by a little less than \$19,000,000.

In corn Kansas is a billionaire; in the last twenty years the State has raised 2,956,122,161 bushels, worth on the farms where grown over \$821,000,000. In Kansas, corn is the monarch cereal and Prosperity's barometer.

Kansas raises a wide diversity of crops, and below are shown the bushels and home values of two of them (corn and wheat), for the past ten years:

Year.	Wheat, Bushels.	Corn, Bushels.	Combined Value.
1895.....	16,001,060	201,457,396	\$53,652,891
1896.....	27,754,888	221,419,414	48,890,206
1897.....	51,026,604	152,140,993	62,940,597
1898.....	60,790,661	126,999,132	63,235,140
1899.....	43,657,013	225,183,432	75,936,366
1900.....	77,339,091	134,523,677	81,555,980
1901.....	90,333,065	42,605,672	72,341,720
1902.....	54,649,236	201,367,102	107,461,143
1903.....	94,041,902	169,359,769	109,504,497
1904.....	65,141,629	132,021,774	102,123,211
Totals.....	580,765,179	1,607,078,361	\$777,642,371

What the Graduate of the Agricultural College May Expect.

Will you please give me an idea as to what pay the average student may reasonably expect on completing the agricultural course? What is the prospect? Do your graduates readily secure positions? How are they principally absorbed? Wm. C. WISE.

Douglas County.

A large percentage, probably 50 per cent or more, of our graduates in the agricultural course become farmers, returning to their homes to farm their own farms; a considerable number enter the experiment station and agricultural college line of work; while others, and this percentage is increasing, become foremen or managers on large farms. It is not always easy to secure a position at once upon graduation, as almost all of the positions, outside of farming for oneself, require men of some experience.

Usually there is opportunity for young men to start in as employees on large farms with the prospect of working up. The farmers are just beginning to appreciate the value of our college educated men as foremen and managers, and I take it that this will be a line of work that will offer employment to a large number of our graduates in the near future. The objection which graduates make to accepting positions of this kind is that the pay is low at the beginning, usually not more than \$30.00 per month with room and board furnished. I have learned however that in engineering trades and other lines of industry, college men are not usually paid high salaries at the beginning of their employment, but must prove their ability by work before they are advanced in position and pay.

Where our young men take positions in experiment stations and agricultural colleges, it is unusual for them to be paid less than \$50 per month when they furnish their own board and rooms, and sometimes larger salaries are paid.

Of course a young man without experience must take a subordinate position and gradually work to a more advanced position and higher salary. Of all lines of education I do not think there is any which offers greater inducements to young men of energy and ability than the agricultural courses in our agricultural colleges. The heads of departments in the agricultural colleges and experiment stations receive about \$2,000 per annum, while assistants' salaries range from \$800 to \$1,500. But such salaries are not large compared with what an educated energetic farmer may make on a well-equipped good half-section farm in a good farming district.

I shall be pleased to hear further from you, and have requested President Nichols to forward you a catalogue describing the college courses.

A. M. TENEYOK.

SEVEN WONDERS

of the American Continent: Yellowstone National Park; The Great Shoshone Falls; The Columbia River; Mount Hood; The Big Trees of California; The Yosemite; and the "Out-Of" across Great Salt Lake

Can all Be Seen on a Trip Over the

UNION PACIFIC

AND CONNECTIONS

TO THE

LEWIS & CLARK EXPOSITION

Portland, Oregon, June 1 to Oct. 15, 1905.

The Decaying Towns.

Much has been written within the past ten years about the dwindling and decaying towns in New England that are remote from the modern currents of travel and social life. We use the words "dwindling" and "decaying" because they are both applicable, one fact as the consequence of the other. The town that is losing population is losing also its enterprise and its good character, if it had any. Intellectual and moral deterioration is apt to follow deterioration of material prosperity. This statement may appear at first blush to be inconsistent with the statement more frequently heard in these days that the virtue of the people of the country is being corrupted because of the abounding material prosperity. But there is no real contradiction. Every student of social conditions is aware of the fact that poverty as well as wealth is a promoter of evil conditions. The need of the average person is to have such a degree of prosperity as will save him from discouragement and despair. Persons who are hopeless of bettering their condition are as liable to make the worst of it as to make the best of it.

Thus it happens that in towns, many of them mill-towns, which have been left stagnant and deteriorating, from which the brighter young folk get away as fast as possible, where the farms cease to be profitable owing to want of proper culture, to the difficulty of marketing crops, to the crushing competition of the more fertile sections of the country cheaply transported to their natural markets, there has been a notable decay of contentment, public spirit and moral energy, as well as of wealth. Schools and churches feel the effect very soon, and the people who remain are those who can not get away, commonly the least enterprising, robust and helpful, the aged, the ne'er-do-wells, the degenerates. The influences that make for good are weakened, the influences that make for evil are disproportionately prevalent and strong. The conditions are especially deplorable in the case of the children.—Boston Herald.

Farm Notes.

N. J. SHEPHERD, ELDON, MO.

Stalk is the stem of a plant. Stalk is the stem or trunk of a tree. Be careful not to pasture the meadows too closely.

In making a lawn, having the soil too rich is as bad as having it too poor.

Other things being equal, that farming pays best which produces the best manure.

Any kind of live stock will depreciate in value when cut short in its rations.

With many products, how to sell is of equal importance with how to produce.

The more condensed and the nearer finished the products are the better the farm will pay.

Other things being equal, of two animals, the one which is the better feeder will be the more profitable.

Mixed grasses make a better and surer pasture than a single variety, though it be the best of all.

No farmer needs more to be a student, an experimenter, and a close observer than the one who is turning out dairy products for the market.

No animal of a fixed and long inherited type will control the type of the offspring when coupled with an animal of ordinary character.

Look out for the supply of seed wheat in good season and be sure that it is sound, plump, clean, and of the best quality.

Plan to grow as large a crop as possible, but also take care to return to the soil the elements you took from it.

Luck in planting is about like the luck in other things, it generally means good common sense and good management.

Feeding for profit begins pretty soon after the calf is dropped; in other words, the animal must be well fed from birth to maturity.

Do not delay cutting until too late. When the grain begins to harden well is the best stage for securing the best feed.

It is only the demand for plant food, in excess of that which the farm produces, which should be supplied by commercial fertilizers.

A moderately quick walk, either when under a load or when empty, exhausts the animal less than the snail-pace.

An attempt at cleanliness is elevating to the farmer and conducive to the content and growth of the animals in his care.

If there is one place above another in which the gain upon the income of the farm can be increased, it is certainly in improving the farm stock. There are no exceptions to this rule.

"For the past ten years the annual average yield of corn has been 24.88 bushels per acre," says the Cincinnati Price Current. "Should it yield this season correspondingly to the ten-year average of July condition and yield the outcome would be about 2,830,000,000 bushels. The possibilities of the crop, however, are much above this, reaching fully 2,600,000,000."

The Poultry Yard

CONDUCTED BY THOMAS OWEN.

The Practical and Theoretical Feeding of Laying Hens.

FRED VAN DORP, TOPEKA.

The subject of stock-feeding as related to poultry is hardly appreciated by most farmers and poultry breeders of this State. Poultry keeping as a special business or an extended branch of other farming is not carried on as yet to any extent. In the eastern part of the United States especially, this is an important occupation and all of the State experiment stations are doing considerable work along this line. To the general farmer of this State a little knowledge of how to feed his flock of hens would increase his winter income as do the improved methods of feeding his other live-stock. But to the one who keeps laying hens on an extended scale for the most profit this subject is of the greatest importance. Is he feeding more than is necessary for maintenance and the maximum egg-production? Is he feeding protein in one kind of feed when he can feed it in a different form for one-fourth less money? Is he feeding nutrients in the proper proportions? These are questions to be studied. The present haphazard methods require it. Each has his own method which his own narrow experience has taught him is the most successful. No two poultrymen feed alike and on a great many feeding questions they have many diverse opinions of what is correct. The common method is to throw them what grain they will eat, usually corn, and let them do the rest.

NECESSITY OF BALANCED RATIONS.

Balanced rations are as necessary for poultry as for other stock. They do not always work out to be the best in practice, with the stock on the farm, but in the majority of cases they prove to be the most economical. All of the most successful dairymen feed their cows reasonably well-balanced rations. A balanced ration is necessary for the most economical consumption of food with poultry for the same reasons as with other stock. A fowl can profitably use only a certain amount of protein, carbohydrates, and fat. It is used in body maintenance, deposit of fat, product, and excrement. If too much protein is consumed the excess is waste, and so with the other nutrients. They must be supplied in a certain amount and proportion to maintain the body and provide for a maximum product. But with our present knowledge we can only use feeding standards as guides and not as anything absolutely correct.

Table showing the composition of poultry feeds:

Feed stuffs.	Per cent dry matter—ash.	Per cent of digestible nutrients.		Calories per lb.	Nutritive ratio 1:
		Pro.	Carbo.		
Corn	89.1	7.14	66.12	4.97	10.8
Kafir-corn	87.5	6.78	53.58	1.33	9.8
Oats	89.	9.25	48.34	4.18	6.2
Wheat	89.5	10.23	69.21	1.68	7.1
Sorghum seed	87.2	7.	52.1	3.1	8.4
Wheat screenings	89.5	8.	60.02	1.80	6.67
Bran	88.5	12.01	41.23	2.87	4.
Middlings	84.	12.79	53.15	3.4	4.8
Shorts	88.3	12.22	49.98	3.53	4.8
Corn meal	85.	6.26	65.26	1,318.55	11.7
Gluten feed	91.9	19.95	54.22	4.75	3.3
Gluten meal (Chicago)	90.5	32.09	39.96	5.25	1.6
Linseed meal (O. P.)	90.8	28.76	32.51	7.06	1.7
Linseed meal (N. P.)	90.1	30.59	38.72	2.9	1.5
Cottonseed meal	91.8	37.01	16.52	12.58	1.2
Green cut bone	84.	22.3	.....	16.5	1.7
Animal or meat meal	90.	35.	.....	10.	.63
Beef scrap	89.9	50.	3	13.7	1.415.04
Blood meal (dried)	91.5	52.3	.....	2.5	1.078.28
Skim-milk	9.4	3.01	5.1	3	163.51
Alfalfa (cut hay)	91.6	10.58	37.33	1.38	949.36
Clover (cut hay)	84.7	7.38	38.15	1.81	923.24
Potatoes	21.1	.9	16.3	.1	325.012
Cabbage	15.3	1.8	8.2	.4	181.12
Beets	13.	1.21	8.84	.05	189.04
Mangels	9.1	1.03	5.65	.11	128.89
Turnips	9.5	.81	6.46	.11	139.86
Rutabaga	11.4	.88	7.74	.11	164.97

The following shows the relative cost of feeds at Kansas prices for the last several years:

Feed stuff.	Cost of Pro. per lb. not allowing for other nutrients.	Average cost per 100 lbs.
Corn	\$.712	.10
Kafir-corn .....	.575	.0975
Oats .....	.812	.0988
Wheat	1.00	.0976
Wheat screenings .....	.80	.10
Corn meal .....	.75	.1188
Bran .....	.80	.0666

Sherts .....	.80	.0654
Middlings .....	.80	.062
Linseed meal	1.20	(O. P.) .0417 (N. P.) .0392
Cottonseed meal	1.40	.0378
Gluten feed	1.10	.0651
Gluten meal	1.30	.0392
Green bone	1.00	.0448
Meat scraps	2.50	.05
Animal meal	2.50	.0714
Dry blood-meal	3.00	.0673
Skim-milk .....	.20	.0664
Cut alfalfa hay	1.00	.0935
Cut clover hay	1.00	.1355

The different nutrients of the feeds have different functions in the animal body although they are interchangeable to a certain extent in some respects. With laying hens, of which we are speaking, protein is used for maintenance and repair of body tissues and any excess is used in the natural product of that individual. It will also produce heat when there are not sufficient carbohydrates and fats furnished. Carbohydrates maintain the body temperature and produce muscular energy. Any excess is deposited as fat. Fats have practically the same functions as carbohydrates. Their fuel value is two and one-fourth times that of the protein and carbohydrates. Fats and carbohydrates are also necessary constituents of the egg. Mineral matter which is not a nutrient strictly speaking is nevertheless necessary for the health of the birds. It hardens the bone and furnishes material for the eggshell, and is also contained in the egg.

CONSIDERATION OF DIFFERENT FEEDS.

We will next consider the different feeds as to their use in feeding poultry. Of the grains, corn is the most plentiful in Kansas. It is desirable in winter being a heating food and low in cost. Wheat is one of the best poultry foods. It is the ideal whole grain. It has a good per cent of protein and is not heating. Oats are good for variety, but are too bulky to feed in large quantities. The nutrients are well proportioned. Kafir-corn is well liked by fowls and is an excellent food, similar to corn in composition, but does not contain as high a per cent of nutrients. Sorghum seed is a valuable feed, but it is so expensive that it can be replaced by other cheaper feeds. These are the only whole grains that it is practicable to feed in Kansas.

Considering the other concentrates, ground corn is similar to whole corn, though slightly lower in digestible nutrients. Mill by-products are not necessary where a ration can be balanced without them, but they are often cheaper, considering their nutritive value, especially where a part of the feed is purchased. Wheat bran is a very valuable food. When in the mash it lightens the food, but if fed in too large quantities it is often not thoroughly acted upon by the digestive juices. Middlings and shorts are similar in composition and not much different from bran. Linseed meal is useful in small quantities to balance the

ration with respect to protein. It is also a good conditioner. Cottonseed-meal is so concentrated as to require great care in limiting the amount to be fed.

The principal foods of animal origin are green bone, blood meal, meat scrap and skim-milk. Green cut bone is the most valuable, although it does not contain the most nutrients. Dried blood is highly concentrated in protein

and too expensive for common use. Commercial meat scrap is very valuable and often a cheap source of protein. A difference in composition of different brands makes this food sometimes misleading. Skim-milk is more valuable than whole milk for poultry-feeding and should always be used when it can be secured, either in mash or to drink.

Grasses, legumes and vegetables are ordinarily considered equal in value, but there is a vast difference. Leguminous plants are superior on account of the higher protein content. Alfalfa is more valuable than clover. The more common vegetables are beets, mangels, turnips and rutabagas. Of these, beets are the highest in protein and mangels have the narrowest nutritive ratio. They are all low in nutrients and are not fed primarily for the nutrition to be gained from them. Their succulency is the important factor, aiding in the digestion and neutralizing the effects of continued dry feeding.

(Continued next week.)

Kansas Fairs in 1905.

Following is a list of fairs to be held in Kansas in 1905, their dates, locations and secretaries, as reported to the State Board of Agriculture and compiled by Secretary F. D. Coburn:

Allen County Agricultural Society: J. T. Tredway, Secretary, Iola; September 12-15.
Barton County Fair Association: W. P. Feder, Secretary, Great Bend; August 29-September 1.
Brown County—The Hiawatha Fair Association: Elliott Irvin, Secretary, Hiawatha; September 5-8.
Butler County Fair Association: H. M. Balch, Secretary, Eldorado; October 2-6.
Chautauqua County—Hewins Park and Fair Association: W. M. Jones, Secretary, Cedar Vale; October 17-19.
Clay County Fair Association: Walter Puckey, Secretary, Clay Center; October 10-12.
Cloud County Fair Association: W. G. Reid, Secretary, Concordia; October 3-6.
Coffey County Agricultural Fair Association: Henry Jackson, Secretary, Burlington; September 19-22.
Coville County—Eastern Coville County Fair Association: J. M. Henderson, Secretary, Burden; September 27-29.
Coville County Agricultural and Live-Stock Association: W. J. Wilson, Secretary, Winfield; October 3-6.
Crawford County Agricultural Fair Association: Frank McKay, Secretary, Pittsburg; September 18-23.
Elk County Agricultural Fair Association: E. B. Place, Secretary, Grenola; September 19-21.
Finney County Agricultural Society: A. H. Warner, Secretary, Garden City.
Ford County Agricultural Society: Nic Mayrath, Secretary, Dodge City; second week in August.
Franklin County Agricultural Society: Carey M. Porter, Secretary, Ottawa; September 5-9.
Greenwood County Fair Association: C. H. Weiser, Secretary, Eureka; August 15-18.
Herper County—Anthony Fair Association: W. W. Bird, Secretary, Anthony; August 7-11.
Harvey County Agricultural Society: J. T. Axtell, Secretary, Newton; September 26-30.
Jefferson County Agricultural and Mechanical Association: Geo. A. Patterson, Secretary, Oskaloosa; September 5-8.
Jewell County Agricultural Fair Association: Henry R. Honey, Secretary, Mankato; September 5-8.
Linn County Fair Association: O. E. Haley, Secretary, Mound City; September 11-15.
McPherson County Agricultural Fair Association: H. A. Rowland, Secretary, McPherson; September 11-16.
Marshall County Fair Association: E. L. Miller, Secretary, Marysville; September 12-15.
Miami County Agricultural and Mechanical Fair Association: W. H. Bradbury, Secretary, Paola; September 25-28.
Mitchell County Agricultural Association: P. G. Chubbick, Secretary, Beloit.
Montgomery County—Coffeyville Fair and Park Association: R. Y. Kennedy, Secretary, Coffeyville.
Morris County Exposition Company: M. F. Amrine, Secretary, Council Grove; September 26-28.
Nemaha County Fair Association: W. H. Fitzwater, Secretary, Seneca; August 30-September 1.
Neosho County Fair Association: H. Lodge, Secretary, Erie; September 26-29.
Neosho County—Chanute Fair and Improvement Association: A. E. Timpane, Secretary, Chanute; August 28-September 2.
Ness County Agricultural Association: J. S. Wagner, Secretary, Ness City; September 6-8.
Norton County Agricultural Society: M. F. Garrity, Secretary, Norton; August 29-September 1.
Osage County Fair Association: E. T. Price, Secretary, Burlingame; September 5-8.
Reno County—Central Kansas Fair Association: A. L. Sponsler, Secretary, Hutchinson; September 18-23.
Rice County Agricultural Fair and Live-Stock Association: E. E. Potter, Secretary, Sterling; September 4-6.
Riley County Agricultural Society: Jno. W. Cone, Secretary, Riley; August 8-11.
Rooks County Fair Association: E. S. Williams, Secretary, Stockton.
Saline County Agricultural, Horticultural and Mechanical Association: H. B. Wallace, Secretary, Salina; September 12-22.
Shawnee County—Kansas State Exposition Company: C. H. Samson, Secretary, Topeka; September 11-16.
Smith County Fair Association: Mile Dimond, Secretary, Smith Center; August 22-25.

Stafford County Fair Association: Geo. E. Moore, Secretary, St. John; August 23-25.
Wilson County—Fredonia Agricultural Association: J. T. Cooper, Secretary, Fredonia; August 22-25.

POULTRY BREEDERS' DIRECTORY

CHOICE B. P. ROCK cockerels and pullets—Collie pups; send for circular. W. B. Williams, Stella, Neb.

S. C. B. LEHORNS EXCLUSIVELY—Some fine young cockerels and pullets for sale cheap if taken early. J. A. Kaufman, Abilene, Kans.

EGGS FOR SALE—S. C. W. Leghorns, W. Wyandottes; \$1 per 15. W. H. turkeys, \$1.50 per 9. Emden geese, \$30 each. W. African guinea, \$1 per 17. All guaranteed pure-bred. A. F. Hutley, Route 2, Maple Hill, Kans.

MAPLE HILL Standard-bred S. C. B. Leghorns champion layers, none better; cockerels from State prize-winners. \$1 per sitting; \$5 per 100. Mrs. D. W. Evans, Edgerton, Kans.

STANDARD BRED SINGLE COMB BUFF LEHORNS—Headed by first prize pen Chicago Show 1903 and took six first prizes and first pen at Newton 1904. Eggs, \$3 for 15. S. Perkins, 801 East First Street, Newton, Kans.

S. C. W. Leghorns and Buff Rocks. Winners at State Fairs. Eggs, \$1 per sitting. J. W. Cook, Route 1, Hutchinson, Kans.

TO GIVE AWAY—50 Buff Orpingtons and 50 Buff Leghorns to Shawnee county farmers. Will buy the chicks and eggs. Write me. W. H. Maxwell, 521 Topeka Ave., Topeka, Kans.

BARRED AND WHITE PLYMOUTH ROCK Eggs, \$2 per 15; \$5 per 45. Hawkins and Bradley strains, scoring 98% to 94%. Mr. & Mrs. Chris Bearman Ottawa, Kans.

Golden Wyandottes

Winners at Topeka Poultry Show, January 1905, 2, 3 hen, 3 pullet, 2 cock, 2 cockerel. A few birds for sale. Eggs, \$2 per 15. J. D. Moore, Route 2, Blue Mound, Kans.

"A NINE TIMES WINNER"

Bates Pedigreed Strain of White Plymouth Rocks have been shown in nine poultry shows the past two years and

Won in Every One of Them.
If they win for us, their offspring ought to win for you. Eggs, \$1.50 per 15. Emden geese, \$30 each. White Wyandottes also hold their own in the show-room. Eggs, \$1 per 15.
W. L. BATES, Topeka, Kansas.

White Plymouth Rocks

EXCLUSIVELY.

Good for Eggs, Good to Eat, and Good to Look at
W. F. Rocks hold the record for egg-laying over every other variety of fowls; eight pullets averaging 225 eggs each in one year. I have bred this strain since for twelve years and have them scoring 94 to 96%, and as good as can be found anywhere. Eggs only \$1 per 15; \$5 per 45, and I prepay expressage to any express office in the United States. Yards at residence, adjoining Washburn College. Address
THOMAS OWEN, Sta. E. Topeka, Kans.

POULTRY SUPPLIES

Thasalia (rice powder).....\$4
Coco-carbo (rice killer).....\$4
Egg Maker.....\$4
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Roup Felt.....\$4
Medicated Nest Eggs.....\$4
Conkey's Roup Cure.....\$4
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520 Kansas Ave., Topeka, Kans.

SCOTCH COLLIES.

REGISTERED GUERNSEY BULLS—Ready for service. Also pure-bred Scotch Collie puppies. G. C. Wheeler, Mgr., Perkins Farm, Harlem, Mo.

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Eyes examined free accurately by mail. Any style glasses, \$1. Write for free examination sheet and illustrated catalog. Satisfaction guaranteed. E. H. Baker Optical Co., 524 Kansas Ave., Topeka

NEW BOOK JUST ISSUED SUCCESSFUL FRUIT CULTURE

A Practical Guide to the Cultivation and Propagation of Fruits.

By SAMUEL T. MAYNARD,
Formerly Professor of Horticulture at the Massachusetts Agricultural College.

This book is written from the standpoint of the practical fruit grower; it is up to date in every particular, and covers the entire practice of fruit culture. It gives in plain, practical language, descriptions of such varieties as are most in demand in our markets, and the methods practiced by the most successful cultivators of many sections of the country. Separate chapters are devoted to the apple, pear, peach, apricot and nectarine, plum, cherry, quince, mulberry, grape, blackberry, raspberry, cranberry, strawberry, blueberry, huckleberry, subtropical fruits, propagation of fruit trees and plants, fruit growing under glass, insect pests and fungous diseases. The chapter on the apple is particularly comprehensive and complete, forming a monograph in itself. The chapter on forcing peaches, grapes, strawberries, and other fruits, describes the most successful methods of the present day, and is the most recent practical treatise on this important industry.
Illustrated, 5x7 inches, 265 pages. Cloth. Price, postpaid, \$1.00.

KANSAS FARMER COMPANY
TOPEKA, KANSAS

ANTS AND SPIDERS.

Continued from page 848.)

the "Corset-pinched" appearance, is characteristic of all true ants and serves to distinguish them from white-ants which are "unlaced" examples and belong to an entirely different order of insects more properly known as termites. The latter avoid the light, generally mining in old wood.

(Remark 2.) Professor Comstock says: "They have a language that seems to exist through the sense of touch. The antennae are most sensitive organs, and when ants meet they cross their antennae and pat each other." He also says that each community lives in perfect harmony, but utterly disregards the rights of others, therefore conflicts are prevalent between individuals as well as united masses from different colonies.

(Remark 3.) "There are always three classes of ants in a colony: Males, females and workers. The males and females are winged, the workers wingless." The parents appear at mating time and the females become queens, gnaw off their wings, and are attended in the nest by workers which are undeveloped females and which do all the work. Only the workers, then, form lines of march, and all are evidently equal in station; the many strange ways of conduct shown in meeting each other, such as prancing about or acting hilariously, indicate joy, amusement, or other concern.

Ants in the house are a common nuisance to housekeepers nearly everywhere and many women have given up in despair all efforts to keep the intruders from kitchen or pantry. When a stray ant discovers some alluring article of food, mainly sweet substances, the news is soon communicated to the colony to which the explorer belongs and an army of foragers is started in motion from the nest to the food and return. Countless numbers of the throng may be killed day after day, yet the stream of live ants usually continues to appear undiminished and the places of the dead are quickly filled by fresh invasions. The hopelessness of the task of trapping or killing by hand becomes apparent and expedients are tried by removing the materials sought to other places, or by arranging obstructions to prevent access of the insects; however, after all pains are taken, the cunning creatures generally seek out each new place that has been selected for storing the food or overcome obstacles to reach it. Besides their attention is easily transferred to other articles, especially if the favorite food has been exhausted or carried away far enough to be lost to them, when swarms will spread through bins and over shelves into a great variety of edibles. No relief comes from their unwelcome visits until the approach of cold weather which as a natural check, confines the busy workers within the nest where winter quarters are provided.

Most measures of repression prove merely of temporary avail, for unless the colony can be reached and entirely destroyed in the nest, the members are almost certain to persist in infesting a house in which they have found access to sweet stores as long as those stores remain exposed. Their line of march establishes a trail for tracing to the nest, which, according to different species, may be located in the walls of a house or in the ground under or outside of a dwelling; in the latter case, the tunnels are often concealed under stones, pavements and other covering. Many difficulties lie in the way of finding nests of ants in or under a house, sometimes parts of the flooring must be torn up to expose the community harbored beneath, but when found, a complete extermination of the tenants should result from a simple injection of carbon bisulphid, benzine, gasoline, or even kerosene. A suggestion is made that any one of these agents can be conducted through a small rubber tube running through a small hole in the floor to

reach infested spots underneath a building, in seemingly inaccessible situations among timbers or masonry. The first, second or third named insecticide will act with double efficiency by producing fumes which permeate the underground tunnels and cause death of insects beyond the limits of liquid contact. Carbon bisulphid is most volatile and only a few ounces will suffice for a treatment, while a larger quantity of benzine or gasoline or a liberal saturation with kerosene is required.

The objectionable odor which attends the liberation of any of the agents, should, with the exception of kerosene, pass away in the course of a day; the introduction of fire for any purpose, even for lighting, must be guarded against where treatment with these inflammable substances is in force.

Ant nests in the ground away from a dwelling can usually be found with little trouble and, if shallow as in the case of the pavement ant, treatment can readily be accomplished with kerosene or sometimes with boiling water. However, such measures as ordinarily applied are almost useless for deeply constructed nests in which the penetrating effect of one of the volatile fluids is necessary for successful suppression of the inmates. Whatever the fluid used it should be poured into openings punched deep with a stick, made one at a time, and then immediately plugged with dirt at the surface.

Notwithstanding the vast amount of information regarding ants and their wonderful ways, the subject is still attractive for further investigation. Such knowledge as a layman might be expected to possess would be at least the simple facts of life history, and this much is well within the reach of all readers, from reference works to agricultural publications. A short practical paper, known as Entomology Circular No. 34, and entitled, "House Ants," is distributed free by the U. S. Department of Agriculture, Washington, D. C.

The study of spiders as well as of insects comes under the science of entomology and probably for this reason spiders are sometimes erroneously called insects or bugs. Spiders belong to a class of animals distinctly lower in development than insects; they have eight legs while insects have six, and never acquire wings, although some kinds are called "flying spiders," but these merely spin threads of web which tangle into streamers or flakes and are drawn up into currents of air carrying the spider, always very small in size, for long or short distances. Ofttimes the air becomes full of streaming webs spun by certain very small spiders or the young of larger kinds, and an instance was reported by a student who claimed that the webs floating in the air were so thick as to annoy his considerably by clinging to his face while riding on his bicycle along the country roads after nightfall, at his home near Parsons, Labette County, in July and August, 1902.

Almost every woman dreads a spider as much as a mouse, and no doubt, those kinds which inhabit houses become a nuisance. Nevertheless, spiders are interesting animals to study, and our western country offers an attractive field for the student of nature in regard to spiders as any other special forms of life. To the credit of one worker, Mr. Theo. H. Scheffer, a graduate of the University of Kansas, but now assistant in zoology at Kansas State Agricultural College, a knowledge of the spiders of Kansas has been promoted with the result of finding 143 species, representing 16 families and 67 genera; and eight species of his list he has described as new to science, although he says that the prairies are not as rich in

species as the regions of the eastern states.

In popular belief, the bite of a spider inflicted on a person is regarded as extremely poisonous and such apprehensive dangers are often exaggerated by irresponsible newspaper writers. To cite a case which has been extensively printed, not only is ignorance displayed by the writer of the article in referring to a certain spider as an "insect," while at the same time, purporting to quote the words of an authority, but under bold headlines, "Beware of this bug, his bite is as bad as that of a rattlesnake," a glaring falsehood is imposed upon the reading public. The spider in question is known as *Latrodectus mactans*; it is a cobweb weaver about one-half inch long, black in color, has a globular abdomen with red spots, and it inhabits houses, or lives among rocks, piles of wood, and plants. Since the name is recorded in the Kansas list, any wrong impression about the spider should be corrected. Why it is feared more than any other kind is without "good reason" according to James H. Emerton, who so refers to it in his book, "The Common Spiders of the United States." This prominent authority who has studied spiders for many years explains their poisonous properties: "The poison kills or disables the insects which are captured by the spider. Its effect on the human skin varies in different persons; sometimes it has no effect at all; oftener it causes some soreness and itching like the stings of mosquitoes and bees, and cases have been known in which it caused serious inflammation which lasted a long time. Spiders seldom bite, and only in defense, the bites so commonly charged to them being often the work of other animals."

To the teacher or student who desires to learn about spiders, Mr. Emerton's books are highly instructive, and under the title, "The Common Spiders of the United States," a book is designed for the use of students of natural history who wish to know the names and classification of ordinary species to be collected almost anywhere. It describes, with one or more figures of each species, 200 of the common spiders, and is very fully illustrated, especially to show different forms of webs. It can be ordered through any book-dealer or direct from the publishers, Ginn & Co., Boston, Mass. Cloth, 245 pages, \$1.50.

Possibly Want and Woe will be seen hereafter, when this world of Appearance shall have passed away, to have been, not evils, but God's blessed angels and ministers of His most paternal love.—F. W. Robertson.

K. C. S.

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The above is a title of a handsome book of 400 pages, by C. R. Jackson and Mrs. D. S. Daugherty, of the State Normal School, Kirksville, Mo.

The book, although primarily intended for use in schools, is equally valuable to any one desiring to obtain, in an easy and pleasing manner, a general knowledge of elementary agriculture. It contains a large number of engravings which are not only attractive pictures, but are actual illustrations of much value in explaining the text. It is printed in large, clear type on handsome, heavy paper, bound in cloth, and will be an ornament to any agricultural library. As its name implies, it gives explicit directions for actual work in the laboratory and the school garden through which agricultural principles may be taught. The work is intended to cover one year's time, but it is so arranged that any part of it may be omitted if the necessary material cannot be obtained, or if the time allowed to this subject makes it necessary.

A careful outlined chapter with specific references is given to each of the following general subjects: Nature and Formation of Soils; Classification and Physical Properties of Soils; Soil Moisture and Preparation of the Soil; the Soil as Related to Plants; Leguminous Plants; Principles of Feeding; Rotation of Crops; Milk and Its Care; Propagation of Plants; Improvement of Plants; Pruning of Plants; Enemies of Plants; and Ornamentation of Home and School Ground. Any energetic teacher can, by careful going over the work in advance, working out the experiments himself and reading the references, be able to do creditable class work if he is willing "to dig," but it is useless for any one else to undertake to be an agriculturist or to teach agriculture.

Published by Orange Judd Company, New York. Price \$1.50 net.

During the five months ending May 31, 1905, there was exported from gulf points 22,216,673 bushels of grain, and from the Atlantic ports during the same period 38,724,986 bushels were exported. During May, 1905, New Orleans received almost nine times as much grain (wheat, corn and oats) as it received in May, 1904.

Radium, like all other things, must be known by what it does. And so far as known, the doings of radium have no parallel in nature. The chemist has seen that it shines by its own light; and this not for a day, a month, a year, but for an illimitable period.

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WEEKLY WEATHER CROP
BULLETIN

Weekly Crop Bulletin

Topeka, Kans., August 15, 1905.

GENERAL CONDITIONS.

The week has been quite warm, the temperature ranging from 3 degrees to 5 degrees above the normal. Good rains have generally fallen in the central and southern counties, in the northwestern portions of Smith Jewell, Republic, Washington and Marshall counties, and in Bourbon, Crawford and Neosho counties; light showers occurred generally over the rest of the State. Hail storms occurred in Jewell Chase and Wilson Counties.

RESULTS.

EASTERN DIVISION.

Early corn is well saved; it is maturing in the Southern counties and hardening in the central. Late corn has grown finely, but now needs rain, having begun to fire at some places. Thrashing continues in some of the central and northern counties. Wheat, oats and spelt are yielding fair to good crops of good quality. Prairie haying continues and a fair to good crop is being put up. The third crop of alfalfa has been cut in many places

plowing for fall wheat being pushed; ground in good condition; fine crops of potatoes, onions and cabbages; pastures good; thrashing about all done and yield has held well up to the average. Montgomery.—Warm, dry week; corn on heavy land in south part of county is fired to some extent; fresh and green on uplands; plowing for fall wheat well advanced and large acreage completed. Osage.—Good week for haying; corn doing well.

Pottawatomie.—Warm, dry week; crops needing rain. Riley.—Fine growing week for corn; much haying has been done; fruit and vegetable prospects and conditions normal; gardens need rain; many varieties of grapes being marketed; muskmelons and watermelons on market.

Shawnee.—Good week for haying; third crop of alfalfa being put up in good condition; making prairie hay and putting up good crop of millet; corn doing well; rain would be acceptable, but crops not suffering for it thus far.

Wilson.—Corn damaged by hail in some localities, but the crop is doing well generally and promises well; hay well started, but not so good a crop as usual; stock water lasting well and cattle are in good condition.

Woodson.—Haying continues and thrashing is about completed; corn looking well, although some fields were damaged by dry weather; plowing for wheat well advanced.

MIDDLE DIVISION.

Early corn is maturing in the southern counties; it promises a large crop generally, except in Sumner County, where the conditions have been so poor that corn cutting has begun to save the crop. Late corn is needing rain. Thrashing continues, though interrupted in some counties by rains. Wheat is giving a fair yield of good quality. Oats are generally showing a good quality but only a fair yield. Wheat is being marketed. Prairie haying continues showing a good yield and quality. The third crop of alfalfa is ready to cut in the northern counties, and is generally cut in the southern and a good prospect of a fourth. Apples are promising a good crop, though in Reno some varieties are now falling. Home grown sweet potatoes and melons are abundant. Grapes are ripe and are fine. Plowing for fall seeding continues, and in Sumner the conditions are now much better than a year ago.

Barber.—All crops looking well. Barton.—Thrashing making rapid progress; wheat ground about all plowed; prairie hay and third crop of alfalfa cut; millet in stack; very good crops of Kafir-corn and cane.

Butler.—General condition of crops good; corn not suffering but a good rain would be beneficial to the crop; third cutting of alfalfa about completed and crop is good; good prospect for fourth crop.

Clay.—Corn needs rain; fall plowing well advanced although ground is becoming somewhat dry and hard; haying still in progress.

Cloud.—Thrashing continues and is well advanced; fall plowing making good progress; grasses in good condition; garden products poor.

Dickinson.—Fall crops needing rain, late corn especially; plowing still continues; prairie hay making good progress; still good but would be improved by rain.

Ellsworth.—Crop conditions good. Harper.—Abundant rains assure a fine hay crop and improved late corn; early corn is made; nearly all of the wheat ground has been plowed.

Jewell.—Prospects for fine corn crop are very good; thrashing in progress some damage to crops by hail storm in north portion of county.

Kingman.—Thrashing interrupted by rain; corn doing well and promises good crop; hay has good quality; plowing in progress.

Lincoln.—Corn has experienced much injury from dry weather, especially in central portion of county; dry, hot week.

McPherson.—Corn doing well and will be a heavy crop; plowing nearly completed; haying in progress; all crops doing well.

Ottawa.—Hot, dry week and rain is needed for plowing; all growing crops, however, are in good condition; third crop alfalfa ready to cut and will be good; good crop of native grass being cut; haying progressing and yield is good; home grown watermelons in market.

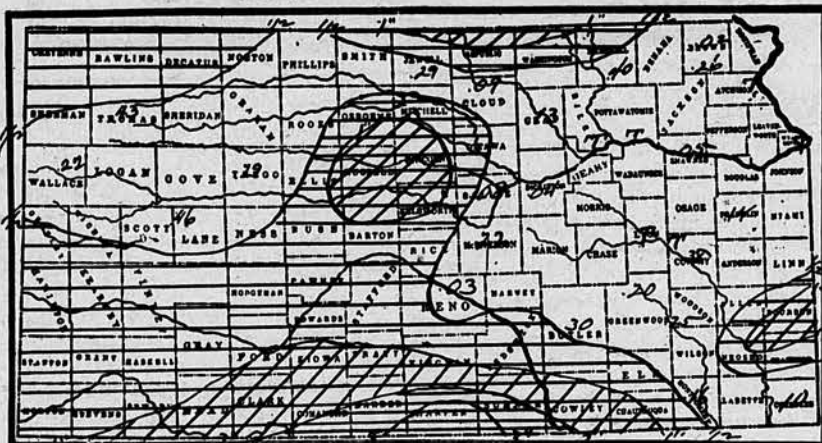
Pawnee.—Corn and forage crops needing rain badly; ground becoming too dry for plowing.

Phillips.—Weather conditions for past week favorable for all kinds of crops; corn crop is unusually good; wheat yielding better than expected.

Reno.—Plowing for wheat resumed and progressing rapidly, with ground in fine condition; corn looks well and promises good crop; cane and Kafir-corn making good growth; millet being cut and crop is good; fair crop of apples although some varieties are falling quite badly.

Republic.—Thrashing still in progress; corn making good growth and promises

Rainfall for Week Ending August 12, 1905.

SCALE IN
INCHES:

Less than $\frac{1}{4}$. $\frac{1}{4}$ to 1. 1 to 2. 2 to 3. Over 3. T. trace.

and is being cut in others; some of it left for seed in Case County has been badly lodged by wind. Bugs have injured the potato tops in Johnson County, lessening the crops; in other counties the crop is giving good promises. Sweet potatoes are being marketed in abundance in Chautauqua County. Early Kafir-corn and cane are in bloom in Chase and Elk County. Plowing continues, with ground in good condition.

Anderson.—Crops doing well; early corn hardening; plowing for wheat progressing rapidly.

Atchison.—A good rain is needed; pastures suffering from the dry, hot weather; corn would be greatly benefited by rain; garden vegetables are not doing well on account of lack of rainfall.

Brown.—Thrashing still in progress; wheat, oats and spelt give fair to good yield and quality is good; corn, especially the early planted, is well eared and gives good promise; late planted needing more rain; plowing for fall seeding in progress; grass would be improved by more rain.

Chase.—Corn improved by local showers in southeast portion of county, with some slight damage by hail and wind; the corn has been injured in some localities by the dry weather; Kafir-corn and early planted cane in bloom and beginning to fill; alfalfa badly lodged by wind in southeast portion of county where left for seed.

Chautauqua.—Beneficial rains; good crop of prairie hay being put up; corn needing rain, but other crops are in good condition; sweet potatoes abundant; large crop of grapes.

Cherokee.—Good week for farm work and thrashing; hay making interfered with by heavy dews; corn doing well.

Coffey.—Corn needing rain and firing in places; fair crop of prairie hay being put up; thrashing making good progress; plowing well advanced.

Crawford.—The week has been favorable for growth of crops.

Doniphan.—Corn needing rain badly; wheat and oats mostly thrashed; warm weather during past week.

Douglas.—Wheat thrashing from shock completed; stack thrashing not commenced yet; plowing in progress, but ground is becoming dry; corn maturing well.

Elk.—Corn maturing and will be a fine crop; some fields good, others poor; Kafir-corn doing well.

Franklin.—Timely showers have improved condition of crops.

Greenwood.—Week has been quite hot; early corn beginning to dry up and late corn needs rain also; fine weather for haying; third crop of alfalfa cut and yield is good.

Jefferson.—Dry, hot week; corn beginning to fire somewhat on thin land; plowing for fall seeding well advanced; crops generally doing well.

Johnson.—Plowing for wheat well advanced, although ground is becoming dry; fine weather for thrashing and yield of all kinds of grain is good; home grown melons plentiful; light crop of potatoes on account of damage by bugs; pumpkins and squashes have yielded good crops.

Linn.—Good week for thrashing and haying; corn doing well; plowing for wheat in progress; pastures good.

Lyon.—Corn doing well.

Marshall.—All growing crops doing well, although corn is beginning to need rain; prairie haying begun and crop is heavy;

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KANSAS CITY, MO.

well; third crop of alfalfa ready to cut; ground becoming too dry for fall plowing and corn will soon need rain.

Russell.—Weather was too dry and hot during the first part of week for crops and pastures; showers occurred at end of the week, however, and greatly improved condition of crops; corn doing well; fall plowing well advanced; thrashing making good progress; pastures good and stock looking well; fourth crop of alfalfa almost ready to cut.

Saline.—Hot, dry week; good rain needed.

Sedgwick.—Wheat has fine quality; yield of oats fair; corn crop much improved by recent rain and outlook is still promising; native hay on market; third crop of alfalfa being cut; egg and oyster plants and green peppers now on market; watermelons, muskmelons and cantaloupes plentiful.

Stafford.—Corn prospects good; ground in fine condition, and plowing continues.

Sumner.—Corn has suffered much injury from dry weather and was not greatly benefited by the recent rains; thrashing and plowing about completed and ground in fine condition for wheat; corn and cane cutting begun.

Washington.—Plowing and thrashing making good progress; yield of wheat is fair and quality good; quality of oats good but yield is light; corn earing well; apples and grapes are doing well; millet being cut.

WESTERN DIVISION.

Corn continues in good condition in the northern counties, but is getting a little dry in the western. Thrashing continues where not stopped by rain, though in some counties the grain is still damp. Prairie haying is progressing. The prospect for the alfalfa seed crop is good. Plowing for fall sowing is progressing rapidly, though in Lane county the ground is becoming dry. The range grass is generally good, but in Ness it has cured on the ground. Pastures are good. Cane is ready to cut in Greeley County. Millet is cut in Thomas and is a large crop in Trego County. Forage crops are fine in Thomas County; are good in Ness, where they are being cut; but it is somewhat dry for them in Wallace County. Cattle are doing well.

Greeley.—Cane about ready to cut; grass in good condition.

Lane.—Ground in some localities becoming too dry to plow; grass in good condition and stock doing well.

Morton.—Warm, dry week; grazing good and cattle doing well.

Ness.—Dry week; feed cutting in progress and crop is good; thrashing half completed; plowing for wheat being pushed; range grass cured.

Norton.—All crops have grown well during the past week; plowing for wheat in progress in some localities; pastures still green and cattle doing well.

Thomas.—Good weather for thrashing but somewhat too dry for good growth of corn; the corn is not suffering, however, and is generally in fine condition; millet cut; forage crops in very good condition.

Trego.—Good week for growth of corn and other crops; thrashing in progress, but grain is still damp; plowing in progress; corn promises well; large crop of millet.

Wallace.—Fine week for haying and stacking wheat; weather somewhat too dry for good growth of corn and forage crop; prospect for alfalfa seed crop very good; some barley being thrashed and grain is good.

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The Markets

Kansas City Live-Stock Market.

Kansas City, Mo., Monday, Aug. 14, 1905.—Cattle receipts were the heaviest of the season last week, at 66,500, including 10,000 calves. Prices weakened from day to day, although all the packers bought liberally; local concerns got 40,000 cattle, also a record for them this season. Country demand for stockers and feeders was good the first of the week, but the market for them flattened out after Tuesday, and closed the week 25 to 40 cents lower. Although the corn crop is made in this territory, it is yet a little too early for feeders to have completed all their arrangements for feeding. On the other hand, the stuff from the range country is coming two weeks earlier than last year, which leaves the stocker and feeder market suffering both from lack of demand and from over-supply just now. For this reason a good many believe that the present time is the low time of the season for stockers and feeders.

Supply of cattle today is 19,000 head, market steady to a little lower on all kinds; desirable stuff selling first at about steady prices. Top on beef steers in a week is \$5.50, good dry lot steers \$4.90 @ \$5.40, best wintered westerns \$4.35 @ \$4.65, medium ones \$3.75 @ \$4.25. Best heifers are scarce, at \$4.60 @ \$4.80, fair to good the stuff \$2.25 @ \$3.25, against \$2.35 @ \$3.65 a week ago, canners about like a week ago, \$1.75 @ \$2.20, veals 50 cents lower, \$4.60 @ \$5.25. Very few feeders sell above \$4.00, most sales of stockers at \$2.50 @ \$3.75, feeders \$3.25 @ \$4.00, stock cows and heifers \$2.00 @ \$2.75, calves \$2.75 @ \$4.00.

Hog prices made a net gain of 15 cents last week, account of the extremely small run of 26,000 here, and light receipts at all the markets. Weights around 200 pounds sell best, and heavy lard hogs are the hardest to move, at 10 or 15 cents below the top. More heavy hogs are coming each week. Market is 6 to 7½ higher today, top \$6.22½, highest this year, bulk of sales \$6.10 @ \$6.20.

Sheep and lamb prices went up another notch last week, and are higher again today. Most of the stuff is Western, sales of which were made to-day at the following prices: Lambs \$6.75, yearlings \$5.50, wethers and yearling ewes at \$4.50, all of these prices the highest since the recent break. Stockers and feeding wethers sell at \$4.25 @ \$4.35, ewes around \$3.75. J. A. RICKART.

Kansas City Grain Markets.

WHEAT.

Kansas City, August 15, 1905. Receipts the past 48 hours..... 422 cars Receipts same time last year..... 316 cars Shipments the past 48 hours..... 204 cars Shipments same time last year..... 159 cars Inspections for Saturday..... 209 cars The market yesterday was slow and sharply lower. The receipts were heavy and now that the spring wheat crop has been made and the thrashing returns from up there are coming in more favorably than expected, there is a general disposition on the part of farmers to sell and accept the lower prices. The visible supply in the United States and Canada increased last week 154,000 bushels. Liverpool came in 1½d lower at the close. The primary receipts were 1,138,000 bushels, against 1,346,000 bushels the same day last year; shipments 487,000 bushels. Export clearances from the four Atlantic ports were 55,000 bushels. In Chicago September closed ¾c lower than on Saturday, and here the same option lost ¾c. By sample on track here at Kansas City:

No. 1 hard, 1 car Turkey 82c, 2 cars Turkey 82½c, 5 cars Turkey 82c, 3 cars Turkey 81½c, 6 cars Turkey 81c, 1 car 80½c, 4 cars Turkey 80c, 5 cars 79½c, 8 cars 79c, 12 cars 78½c, 12 cars 78c, 4 cars 77c, 1 car 76c, 1 car macaroni 72c.
No. 3 hard, 1 car Turkey 82c, 3 cars Turkey 80c, 1 car Turkey 79½c, 1 car Turkey 79c, 4 cars Turkey 78c, 1 car 78½c, 4 cars 78c, 4 cars 77½c, 7 cars 77c, 1 car 76c, 4 cars 76c, 6 cars tough 75½c, 1 car 75c.
No. 4 hard, 1 car Turkey 78c, 2 cars 77c, 7 cars 76c, 2 cars 75½c, 12 cars 75c, 1 car 74½c, 6 cars 74c, 1 car 73½c, 1 car 73c.
No grade hard, 19 cars 70c, 12 cars 69c, 17 cars 68c, 3 cars 67c, 1 car hot and wet 65½c, 1 car hot and wet 60c.
Rejected hard, 2 cars 72c, 1 car 71c, 4 cars 70c, 5 cars smutty 66c.
No. 2 red, 6 cars 80c, 3 cars 79½c.
No. 3 red, 1 car 79c, 1 car 77½c, 15 cars 77c, 1 car 76½c, 1 car 76c, 3 cars 75c.
No. 4 red, 1 car 75½c, 5 cars 75c, 2 cars 73c.
Rejected red, 1 car 72c.
No grade red, 1 car 72c.
No. 2 mixed, 1 car 77c.
No. 3 mixed, 5 cars 77c, 2 cars 76½c, 1 car macaroni no good, 67c.

CORN.

Receipts the past 48 hours..... 157 cars Receipts same time last year..... 46 cars Shipments past 48 hours..... 119 cars Shipments same time last year..... 31 cars Inspections for Saturday..... 144 cars With good rains in most of the corn belt the past few days and feeling that a big corn-crop is assured, and in consequence better receipts everywhere, buyers picked around and bore down hard on prices. Most of the sales showed a decline of 1c. And even at this reduction holders were unable to make clearances. A good many cars still remained on hand unsold at the close. The visible supply in the United States and Canada increased last week 233,000 bushels. Liverpool came in ¼d lower at the close. The primary receipts were 589,000 bushels, against 302,000 bushels the same day last year; shipments 785, bushels. In Chicago September closed 1c lower, and here the same option declined ¾c. By sample on track here at Kansas City:

No. 2 mixed, 3 cars 49½c, 18 cars 49½c, 2 cars 49c, 5 cars yellow 49½c.
No. 3 mixed, 3 cars 49½c, 2 cars 49c.
No. 4 mixed, nominal, 1 car 48c.
No. 2 white, 4 cars 49½c, 18 cars 49½c.
No. 3 white, 2 cars 49½c, 2 cars 49c.
No. 4 white, 2 cars 47½c.

OATS.

Receipts the past 48 hours..... 42 cars Receipts same time last year..... 12 cars Shipments past 48 hours..... 6 cars Shipments same time last year..... 5 cars

Inspections for Saturday..... 15 cars There was an active movement in this grain yesterday, but with free arrivals and wheat and corn both lower, buyers were bearish and prices were against holders. But at the lower range of values there was good buying, both on home and shipping account. The visible supply in the United States and Canada increased last week 973,000 bushels. In Chicago September closed ¾c lower, and here the same option lost ¾c. By sample on track here at Kansas City:

No. 2 mixed, 1 car red 28c, 1 car bulk-head 26½c, 2 cars 26½c, 2 cars 26c.
No. 3 mixed, 2 cars 26½c, 1 car 25½c.
No. 4 mixed, nominally 24½c.
No. 2 white, 1 car 30c, 1 car 29½c, 1 car 28½c, 4 cars color bulkhead 28c, 4 cars color 28c, 6 cars color 27½c.
No. 3 white, 4 cars 28½c, 1 car color 28½c, 2 cars 28c, 1 car color 28c, 1 car 27½c.
No. 4 white, nominally 26½c @ 26½c.

South St. Joseph Markets.

South St. Joseph, Mo., Aug. 14, 1905.—Whole the number of cattle in sight today at the five leading markets was somewhat in excess to receipts last Monday, the general improvement in the eastern dressed meat trade at the close of last week more than offset the increase in supplies, and a general strengthening of values resulted. The local supply was not within requirements of the trade and created competition sufficient to force values up 10 to 15c and in some instances more, the advance here being greater than reported at other points. Choice medium heavy steers weighing somewhat under 1,400 pounds, sold readily at \$5.60, and good plainish fat 1475-pound steers sold at \$5.50. Good to choice light and medium grades sold \$5.05 @ \$5.35, but largely around \$5.15. Short-fed natives showing some grass and strictly grass steers were steady to strong. Good heavy cows and medium heifers were rather scarce and prices held around steady, but the common to medium grades, which formed the bulk of supplies, sold 10 to 15c lower, but the demand was active and a clearance was quickly made. Bulls were common to fair in quality and of dull sale at a 10 decline. Veals were in fairly large supply and steady with last week's lower close. There was a good supply of stock and feeding cattle on the yards, and buyers endeavored to break values 10 to 15c, but packers competed for the good fleshy feeders, suitable for slaughter and bought them about steady. However, buyers were successful in breaking yearlings and calves 10 to 15c, which makes the market 25 to 40c lower than the best time of last week. Regular dealers all have large assortments, and the country can find almost anything to their liking, either in weight or quality and at prices somewhat under first cost. Offerings include a large number of good to choice west and north-west feeders, as well as natives, both horned and dehorned, and a large number of well-bred yearlings and calves, both natives and westerns.

The trade in hogs continues to work upward, under the stress of light supplies at all points. Prices here to-day were 5 to 10c higher, ranging from \$5.95 @ \$6.15, and the bulk selling at \$6.00 @ \$6.10. Quality does not show any improvement which would indicate that the country has marketed very close. There is also a bull movement in provisions, and this tends to create a very bullish sentiment in the trade. Present prices, however, are very profitable, and the country should not make the mistake of holding matured hogs back, as this would have the effect of weakening the general situation later. Demand here calls for more than are arriving, and this seems to be about the situation at all markets.

While all sheep markets were quoted lower to-day, the local trade was brisk and fully steady with the best time of last week. Offerings were mostly Idaho lambs which sold at \$6.65 @ \$6.85, with feeders at \$5.75 yearling wethers sold at \$5.25, with old wethers at \$5.00 and ewes at \$4.50 @ \$4.65. Demand was strong and a clearance was soon made. WARRICK.

Management of Breeding Hogs.

Editor Kansas Farmer.—As it has been some time since we have written you we take this chance to tell you, our past customers, and all others that may be interested in Duroc-Jersey swine and Shorthorn cattle that we, and our stock in particular, are very much alive.

We believe the past year has been one of the best years for a long time for feeding stock intended to go out this fall for future breeding animals. The scarcity of corn has as much to do with promoting useful animals as the ambition and strenuous efforts of breeders. Large cribs of corn are too handy their doors are too easy of access to their owners. A big crib of cheap corn has doors whose latch string always hangs out. Breeders have any amount of things to overcome. It takes lots of presence of mind and nerve for a breeder while showing a prospective buyer through his herd, to keep from shelling off a few ears or throwing out a few scoops of corn if he has plenty of it. We have always tried to overcome such temptations for the good of the cause and we feel we have been fairly successful.

But we wish to say right here that the past year has been the easiest of any on our anatomy along that line. We have fed less corn this year than ever before, and as a result have, in our estimation, the best and most useful bunch of hogs we ever produced. Our brood sows in the early spring had a fine pasture of red and white clover, blue grass and timothy. After they farrowed, we gave them in addition two lots of oats and one of sowed corn, the oats headed out and gone to seed would have made thirty-five to forty bushels, which they also stripped off. The oat lots were plowed and sowed to wheat. The oats that were shattered off are up and the wheat coming up nicely. These lots we reserve for our males, our she stuff have been put on twenty acres of red clover, of which the second crop has been stacked. The clover is twelve to fourteen inches high. We feed at present one-third corn (two-third spelt ground together very fine, soaked twelve hours at night, and a liberal feed of whole spelt, soaked twelve hours in the morning. While the stock had green pasture in the spring we feed from one to two bushels of shelled corn a day—feed 130 head two bushels per day. We will not show this

year. We have stuff that, if fitted, would be hard indeed to defeat, but we prefer to let the other fellows fit them, then if it injures their breeding qualities they can not blame us for it. We raise and feed breeding stock; if you want fat stock go to the other fellows or the fat market.

We will hold our regular sale some time in October, and will consign from 100 to 120 head all ages and all good in blood lines as well as individuality. Watch our card for date and come and eat a square meal with us whether you care to buy or not, you are always welcome to the best we can put up. Try the old-reliable Kansas Farmer with an advertisement when you want anything in that line. NEWTON BROS. Whitney, Kansas.

Summer Tourist Rates Via Chicago Great Western Railway.

To points in Illinois, Wisconsin and Michigan. One way fare plus \$2.00 for round trip. Tickets on sale daily to Sept. 30th. Final return limit Oct. 31st. For further information apply any Great Western Agent or G. W. Lincoln, T. P. A., 7 West 9th St., Kansas City, Mo.

Special Want Column

"Wanted," "For Sale," "For Exchange," and small want 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. No order accepted for less than \$1.00.

CATTLE.

HOLSTEINS—Bull calves cheap while they are little. H. B. Cowles, Topeka, Kans.

FOR SALE—10 Registered Galloway bulls, cheap. J. A. Darrow, Route 2, Miltonvale, Kans.

RED POLLED BULLS.—One three year old, and one fourteen months. Both registered and nice. Will sell cheap. H. L. Pellet, Eudora, Kans.

FOR SALE—Eight good, registered Shorthorn bulls, four straight Cruickshanks, good ones, and prices right. H. W. McAfee, Station C, Topeka, Kansas.

TO TRADE—10 cows, 1 Registered Bull and 1 No. 6 Separator, for sheep, mules, or jack. Also Duro-Jersey hogs for sale, either sex. J. C. Strong & Son, Moran, Kans.

FOR SALE—One French Coach Stallion, dark brown, 16½ hands, 1300 pounds, perfectly sound, kind and gentle, drives fine, single or double. Dr. Hugh S. Maxwell, Salina, Kans.

FOR SALE—The Holstein Friesian Bull "Beechwood Brownell" (38705). This is a royal bred bull and is individually as good as his breeding. His blood lines tracing to the imported cows, Parthena, Lady Gretchen and others of equal merit. For full description, pedigree and price, address W. E. Brockelmy, Lawrence, Kans.

FOR SALE—A 3-year old Shorthorn bull, sired by Royal Bates. Address Dr. N. J. Taylor, Berryton, Kans.

SWINE.

FOR SALE—Say! I have some fine, big-boned, broad-backed Berkshires, brood sows or pigs. Want some? Write me; turkeys all sold. E. M. Melville, Eudora, Kans.

THOROUGH BRED DUROC JERSEY HOGS.—For sale, 20 last fall boars, also spring boars and gilts, sows and pigs. Anything you want in Top-Notcher blood. A. L. Burton, Wichita, Kans.

30 DUROC-JERSEY SPRING BOARS.—Large body, growthy, heavy bone, and good feet and color. Price low. A. G. Dorr, Route 5, Osage City, Kansas.

SEEDS AND PLANTS.

WANTED—English blue-grass or meadow fescue seed. Correspond with us. Kansas Seed House, F. Barteldes & Co., Lawrence, Kans.

PLANTS FOR SALE—Strawberry, blackberry, dewberry, rhubarb, grape-vines. Write for special prices. Address J. C. Banta, Topeka, Kans.

FOR SALE—Seed Sweet potatoes; 6 kinds; write for prices to I. P. Myers, Mayesville, Kans.

SEED CORN—Both white and yellow at 90 cents per bushel; cane, millet and Kafir-corn seeds. Prices and sample on application. Adams & Walton, Osage City, Kans.

FARMS AND RANCHES.

FOR SALE—My imported Percheron Stallion, nine years old, black, weight 1800. Have used him four seasons. Will be pleased to show you his get. A fall stand will make a man big interest on his investment. Write for price and pedigree. Also Poland-China boars, ready for use, good ones. W. W. Stegeman, Route 1, Hope, Kansas.

KANSAS LANDS.—I have a choice lot of well-improved farms in Marion County, varying from \$20 to \$50 per acre. Also large list of Western Kansas lands. For full particulars, address, A. S. Quisenberry, Marion, Kans.

CHEAP HOMES—80 acres, 60 acres second bottom, good alfalfa land, \$1,800; 80 acres, 40 acres cultivated, \$1,000; 80 acres, 6-room house, level land, \$1,200; 160 acres nice smooth land, near town, \$3,000; 160 acres, 5-room house, all smooth, \$3,200; 160 acres, 50 acres cultivated, balance pasture, partly rough, \$2,000. We have all sizes cheap! Try us at Florence, Minneapolis or Salina, Kans. Garrison & Studebaker.

FOR SALE.—160-acre farm at \$12 per acre within two miles of a good town, 23 acres within three miles of a good town for \$25 per acre. All the land for sale. A good business for sale. Write or come and see what bargains we have. J. Balmun, Arlington, Reno County, Kansas.

I CAN SELL YOUR FARM, RANCH OR BUSINESS, no matter where located.

Properties and business of all kinds sold quickly for cash in all parts of the United States. Don't wait. Write to-day, describing what you have to sell and give cash price on same.

A. P. TONE WILSON, JR., Real Estate Specialist, 413 Kansas Ave., Topeka, Kans.

FOR SALE—The best fruit and dairy farm of 80 acres in Kan. 40 minutes drive from Topeka, finely improved, large barn, 7-room house, 3 chicken houses, large young orchard, hanging full of choice varieties of apples, 400 peach trees, 2 acres grapes, 1 acre blackberries, 50 cherry trees and other fruit in smaller quantities; 10 acres alfalfa, 8 acres clover and timothy, 25 acres tame grass, pastured, 2 acres Kaw bottom in potatoes, 15 acres corn, 5 acres in cane and millet, enough timber for fuel and posts. The above is a very pretty and picturesque place on rural free delivery and telephone cannot be beat for a home. Also sell the cows and horses, implements, etc. My health will not permit me to farm, the reason for selling. Can give terms on part, equal to or better than rent at 6 per cent. Will give possession as soon as a deal is made. Address R. F. D., care Kansas Farmer, Topeka, Kans.

200 ACRE WELL IMPROVED FARM for \$3,200, to close an estate. Address Hurley & Jennings, Emporia, Kans.

WANTED—To lease sheep ranch with 200 or more sheep, for 3 to 5 years. Man with family, has years of experience. Good reference given. Fred Pearl, Ellsworth, Kans.

WANTED TO TRADE—Good Topeka city property for 180 acre or 80 acre farm within 8 miles of Topeka, Osage or Salina. Frank Johnson, 1121 West 8d Street, Topeka, Kans.

FOR SALE—Good farm and pleasant home, one-half mile from county high-school and city public school, three-fourths of a mile from several churches and stores, 2 grain elevators and stations. Farm consists of 800 acres, adapted to farming and stock raising, good 9-room house, with water, bathroom and good cellar, ice-house, tool-house, barns and sheds sufficient to hold 40 tons of hay and 150 head of cattle and horses, alfalfa, shade and fruit trees. Farm can be divided. Price, \$15 per acre. Call on or address the owner, Box 192, Wakeeney, Kans.

FIFTY farms in Southern Kansas, from \$15 to \$70 per acre; can suit you in grain, stock, or fruit farms. I have farms in Oklahoma, Missouri and Arkansas for sale or exchange. If you want city property, I have it. Write me. I can fix you out Wm. Green, P. O. Box 988, Wichita, Kans.

LAND FOR SALE in Western part of the great wheat State. H. V. Gilbert, Wallace, Kans.

CHEAP LAND—160 acres, improved, \$2400. \$500 cash, balance easy terms. 30 acres, all bottom, good improvements, \$2500. 160 acres one-half cultivated, \$2000 worth of improvements, \$3200. 80 acres, one-half cultivated, \$1000. 320 acres, good improvements, \$4500. 40 acres, all bottom, no improvements, 2 miles from town, \$1200. 320 acres, 70 acres bottom, well improved, \$6200. 490 acres, fine improvements, 150 acres tame grass, \$9600. 1480 acres, 500 acres bottom, 40 acres timber, good improvements, \$21.50 per acre. Any kind or size. Try us, at Florence, Minneapolis or Salina, Kansas. Garrison and Studebaker.

FOR reliable information about Southwest Texas real estate, write Word & Moore, R. E. agents, San Antonio, Texas.

AGENTS WANTED.

AGENTS WANTED Sell \$1 bottle Sarsaparilla for 30c; best seller; 200 per cent profit. Write today for terms. F. R. Greene, 115 Lake St., Chicago.

MISCELLANEOUS.

FOR SALE—Fine Catalpa and Black Locust seedling trees. W. K. Stephens, Winfield, Kansas.

SEA SHELLS from Long Island Sound; 25 assorted for 15 cents, stamps or silver. Alice L. Cramp-ton, Madison, Conn.

WANTED—Middle aged woman with no income to do house work in a family of three. R. J. Linscott, Holton, Kans.

FOR SALE—Second-hand engines, all kinds and all prices; also separators for farmers' own use. Address the Geiser Mfg. Co., Kansas City, Mo.

100 PURE PARTRIDGE COCHINS—Cockerels and pullets for sale at \$1 each. Very choice lot. Order early. H. Wodring, Elk City, Kans.

FOR SALE—No. 2 De Laval cream separator used little; bearings new; perfect condition; taken on debt. Sayda Polo Jersey Farm, Parsons, Kans.

TO EXCHANGE—Humphrey Bone Mill and Corn Cutter, nearly new, for commonly bred, early hatched spring pullets. Horace Hensley, Dawkins, Colo.

FOR SALE OR EXCHANGE—Good factory building near 3 railways \$1600. Good building for Cheese factory, Laundry or Manufacturing with residence \$1500, both in Iowa. Complete outfit for Vinegar Works, capacity 3000 pounds, \$1200. Barnes, Algona, Iowa.

5,000 FARMERS to handle best woven wire fence —100 styles—movable corn cribs, high grade bugles, implements, harness, barbed wire, paints, etc. Our premium buggies lead them all. Everything guaranteed. Write today and save money. American Trade Union, Wichita, Kans.

FREE Pretty Gold Plated Scarf Pin, ruby or turquoise setting, with yearly subscription to our new monthly magazine. Introductory price 10c. Write, Middle-West Advocate, Rock Island, Ill.

For Sale or Trade. A 20-room hotel, newly papered and remodeled throughout. In splendid location. One of the best towns in Kansas. Fine educational facilities in the way of City High School and State Manual Training Normal School. Will sell or trade for a farm. Price \$4000. John Curran, Lock Box 66, Pittsburg, Kansas.

PLATE your own MIRRORS by the best factory process. Full directions and formula for \$1. W. B. Francis, Pittsburg, Kans.

WANTED.—Man and wife, by the year, on a farm where other help is kept part of the year at least. Man must be honest, a good worker and capable of managing in the absence of the owner. Woman to take care of other help if necessary and care for poultry. House conveniences and garden furnished. Good place for right party. Hill Top Farm, Parkville, Mo.

FOR SALE.—Two female Scotch Collies about 8 months old, one black with white and tan points, \$5.00; one golden sable, extra marking, \$7.50. Full pedigrees furnished, best of stock. Hill Top Farm, Parkville, Mo.

Stray List

Week Ending August 3.

Johnson County—Roscoe Smith, Clerk. HORSE—Taken up by H. B. Jackson, in Monticello tp., June 23, 1905, one light brown or bay mare; valued at \$30.00.

Jackson County—F. E. McConnell, Clerk. COW—Taken up by B. J. Hamilton, in Franklin tp., July 31, 1905, one red brindle cow, branded "L" on right hip, marked by two under bit on left ear.

INTERNATIONAL SUNDAY SCHOOL
LESSON.

(Copyright, Davis W. Clark.)
Third Quarter, Lesson VIII, Jeremiah
xxxvi, 21-32, August 20, 1905.
Jehoiakim Burns the Word of God.

Jehoiakim is a type of the sinful soul asserting itself in terror and wrath against the righteous judgments of God. His fate is a terrible example of the folly of doing so. A merciful Providence had given him every opportunity of repentance. God had allowed him to be dethroned, put in irons, his face set toward Babylon. Then came an unexpected reversal of fortune—liberation and re-enthronement. God's hand ought to have been recognized, but was not. Neither severity nor goodness affected his obdurate heart.

In the present instance the threatening prophecies, so lately and publicly read, could not long, in the nature of things, be secreted from the king. But his courtiers approached him with consummate skill. They left the scroll behind, lest the very sight of it should inflame him. They secreted the prophet and his amanuensis, lest the king in his rage should kill them. They attempted to break the "burden" of the prophet in the softest manner possible, in hopes that his stubborn will would yield and disaster be averted.

The king was seated in the winter residence portion of the palace, which was itself the target for the prophet's shafts—a house with spacious apartments and airy balconies, ceiled with cedar, painted with vermillion, but built with enforced and unrequited labor.

The strategy of the nobles availed nothing in this instance. The king was in a passion at once. He demanded to see the scroll. When three or four columns were read he could endure no more. In spite of the entreaties which his princes had the courage to make, with the deliberation of an implacable malice he prepared to destroy the parchment. Taking a scribe's knife, sharp for mending pens and making erasures, he began cutting the odious document into shreds, and kept dropping it, piece by piece, into the brazier of live coals and waiting till each had shriveled up before he dropped another, until the whole was consumed. He would have dealt in the same manner with Jeremiah and Baruch if he could have laid hands upon them. But how secure are they whom the Lord hides!

Doubtless the king congratulated himself upon the total destruction of the hateful writings. How brief the respite. The scroll was a phoenix. It rose from its own ashes. Not a syllable was wanting. And there were terrible additions, to the effect that the land should be entirely desolate, that no descendant of the king should permanently sit upon his throne, and that his corpse should meet a fate peculiarly revolting to the Oriental mind.

The Teacher's Lantern.

The Bible can not only endure, it can challenge criticism. No true friend of the sacred book should seek to exempt it from the test of literary criticism. When all is said and done it is highly probable that for substance of doctrine and precept we shall have the same old book our fathers had.

The knife and fire were so very handy. Sight of them suggested the means of destruction. The angry king snatched the knife from the scribe's girdle. And there stood the brazier of red hot coals. The implements of vice are rightly banished by law. Men act largely by suggestion. Out of sight is to be out of mind for most. The saying that opportunity makes thieves is not strictly true; but all will agree that it is well to have the opportunities reduced to a minimum.

Jehoiakim was practically sold out to heathenism when he came to his throne. He was Pharaoh's puppet, and to please his master added Egyptian rites to others which he adopted. "Another roll." Truth gained emphasis by reiteration. Spite of knife and fire the word of God remains and is indestructible.

Baruch deserves to have his name

perpetuated. He knew the peril of being scribe to Jeremiah. At first he demurred, but when he once accepted the office he gave a splendid example of constancy and courageously read the prophets' message in the court of the temple.

Sad days were these. The times were evil. Josiah's death is declared to have been the most tragic event in Hebrew history. And the complete destruction of the land by the king of Babylon was now impending.

There is deep significance in the juxtaposition of this lesson and the preceding. The former shows the Bible honored. This the Bible dishonored. To Josiah the Bible was a savor of life to life. To Jehoiakim of death to death. In no mystical way, but none the less efficiently, the Bible slays or makes alive as men use it to-day.

The Uintah Opening.

HORACE B. COWGILL.

Uncle Sam is conducting a big lottery at the present time, but instead of being for the purpose of separating the man from his money, it is for the purpose of adding fairness to the disposing of Government land in Utah, known as the Uintah Indian Reservation.

This land was opened up for settlement by a proclamation of the President August 1. But this does not permit "squatters" to rush into the country and appropriate the land. The lottery plan, which has been used by the Government for the last two or three years, puts right of first choice of the land into the hands of chance.

From August 1 to 12, registration offices have been conducted by the Government at four towns in the vicinity of the reservation. The towns are Grand Junction, Colo., Provo, Vernal and Price, Utah. Grand Junction has done the largest business, it being the largest of the towns located on a railroad.

At the latter place eight experienced registration clerks are employed and can handle the applicants at about the rate of eight a minute.

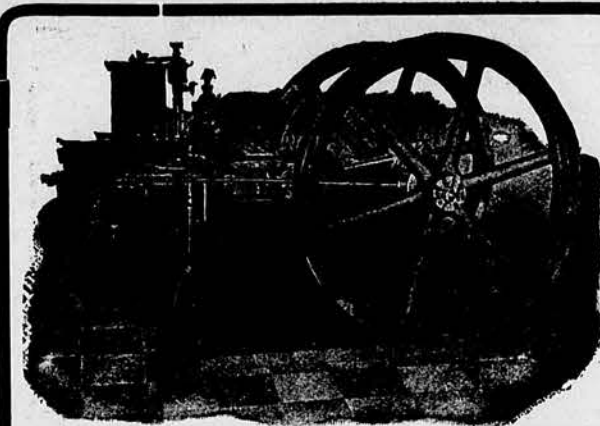
An applicant for a claim is required to swear before a notary public that he is qualified according to the laws to take a claim, and the notary at the same time makes out a description of the applicant and his address at which he wishes to be notified as to his drawing. With these he enters the registration office and is recorded as an applicant for land and is given a permit to go upon the reservation and view the land.

On August 17, at Provo, Utah, occurs the public drawing for choice of the land. There are about 6,600 claims to be given away and it is estimated that thirty or thirty-five thousand people will register, making about one chance in five or six for the applicant to get a claim.

The town of Grand Junction has the continual appearance of a circus day in a county seat. There are lemonade-stands and temporarily constructed eating-stands on every vacant lot. There is an atmosphere of "Do others or they'll do you" about. Notary publics are the men of the hour. They fix the applicant up at the price of 25 cents per head and they do a good business in spite of the fact that there are a good many of them. They make you swear as easily as eating your meals.

Then the local saloons do a rushing business. Homeseekers seem to be a very thirsty crowd, though it would create the wrong impression to say that homeseeker and booze-fighter were synonymous terms.

The registration office opens at 8 o'clock, but a line commences to form before 7 every morning. There are plenty to wait upon your wants. You are offered a chair in which to sit while you wait for the office to open; this costs you 10 cents. Then you will be entreated to buy a map of the reservation. There are at least four kinds of maps of the reservation, ranging from 10 to 50 cents in price, and each variety is offered for sale by four or five peddlers. The man who

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THEY STOP THE
NOISE AND LESSEN THE WEAR.
LATEST, STRONGEST, BEST.
FACTORY, BEATRICE, NEB.

rents chairs also sells cigars and lemonade. If you don't like the lemonade, your money will be refunded.

The homeseekers are a husky crowd, as a general thing, but all classes are represented. They are all good-natured and take life easy as they wait their chance to register. They tell stories and joke together. Everyone expects to draw first choice.

Most of the applicants come in on the trains and leave as soon as they can register, but a few have come in prairie schooners, bringing their families and some household goods, as was done when Kansas was settled. Grand Junction seems to be making an effort to accommodate people at a small cost, but accommodations are exceedingly poor. A hungry man must order two meals if he gets his appetite appeased.

The Desert Land Act.

EDITOR KANSAS FARMER.—In the issue of the FARMER of June 15, a man signing himself H. Gamble, of Kiowa County, Colorado, answers F. W. Goldbeck's letter in the FARMER of June 8. Mr Gamble says a man can homestead 320 acres in Kiowa County, Colorado. I would like to know something of the law that gives 320 acres as a homestead.

J. H. MOORE.

Ellis County, Kansas.

This letter was referred to Howard Gamble, Sheridan Lake, Colo., who replies as follows:

The Desert Land Law applies to Eastern Colorado. It provides that every qualified person, a resident of the State in which the land is located, may enter 320 acres, or less, of surveyed or unsurveyed land that can be reclaimed by irrigation. Desert land is land held to be without a growth of natural timber or on which ordinary crops will not grow without irrigation.

A married woman can make a desert-land entry, if she makes it herself and with her own money, so you see a man and his wife gets 640 acres. The settler must pay 25 cents per acre when the entry is made and he must expend not less than \$1 per acre every year for three years in procuring water for irrigation and in permanent improvements. He must cultivate one-eighth of the land entered. The work can all be done in one year, if desired, but the owner must make a sworn statement showing that \$1 per acre has been expended and within four years from the date of his entry he must prove more work and reclamation and pay a farther fee of \$1 per acre. Desert land entries can be assigned to any qualified person who has never made an entry and the assignee can comply with the law and make final proof.

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WHEN WRITING ADVERTISERS PLEASE MENTION THIS PAPER.

The Veterinarian

Horse Having a Sprained Ankle.—I have a Gelding, eight years old that strained his ankle joint or the cord on the back of his ankle, just a month past and he is very lame. There is a bunch which looks like a wind gall on the outside of the ankle joint but is hard. He goes very lame when he first starts off. It is his right hind leg. E. C. M.

Ozark County.

Answer.—From the fact that the lump on the horse's ankle is large and causing him considerable pain when moving at first would indicate the necessity of applying a medicine to soften this enlargement; I would advise having the following prescription filled at your drug store, if possible, if not we can fill it here for you: Tinct. of capsicum, 4 oz.; Tinct. of cantharides, 4 oz.; Tinct. of calendula, 6 ounces; fluid extract of echinacea, 4 ounces; rectified spirits, 4 ounces; gum camphor, 2 ounces; shake this solution well before using. Apply to the affected part daily until sore, then withhold for three or four days and begin again; when applying the liniment rub the joint and lump for a considerable length of time. It would be advisable not to give this horse any work to amount to anything until this enlargement is entirely gone, as exercise would aggravate the condition and thus prevent successful treatment. Would advise feeding the animal well and turn in a small yard where he can walk around sufficiently to exercise for his own good, and I believe that the animal will make a very rapid recovery.

Diseased Tooth.—I have a horse that has a discharge coming from its nostrils that is very offensive; it has been discharging this way for several months, and I believe the quantity of material that comes from the nose is constantly increasing. The horse seems to eat on one side of the mouth, and after a meal notice that the manger is full of little balls of hay, that it has evidently eaten and then spit out. Its left eye seems to be affected and runs considerably. The left side of the face is considerably enlarged. What is the disease and what can be done for it? H. H. B.

Barber County.

Answer.—The description you give of your horse's condition would indicate a diseased tooth which has become ulcerated to the extent that considerable pus has accumulated in one of the cavities of the head, located at the root of the teeth. The pus has escaped through the roots of the teeth into this cavity and from there has worked its way through into the nose. The symptoms you give of the eye are caused by the inflammation in the side of the face; the enlargement of the left side of the face is caused by the great amount of pus that is accumulated in the cavity mentioned. For treatment I would advise you employing a skilled veterinarian to treat this case. He will probably have to trephine into the side of the face and punch out the diseased tooth, and then give drainage to the cavity that has been filled with pus. You will probably need one of the common disinfectants to inject into the pus cavity, daily, in order to bring about healing. It is surprising how quickly one of these cases heals up after the cause has been removed; it taking but a few weeks until the horse can be worked again. So many horses suffer untold agony on account of their teeth, and the time has come when the horses' teeth should be examined just about as often as the teeth of a person who looks after his own teeth properly. While you are having a skilled veterinarian operate on your horse for the diseased tooth you had better have the animal's teeth floated, that is, the sharp corners filed off so that they will not cut the horse's tongue and cheek. If the horse is in very poor condition, as so many are from suffering on account of their teeth, it is advisable to secure a good stock food to build him up.

Slobbering.—I have a horse that

slobbers all the time while eating, and especially while driving. What is the cause and remedy? J. B. A.

Cowley County.

Answer.—The symptoms you give would indicate that your horse has sharp teeth. Would advise your employing a skilled veterinarian; one who will properly float your horse's teeth, and I believe you will have no more trouble with your horse slobbering.

Choking in Horse.—I had a horse that had difficulty in swallowing; whatever it would eat would come out through the nose. It was fed on oats, corn chop and prairie hay. It lingered along for several weeks and finally died, as we could not find what the trouble was in order to relieve it. Allen County. L. R. R.

Answer.—The symptoms you give point very strongly toward choking in your horse. A horse seldom chokes, but occasionally a horse will choke on oats, the obstruction being in the gullet. If one can possibly reach the obstruction on the outside it may be possible to work the material along so that the animal can swallow; but if the material is lodged in the gullet it is located inside of the chest where the gullet goes through the chest cavity to the stomach, it is then necessary to pass a probang down the horse's gullet the same as for choking in cows. This, of course, would have to be done by a skilled veterinarian; one should never resort to broom-sticks, horse whips or anything of that kind to push down a horse's throat as there is great danger in injuring the horse's gullet or other sensitive tissues. If another case of this kind should come up, if you can secure the services of a good veterinarian it is best to get him as soon as possible with his instruments, or you may lose another animal.

Colic.—I have an old horse fourteen years old that is subject to colic every few days, especially if I get him warm. What can I do for him? M. S. B.

Shawnee County.

Answer.—The colic you mention most always comes from worms, the horse not being affected unless exercised quite violently. In such an event the worms are more active and cause greater irritation. I would advise your giving the horse turpentine in two ounce doses in a half pint of raw linseed oil every four or five hours for a day, or more. Follow this by giving a full quart of raw linseed oil. In the meantime give the horse very little feed. Also before beginning to treat him keep him away from feed for at least 48 hours, excepting a little bran so that he will be well emptied out; then the medicine will act directly on the worms. If you find that after repeating this dose, say again in ten days, that you have not cleared all the worms out of the horse, I would advise you to get some of our stock food, such as we feed our college animals, which is good for keeping the worms out of animals.

Azorturia.—I had a very fine horse die from a disease that I am unable to diagnose. The horse was 6 years old, a fine work animal, weighing 1500 pounds, and in extra good condition. I fed the horse a gallon of ground feed, composed of equal parts of bran, corn chop, and ground oats, giving this quantity three times a day with a little alfalfa and plenty of good prairie hay, and good water from a spring. I had an extra careful driver and kept the horse at work until, during the rainy season, the horse was laid off for three or four days. Being obliged to be away from the farm during most of that time I neglected to caution my men about overfeeding the horses in case they did not work them. While they were idle they received the same grain ration as when at work. When I returned I hitched this horse up with its mate. The horse being a good feeder, jumped and played as soon as he was hitched. He went about half a mile standing on his hind feet, squealing and jumping; he then began to sober down, lag back in the harness and would not keep up with his mate. Finally he began to get stiff in the hind parts and seemed to be getting lame.

I stopped him and got out of the wagon, and as soon as I walked along side of the animal, noticed he was trembling and about ready to fall. We unhitched him and just as soon as the harness was off he dropped by the side of the road. Being near a neighbor's, we got him to his barn and tried to find some one to treat him, but there being no veterinarian available, we did the best we could. He never got up, but simply lay and groaned until he died. What is the name of the disease, and could I have cured him?

Answer.—Your horse died from what is technically known as haemoglobinuria; the meaning of this term is "blood in the urine." The cause of the trouble comes from feeding a horse, that is in extra fine condition and in good muscular condition from regular work, heartily while at rest. Not being exercised the system can not work off the absorbed materials from the food; the result being that the liver is overtaxed. As soon as a horse is exercised a little the liver throws its great quantity of food materials into the blood at once, with the results that you have noticed in your horse—a stiffening of the muscles, a passage of blood in the urine, causing the urine to be as black as coal. If you could have taken your horse, after he was down, and stayed by him with plenty of help, so in case he made an effort to get up you could get him onto his feet, rubbing the legs with warm water, as warm as he could stand, then when he would lie down watch him until he wanted to get up again, and helping him, you would probably have brought him through. We often find it advisable to apply hot blankets all over the body, changing them as often as they get cold; and constantly working the legs and rubbing the muscles to stimulate the circulation, as the legs become numb in this disease. The horse should have received at least a quart and a half of raw linseed

oil. Then in about forty-eight hours after the first dose of oil, another dose of a quart should have been given, providing that the bowels have not worked properly and are not extremely loose. From the first it is best to give, providing that the animal is not nervous, the following, which you can have put up at your drug store: Nuxvomica, fluid extract, 1 ounce; iodide of potash, 1 ounce; aqua, 3 ounces; mix. Give a teaspoonful of above in half a pint of water every four hours. A stimulating liniment composed of the following drugs would have been very advisable to be used over the muscles of the limbs about three times daily: 1 pint of rectified spirits; 2 ounces of gum camphor; 1 ounce of spirits of turpentine; 1 ounce each of oil of spike, oil of cadjuput, and oil of origanum; mix together. If the animal could not rise he should have been turned every few hours so as not to allow the muscles to become any more numb than possible. To prevent this disease in horses that are in extra fine condition and in regular exercise, it is advisable to cut down on their grain and give laxative food, when they are not working. It sometimes goes by the name of Monday Morning Disease, Fourth of July Disease, New Year's Disease, as it often comes on after a day or more rest. After a horse is once down and cannot get up, unless you can help him, he loses all his ambition to try again, and when he has been down for several days it is very hard to treat him, and in fact in such cases very few get up. The disease is more easily prevented than treated. C. L. BARNES.

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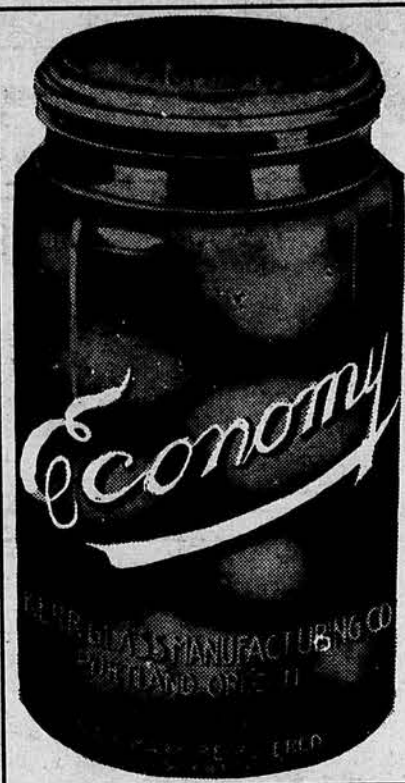
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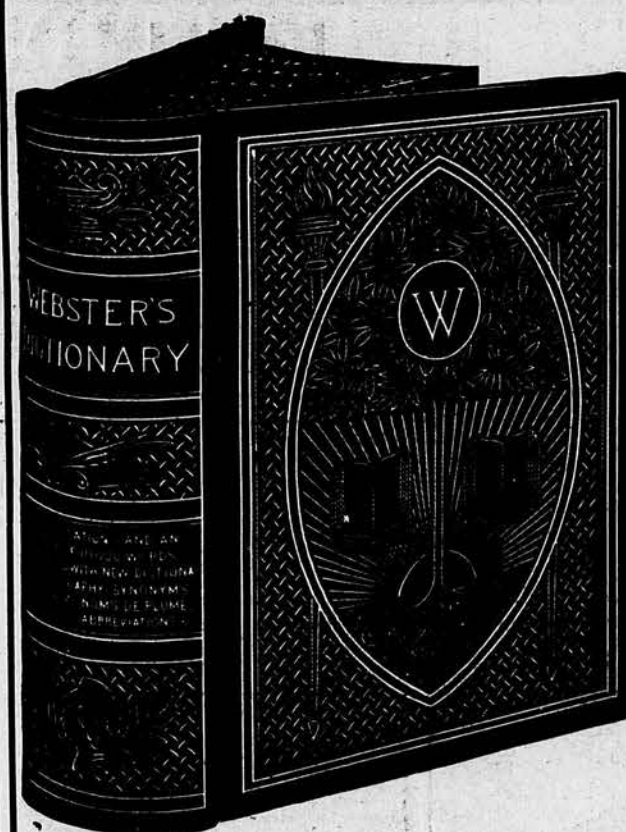
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