

Frank



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The Y. M. C. A. Building Kansas State Agricultural College

My Farmer Friends:—Perhaps few of you are acquainted with the efforts which we have been making at the Kansas Agricultural College for the past two years with reference to raising a certain sum for the construction of a Y. M. C. A. Building for the Agricultural College students. You know something of the work of the Young Men's Christian Association in the cities and in the colleges of the land. It is a splendid organization and is accomplishing a grand work in developing Christian citizenship and in raising the standard of manhood in our colleges and cities. It is a necessary organization in every university or college.

We have a strong Y. M. C. A. organization at the Agricultural College, but the students have been hampered by not having proper accommodations in the way of buildings and equipments for carrying on the work of the organization. Nearly two years ago our worthy secretary of the College Y. M. C. A., W. W. McLean, originated the plan of raising a certain sum for the construction of a suitable building to be the home and headquarters of the Y. M. C. A. of this college. The original plan was to raise \$25,000, and of this amount \$22,000 has already been subscribed, as follows: Students and faculty of the college, \$13,000; alumni, \$4,000; business men of Manhattan, \$4,000; an Eastern friend, \$1,000. It has been found that \$25,000 is not enough even to complete the building which has been planned, besides it will require some five or six thousand dollars to equip the building after it is completed. It is proposed therefore to raise \$10,000 more. It is necessary to have this amount subscribed in order to let the contract and begin the construction of the building. The lot has already been purchased and the plans of the building have been drawn and everything is ready to construct the building as soon as the money is raised.

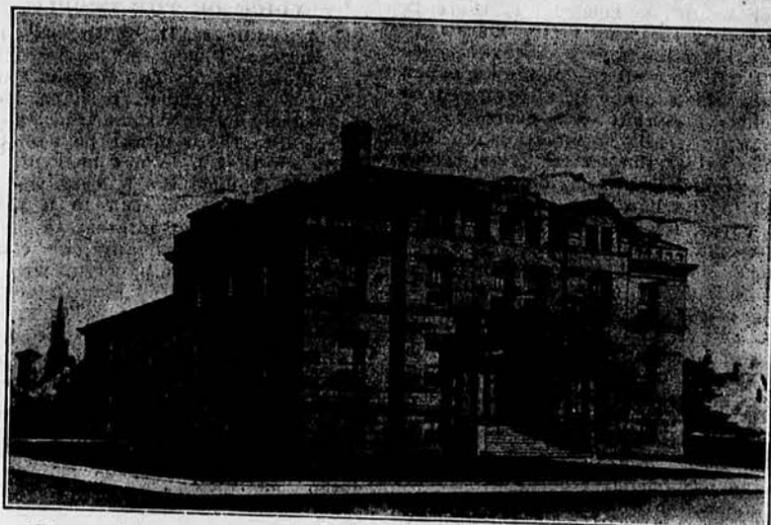
We believe that the balance of the sum required, \$10,000, ought to be contributed by the people of the State, a large part of which should come from the farmers of Kansas. You have observed the recent success which has attended the movement in Kansas City to raise \$250,000 for the construction of a Y. M. C. A. building in that city. We should certainly be able to raise \$10,000 from among the farmers of Kansas, since the purpose is to make a place at the Agricultural College which may be a religious home for the farmers' sons who attend this institution.

The Agricultural College is supported entirely by the State and the United States; no individual donates anything for its support. The State, however, contributes nothing toward carrying on religious work or towards the construction of buildings for that purpose. Here is an opportunity for the farmers of Kansas to show their appreciation of the splendid work which the Agricultural College and Experiment Station is doing.

Several of the Kansas farm papers, the KANSAS FARMER, Mail and Breese, and Farmers' Advocate, have agreed to assist in the canvass in raising this \$10,000, which is still required. These papers have generously started the subscription at a good figure and we hope

that the plan will meet with the approval and a hearty response from the farmers of the State.

Let's see, it will take 10,000 one dollar subscriptions to raise the amount required and I am sure that there are ten thousand farmers who will read this article who are interested a dollar's worth in the Y. M. C. A. work and in the Agricultural College and its development, which interest they can show by contributing toward this Y. M. C. A. building fund. But we expect a great many larger subscriptions. One thousand \$10 subscriptions will



Proposed Y. M. C. A. Building, Kansas State Agricultural College.

raise the amount, and it would only take one hundred \$100 subscriptions. I have been informed by farmers in different parts of the State that the suggestions, information, and bulletins received from the Agricultural College and Experiment Station have actually saved for them in one instance more than \$100. I received a personal letter from a farmer in Southern Kansas a few days ago in which he volunteered his financial assistance in any way which would be beneficial to the Agricultural College. I know there are others who will be willing to contribute in this way.

The writer is chairman of the College Y. M. C. A. board of control, and is personally interested in seeing this building proposition succeed. Such a movement ought to receive the hearty support of the farmers of Kansas, and the friends who assist in this movement will receive the appreciation of the agricultural board, faculty, and students, as well as the commendation of all friends of the Agricultural College and the Y. M. C. A. throughout the State.

You may send your subscription to the publisher of this paper, or to W. W. McLean, secretary of the College Y. M. C. A., Manhattan, Kansas. The names of those who contribute to this movement will be published in this paper. Now, do not delay, let us see how quickly we can raise this small amount. It seems that we have raised as much by local subscription as it is possible to raise. Some have proposed trying to raise this amount from wealthy men of Eastern United States, such as Carnegie

(Continued on page 384.)

UNDESIRABLE CAMPERS.

EDITOR KANSAS FARMER:—How long can travelers camp by the roadside? If there is a time limit, to whom should a complaint be made to induce them to move?

Has the owner of adjoining land any more authority to induce them to move than any one else?

They camp for several days and even weeks at a time. Some of them work while others offer little worthless things for trade for a living, which, with the pitiful stories they tell, amounts to almost the same as begging.

A SUBSCRIBER.

Any one has a right to the unlimited use of the road for purposes of travel. This necessarily includes the right to make such stops as may be incidental to the use of the road in passing to and fro. For all other purposes than its use as a highway, the land included in the road belongs to abutting farms,

ejection to be brought by the owner of the land upon which the camp is maintained.

ORIGIN OF THE BEEF-TRUST CASES.

President Roosevelt is sending a special message to Congress discussing the several aspects of the meat-trust question.

It will be remembered that this beef-trust investigation followed a showing of injustice made by Gullford Dudley before the Kansas Stock-Breeders' Association in January, 1904. This association passed resolutions on the situation. H. A. Heath, of the KANSAS FARMER, secretary of the Stock-Breeders' Association, forwarded a copy of these resolutions to President Roosevelt accompanying them with a strong letter calling the President's attention to the gravity of the situation.

The resolutions forwarded and the replies which resulted were as follows:

RESOLUTIONS OF THE KANSAS STOCK-BREEDERS.

Whereas, Sufficient evidence has been presented to the stock-breeders of Kansas to convince them that there exists at Kansas City and other points an illegal and unlawful combination or trust that has the power to and does depress the price of beef on foot to the great damage and detriment of the breeders and feeders of Kansas and without a corresponding benefit to the meat-consumers of the world, but to the sole benefit of the packing trust; therefore be it

Resolved, By the Kansas Improved Stock-Breeders' Association, in its fourteenth annual convention assembled, that Theodore Roosevelt, President of the United States, be hereby requested to call the attention of his Attorney General to this matter and require him to investigate the same to the end that the guilty parties may be punished and the anti-trust laws of the United States be fully enforced.

Resolved, That a copy of this resolution be sent direct to the President of the United States, signed by the president and secretary of this, the greatest live-stock breeders' association in the United States.

Whereas, It is apparent that the laws of Kansas are ample for the suppression of trusts and combines and the control of all corporate interests; therefore, be it

Resolved, That we call upon Governor W. J. Bailey to secure the enforcement of these State laws by all means at his command and thus aid in fostering the industries which lie at the foundation of our prosperity and throttle the gigantic meat trust which is threatening these industries with gradual extinction; and further be it

Resolved, That a copy of this resolution be signed by the president and secretary of the Kansas Improved Stock-Breeders' Association and handed to Governor Bailey.

THE ROOSEVELT WAY.

White House, Washington, January 25, 1904.

My Dear Sir:—I beg to acknowledge the receipt of your letter of the 21st instant, with enclosed copy of resolutions, and to say that the President has taken the matter up with the Attorney-General.

Very truly yours,

WM. LOEB,

Secretary to the President,
116 W. Sixth Street, Topeka, Kans.

REPLY OF THE ATTORNEY-GENERAL.

Department of Justice,

Washington, D. C.,

January 28, 1904.

Mr. H. A. Heath, Secretary Improved Stock-Breeders' Association, Topeka, Kans.

Sir:—The President has referred to this Department your letter of the 21st instant, enclosing a resolution of the Kansas Improved Stock-Breeders' Association complaining that the anti-trust laws of the United States are being violated by the beef-packing companies to the detriment of the complainants. In reply, you are informed that in May, 1903, the Federal Government obtained an injunction against the leading beef-packing companies and firms, and also against a large number of individuals, restraining them from violating the provisions of the anti-trust act, and so far as the Department is advised they have obeyed the injunction. If you have any evidence of new violations of the law or of violations of the injunction, forward it to S. H. Beth Esquire, United States Attorney, Ch

go. Illinois, and it will receive prompt consideration. I enclose a copy of the court's opinion and decree in the beef-trust case. Respectfully, P. C. KNOX, Attorney-General.

Replying to Attorney-General Knox's request for information of violations of the law, Mr. Heath called attention to the fact that in the nature of the case stockmen could possess only clues to evidence, and that they would be unable to present complete and conclusive evidence such as would convict in court. He suggested that with these clues the special agents of the Government ought to be able to perfect the evidence, and that, in the view of the stockmen, competent special agents ought to be assigned to the work.

The Garfield investigation followed, and resulted in a published report which was ridiculed by the press throughout the country.

After accumulating evidence enough to convict the members of the trust and getting the matter fairly into court, the Attorney-General was confronted by the showing that this evidence had been given to Commissioner Garfield under promise of immunity from prosecution. It developed that, under this promise of immunity the members of the trust made haste to confess their guilt. As a crowning piece to this gigantic blunder of the son of a former President, the judge before whom the case was tried strained the law to favor the self-confessed culprits and set them at liberty.

It is not surprising that the President and the Attorney-General are laying before Congress this strong case of outrage in the name of the law with a view of having it made impossible to again thus obstruct the administration of justice. Every member of Congress from the stock-growing States should favor such amendment of the law as will make it impossible for the guilty to escape by confessing his guilt, even to Commissioner Garfield.

INFLUENCE OF THE MOON.

EDITOR KANSAS FARMER:—I would like to know through the columns of the KANSAS FARMER whether it makes any difference in which sign of the moon potatoes are planted in order to secure a good crop.

MATT. WINTERSCHIEDT, Brown County.

In the fall of 1860 a 15-year-old boy was driving home from town after having delivered a load of wheat at the mill. About three miles from town there was a settlement of thrifty people from Pennsylvania. The women of this community produced vegetables in their gardens, carried them to town in baskets strapped to their backs, and were usually rejoiced on returning with the money they had received for their vegetables. These women never asked to ride on a loaded wagon, but were glad to accept an invitation to ride home when the empty wagon returned. One such mounted the high spring seat on top of the double wagon-box beside the 15-year-old boy above mentioned. She was talkative. Everybody was then speculating on the prospect for war. The following conversation took place:

"What you denk, will be war?" "Some people think there will, but others think there will be more talk than blood." "O, our nachbar was to house gester abend, und he say he see a star und he looks blooty. He denk it is a sign of war. What you denk?"

This energetic woman's husband went to the great war which came soon enough. With her sons she continued to cultivate the farm. They added to the area lands now worth \$100 an acre. Her children went to school. Her grandchildren attended the State University and took honors. Her great-grandchildren are becoming leading citizens.

This good woman was doubtless confirmed in the opinion that the appearance of the planet Mars in the fall of 1860 was a portent of the war of 1861-5. But was it?

This woman who succeeded in producing the finest vegetables believed in planting when "the sign was right," but she neglected not to cultivate and to fertilize. Do her descendants who are equally successful give any attention to signs?

Another instance: A good farmer who rejoiced in the scriptural name, Jephtha, and who was a native of the great State of Ohio, was about to commence haying. Up early in the morning, his eyes naturally scanned the skies to see whether the weather promised fair or foul. The sun rose bright and clear and, after shining a few minutes, went under a cloud.

more sown! No use to think of haying to-day, sensible persons always

said Jephtha. "I have noticed all my life that if the sun gets up clear and then goes to bed again, it will be a rainy day. It's a sure sign. I never saw it fall."

The boys didn't believe much in signs and decided to keep a record on the "sure sign." It failed that day, and during that haying season "it missed oftener than it hit."

Some of Jephtha's descendants have attained prominence, some have become very wealthy, but not one of them pays any attention to signs, to changes of the moon, or to any of the vagaries which disturbed the repose of mind of their ancestor at planting time, at haying time, and at hog-killing time.

The successful farmer of the present day should be something of a scientist. He should lay aside all sayings and imaginings and depend upon recorded observations as to phenomena of nature. The official records fail to show any advantage from observing signs of the moon, neither do they show any influence upon vegetation on account of positions of the planets.

DIVISION OF INHERITANCE.

EDITOR KANSAS FARMER:—Will you please answer the following question: When both parents have died without making a will and all children are past 21 years of age, is any process of law necessary in dividing property if all can agree to division? A. M. OLSON, Cloud County.

This correspondent does not state whether the property left by the parents consists entirely of personal property, entirely of real estate, or of both personal property and real estate.

In the division of personal property where the heirs are all of lawful age it is necessary to provide for the payment of all debts that the parents or either of them may have owed at death; to make sure that all heirs are included; and to make the division satisfactory to every heir. There being then no one at interest to complain, the division can be made without assistance of the Probate court, and no lawyer would be needed. If there is any liability that any of the heirs may change his mind and become dissatisfied, it will be well to draw up a paper stating which property is assigned to each heir and that each accepts such division in full satisfaction of his claims against the estate. This agreement, signed by each heir, may be placed in the hands of a disinterested third party, for instance the bank, for safe keeping.

There is probably real estate also to be distributed. In this case the conditions mentioned as incident to the division of personal property have to be observed, and the matter might be settled by mutual consent and without danger of future complications were it certain that none of the holders would ever desire to sell their lands. Purchasers of lands are, wisely, particular to have the official records show perfect succession of title. The record in this case would not show conclusively that all debts had been paid, or that all of the heirs had received their share to which they were entitled. Such lack in the record would "cloud" the title to such an extent as to seriously reduce the value of the holding.

It is in all cases of this kind better to pass the estate through the Probate Court. One of the heirs, perhaps the oldest brother, should ask the Probate Judge to appoint him administrator. The other heirs can signify their acquiescence in the appointment and their agreement as to the division of the property. If there are no debts, or the heirs have provided for the payment of the debts, there need be no heavy expense. If the case were in Shawnee County, the Probate Judge would render all necessary assistance and no lawyer would be required. The entire cost would probably be \$12 to \$15. The records of the Probate Court would then make clear the title to properties and the possibility of future complications would be avoided.

The case is not quite so simple where there are minor heirs, but where all want to do right and all agree there need be no great expense.

Young readers of the KANSAS FARMER of a few years ago were greatly pleased with the "Autobiography of a Collie Dog." They will again be pleased on following the "Autobiography of a Pony" by the same careful writer, a young lady who chooses to have her excellent writings appear first in this paper. After its publication in the KANSAS FARMER, the "Autobiography of a Collie Dog" was issued in book form by a prominent publishing house. Those who enjoy going down into the mental and emotional phases of animal life following the insight of one who

has an unusual intuitive appreciation of their experiences as well as an insight into their relations with people will enjoy the "Autobiography of a Pony," while those who can not, like the young lady who writes these stories, get into close sympathy with animals will surely be benefited by getting as close as they can.

Breeders of pure-bred stock will be interested in the letter of Dr. N. S. Mayo on "The Live Stock Industry of Cuba." The development of the stock industry in the island under the able guidance of Dr. Mayo as Chief of the Department of Animal Husbandry is likely to call for importations of well-bred animals from the United States.

The late snows and early rains of the spring of 1906 have provided in the soil and subsoil of a very large proportion of Kansas as much moisture as is used in growing and maturing a full crop of corn, wheat, or oats. The problem of retaining this moisture where it may contribute to the growth of the crops is one of first importance.

Frank Hall, of Denver, Col., is now on the ocean with 2,100 head of Hereford cattle purchased in Herefordshire, England. The bunch is valued at \$80,000 to \$100,000.

BLOCKS OF TWO.

The regular subscription price of THE KANSAS FARMER is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to secure the paper at half price. While the subscription price will remain at one dollar a year, every old subscriber is authorized to send his own renewal for one year and one new subscription for one year, and one dollar to pay for both. In like manner two new subscribers will be entered, both for one year, for one dollar. Address, The Kansas Farmer Company, Topeka, Kans.

VOICE OF THE PEOPLE.

G. A. Biddle, M. D., of Emporia, Kansas, writes: Please find enclosed \$1.00 for which send me THE KANSAS FARMER.

You will remember, perhaps, that I stopped my FARMER some time ago, but I feel like there might be something going on that I do not hear of. The reason I stopped the FARMER was that there is too much stuff in it that is absolutely without interest to me and should not interest any one else. I object to filling the paper up with continued stories, but as I am not directing the policy of your paper and find you can still do business even if I do stop my subscription—at least I have not heard of your suspension—I will do like the Hon. Cy Leland in the boss buster business, "If I can't beat em—will jine em." So just send along your paper—stories and all—and I will take down "my kick."

Mr. Kingsley, of Independence, Kansas writes: "I am sending a new name with my own for the \$1.00 subscription offer. The new subscriber is John P. Wetmore, Independence, Kansas."

"My name must be among the oldest on your list. I know I was taking THE KANSAS FARMER in 1873, and suppose I shall take it as long as I live."

After the Lawbreakers.

EDITOR KANSAS FARMER:—Please allow me to commend THE KANSAS FARMER, not in terms of flattery, but in words of soberness and truth, for the publication of the International Bible lesson entitled "Temperance" by David W. Clark.

I wish I had a clarion voice that could be heard from the Atlantic on the East to the Pacific on the West, and from the Lakes on the North to the Gulf on the South. I would sound it forth until every voter in this broad land of ours could find no rest until he became anxious to do all in his power to abolish the liquor business, root and branch.

I most heartily approve of Governor Hoch's plan to oust the derelict State officers for violating the most sacred obligations that men can take upon themselves in assuming the duties conferred upon them by the laws of the State.

It is certainly too late for the Supreme court to undertake to decide that the plan is unconstitutional. Such a decision at this juncture would be greater complicity with the rum power than was the Dread Scott Decision of ante-bellum times. Cruel as was the enslavement of the African race, it bears no comparison with the shackles that now bind the white race and the

colored people of the United States. At such a time as this, THE KANSAS FARMER should keep giving its powerful influence in favor of the rigid enforcement of the prohibitory law, urging the Governor to push his plan of ousting every perjured officer of the State.

If prohibition in Kansas falls flat to the ground, hordes of liquor-mongers will override the State and everything good and noble will be left in heaps of ruins. It must not be.

Mordecai said to Queen Esther not to think that she would escape if she held her peace at that crucial moment. Let all the lovers of sobriety and Christianity be aroused to action and "stand up for Kansas" like men.

Dear Editor do not call me insane for I am duly sober and I am aware that THE KANSAS FARMER has much to do in its legitimate line as an agricultural magazine, but this subject vastly outweighs everything else now touching our interests, and this is my apology for writing this letter. God is with us. Keep marching around Jericho and the walls will fall.

BENJAMIN NICHOLSON, Sumner County.

Shawnee County Boys' Corn-Growing Contest.

EDITOR KANSAS FARMER:—The committee in charge of the boys' corn-growing contest of Shawnee County met March 31, and offered \$35 in prizes for pure-bred corn raised by boys from 12 to 18 years of age. The money will be divided as follows: \$10 for the best ten ears, \$8 for the second, \$6 for the third, \$4 for the fourth, \$2 for the fifth, and \$1 each for the next five. Leaflets giving full information will be furnished by the committee: F. P. Rude, North Topeka, of Indian Creek Grange; Emery Brobst, of Oak Grange; and C. A. Klein, of Berryton. Pure-bred seed-corn will be furnished at cost to the boys, and can be obtained at Forbes Bros., and of members of the committee. This contest is open to all farmer boys within the age limit. F. P. RUDE, \$53.

Upon reading Luther Burbank's article on "How Plants are Trained to Work for Man," printed in "The Youth's Companion" for March 22, one can not help thinking that only a Methuselah could reap the full rewards of his own plant-breeding. The article indicates that the author has already achieved the end aimed at in some of his experiments. On the other hand, many of them involve so many crosses, such careful selection season after season, that the result of them can hardly be known within the span of three score years and ten. This contribution to "The Youth's Companion" is said to be the first word that Luther Burbank has ever yet said about himself or his work in print, and it is likely, therefore, to be read with interest by every one interested in horticulture.

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Agriculture

Some Experience with Barley.

EDITOR KANSAS FARMER:—On account of the high price of shorts and bran, I concluded, in 1902, to try to secure some kind of grain which could be raised on our farms, that had plenty of protein to help balance the corn-ration for all kinds of stock. Speltz was lauded to the skies by the Northern seedsmen. I procured a small quantity and raised some. I was disappointed in it as there were too many husks. In 1903 I sowed 8 acres with Six-rowed spring barley on river-bottom land. On May 27 the floods came and the barley, with all our other crops, was washed away. In 1904 I sowed about 8 acres near the river. It grew very fine and was ready to cut before fall wheat, but after it was in the shock, the river rose high enough to float all but about 40 shocks. We saved that for seed and sowed it in 1905. A part of the seed saved was sown on ground where there was some volunteer wheat and was choked out; but we thrashed enough to give it a fair trial and found it far superior when ground, to corn chop and Kafir-corn. Horses could stand the heat a great deal better after eating it; it made excellent slop for hogs when ground fine; and for milch cows, it is far superior to bran and shorts.

In the fall of 1904 I received a bulletin from the McPherson Experiment Station giving the results of the yields of various kinds of grain, and this said that Tennessee winter barley yielded 62 1/2 bushels per acre. I immediately wrote for and obtained one bushel which was sown October 8 on good soil. It came up strong and made a fine growth. It was not damaged by the winter in the least and on June 9 it was cut and shocked. The ground was measured and there was just 89 rods. The crop was thrashed as soon as the wheat was cut and I had 35 1/2 bushels of fine grain. There was considerable loss handling such a small quantity. I think there will be no difficulty in raising from 50 to 80 bushels per acre on our rich bottom-lands. I distributed a little seed to some of my friends and saved the balance. For Kansas farmers and breeders, I believe barley is a bonanza, equaled only by alfalfa.

Dickinson County. WM. RAMSEY.

Seeding a Hog Pasture.

I desire to seed for hog pasture a piece of ground consisting of black creek-bottom land and limestone slope. The latter is underlaid with heavy clay subsoil and in places is somewhat seepy. This land is now in English blue-grass with a little white clover, but the stand is poor. A part is now in pasture and will have hogs on it this summer. I wish to sow this piece in white clover. Can I secure a stand while hogs are on it? The balance of the ground will have no stock on it. I shall use a mixture of Alsike, red, and white clover, with redtop for seepy spots. At what time and in what manner should I do the seeding in order not to destroy the grass already there? I also desire to seed a timber slope which I have thinned and cleaned of underbrush. I shall use Kentucky blue-grass and white clover. At what time should I sow?

At what time should rape be sown for hog pasture, and how much seed should be used per acre?

I have a Duroc sow that has farrowed and raised fifty-two pigs in a little less than twenty-four months. This can be beat but how many KANSAS FARMER readers can do it?

Osage County. H. G. JUMPER.

Sow the clover- and grass-seeds on the English blue-grass meadow as soon as possible. In fact it might have been a good plan to have seeded on the late snow. Sow now, however, while the ground is still freezing and thawing, before it becomes packed by rain, and a good part of the clover- and grass-seed will become covered with soil and sprout, or it may be advisable to run the harrow over the field two or three times just as soon as the soil is in fit condition, or immediately after sowing the grass- and clover-seed. With early seeding the harrowing would probably be all the cultivation really necessary, but if you do not seed until after the ground becomes firm then I would advise disking and harrowing in order to loosen the surface to receive the seed. The disking will probably not injure the English blue-grass, and may benefit it.

The field could be pastured lightly with hogs, if they were kept from root-

ing, and I would advise that they be kept off during wet weather when the ground is soft. It will not do to pasture very closely; in fact, it would probably be better not to pasture during the first part of the season.

I would advise also to sow the grass and clover as soon as possible in the timber lot—the earlier the better. Unless you can cultivate the ground to cover the seed, it will not be advisable to sow after the ground becomes settled and firmed by spring rains.

If rape is sown broadcast or in close drills four to five pounds of seed is required per acre, but if planted in rows thirty inches apart two pounds of seed per acre is sufficient, and even less may be planted and give a good stand. On the whole, I think it is preferable to sow in close drills rather than to sow broadcast and give no cultivation after planting.

You may hear from some of the KANSAS FARMER readers regarding the Duroc sow with fifty-two pigs.

A. M. TENEYCK.

Cheat Instead of English Blue-Grass.

I sowed some grass-seed last fall supposing it was English blue-grass, but to my disappointment it turned out to be cheat. I mixed with this cheat-seed 27 pounds of alfalfa-seed and 35 pounds of Bromus inermis. These three kinds of seed were mixed together and sown on nine acres of land that was plowed early and deep, being well settled before it was seeded. I drilled in the seed with a disk-drill, secured a good stand and thought I would pasture it to keep the cheat from seeding. What treatment would you advise me to give this field in order to secure a better stand of alfalfa? I thought some of disking the ground after harvest and seeding to alfalfa. Would you disk or plow or what would you suggest? There seemed to be considerable alfalfa up last fall.

Washington County. JNO. BROWN.

Unless the Bromus inermis has made a fair stand along with the alfalfa, I would advise you to plow this field and seed down other land to grasses and alfalfa this spring. As a rule it is not satisfactory to attempt to thicken a stand of alfalfa or grasses, and there would be a special objection in this case since the land is seeded with cheat.

If there is a part of a stand of Bromus inermis along with the part of a stand of alfalfa you have mentioned, I would leave the field alone and not attempt to reseed it. I would either pasture the cheat, as you have suggested, or cut the grass early to keep the cheat from seeding. Bromus inermis will thicken up very rapidly, and a half a stand of grass will often spread so as to give a very good stand the succeeding year. Probably the alfalfa is thick enough to furnish good pasture with a good stand of grass. A. M. TENEYCK.

Harrowing to Maintain Mulch—Growing Wheat.

Will you kindly give me some information in regard to harrowing wheat? What month would you suggest for harrowing in this section of the country, and how often would you harrow? What kind of harrow would be the best to use?

A. A. BREITZER.

Saline County.

We have not carried on extensive experiments in harrowing wheat at this station. For the last three years I have harrowed a field of wheat each spring but have not made a yield test. From observation, there seemed to be little or no effect on the growth or yield of the wheat, but the last three seasons have really been too wet for the best development of wheat. The harrowing is essentially for the purpose of conserving soil-moisture. In a drier season we may expect more beneficial results. I have not observed that the harrowing injured the wheat. Our plan has been to harrow once or twice in the spring after the wheat has started well. It is not usually advisable to harrow wheat in the fall and it is best not to harrow too early in the spring, but when the wheat has made some start and the roots of the plants are well established, wheat may be harrowed without injury and often with much benefit. The harrowing will not only loosen the soil, producing a mulch which tends to conserve the soil-moisture, also producing a favorable surface for receiving rain, but the harrowing destroys the young weeds and gives a cleaner crop of wheat than may be secured without harrowing, especially if the soil is inclined to be weedy.

W. H. Campbell in his "Campbell's Method of Soil Culture," recommends harrowing the wheat, beginning in the spring and continuing the harrowing until the wheat is a foot or eighteen inches high. In the dry climate of the

semi-arid regions, the harrowing and the continuing of the harrowing during the early growth of the wheat may often prove beneficial in conserving soil-moisture and producing larger yields of wheat than may be secured without the cultivation. Mr. Campbell claims excellent results in the use of his method on the Pomeroy farm at Hill City, in Graham County, Kansas. The average yield of wheat on the Pomeroy farm, resulting from the practice of the Campbell method of culture, was something over 40 bushels per acre, while the average yield from surrounding farms was not over 20 bushels per acre. The Campbell system includes much more than the harrowing of the wheat, and I believe that on the Pomeroy farm the practice has been to summer-fallow, practicing summer culture every two or three years, during which season no crop was grown. Experiments in the harrowing of wheat are being undertaken at the Fort Hays Branch Experiment Station, Ellis County, Kansas.

The weed-harrow, or weeder, is perhaps better adapted for harrowing wheat than the common straight-tooth or slanting-tooth harrow. The weeder is somewhat objectionable on account of the wheels. When the ground is reasonably firm the common harrow may be used without injuring the wheat. I question whether it is necessary to continue the harrowing after the wheat covers the ground well, unless very heavy rains firm and puddle the soil, destroying the mulch of mellow earth. Usually this will not occur. I have harrowed wheat when it stood 5 or 6 inches high and had stood so as to about cover the ground, and the mulch thus produced was still in evidence at harvest time. In this experiment the ground was harrowed twice on the same day. The yield of wheat from the harrowed field was 3 bushels per acre on the average above that from the field adjacent not harrowed, and at harvest time the soil of the harrowed field contained 2 inches more water in the first six feet of soil than that of the field which was not harrowed. The wheat on the harrowed field ripened about two days later than the wheat on the check plot. This experiment was carried on at the North Dakota Experiment Station with spring wheat. It was observed in the same experiment that wheat harrowed before it had stood much was injured in the stand and gave a less yield of grain than the wheat not harrowed. It appears, therefore, that even with winter wheat there may be some danger of injuring the wheat if it is harrowed too early in the spring.

Sand Lucerne.

Is there a kind of alfalfa-seed that grows and thrives better on light, thin prairie-land than does other kinds? If so, what is the name of the seed and where may we buy a few bushels of it?

Chatauqua County. J. O. TULLOSS.

You perhaps refer to the Turkestan alfalfa. This is a hardy strain of common alfalfa, which has been brought to this country from the dry plains of Turkestan where it has been growing for perhaps a century. Apparently this variety of alfalfa is somewhat harder than the common alfalfa grown here, and may be better adapted for growing in Western Kansas and the Northern part of the United States. Possibly also it may succeed better than common alfalfa on thin land in Southern Kansas. We sowed a plot of it three years ago alongside of a lot of common alfalfa, but the Turkestan alfalfa does not grow so rank and has not yielded quite so well as common alfalfa. The trial was made on our upland soil, land rather poor in fertility. Pure seed of Turkestan alfalfa is hard to secure. The seed is advertised by Western seed companies. We secured seed three years ago from Northrup, King & Co., Minneapolis, Minn., and this company now advertises pure seed of Turkestan alfalfa. You may be able to get a small sample of seed also, from the U. S. Department of Agriculture. Write to T. B. Gallaway, Chief of Bureau of Plant Industry, U. S. Department of Agriculture, Washington, D. C. It may be that you have in mind land lucerne (Medicago media). This is a perennial, leguminous plant, resembling alfalfa; in fact, it belongs to the same group or family, the botanical name of alfalfa being Medicago sativa. We planted a plot of sand lucerne a year ago last fall; it made an excellent stand and produced several cuttings last year, but the hay is a little coarser and not so good in quality as alfalfa hay, although from analysis of the hay it appears that the feeding value of sand lucerne hay is practically equal to that of alfalfa. Sand lucerne is very highly recommended for

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is practicable in Hamilton County, Kansas. In fact, I doubt whether dry-land farming may be successfully carried on in that section of the State without the practice of thorough tillage and cultivation of the soil, as outlined in the "Campbell Soil-Culture Manual." I refer you to Mr. Campbell's soil-culture manual for detailed information regarding his methods. Write to H. W. Campbell, Lincoln, Nebraska. I have mailed to you a copy of a letter which briefly describes the Campbell system of culture.

The durum wheat has been grown successfully at several points in Western Kansas. I met farmers in Thomas County last fall who claim to have harvested 40 bushels of durum wheat per acre last season. In Southwestern Kansas I have also received favorable reports of the growing of this wheat. The durum wheat is doubtless better adapted for growing in our Western climate and soil than any other variety of spring wheat. I find that Western farmers sow the wheat very early in the spring or even in the winter. It should at least be sown early in the spring. I have mailed you copy of a circular letter giving information regarding durum wheat.

I have learned that broom-corn is grown very successfully in the counties east of Hamilton and even in Hamilton County. This crop is a great money-maker. We have published no bulletins at this station regarding the handling and culture of broom-corn, but you can secure excellent bulletins from the United States Department of Agriculture, Washington, D. C.—address Office of Experiment Stations. A good bulletin on durum wheat may also be secured from the South Dakota Experiment Station, Brookings, South Dakota. I have mailed you seed-grain circular No. 1, which calls attention to the best producing varieties which have been grown at this station, at the Ft. Hays Branch Station, and at the U. S. and State cooperative station at McPherson, Kansas.

Other crops adapted for growing in the section named are sorghum and Kafir-corn, sorghum especially being grown for forage and Kafir-corn both for forage and for grain. The difficulty has been to mature Kafir-corn for the grain-crop—we need earlier maturing varieties. Some work is being done in breeding Kafir-corn at the Ft. Hays Branch Station, Hays, Kansas, with the purpose of securing earlier-maturing and better-producing strains or varieties.

Spring barley is grown successfully in many of the Western counties of the State, and alfalfa is being rapidly introduced and is a hardy crop wherever a stand may be successfully established.

I am also urging Western farmers to try the growing of flax more extensively. I see no reason why flax may not become a profitable crop for growing in Western Kansas the same as in Western North and South Dakota.

A. M. TENEYCK.

Boys' Corn-Growing Contest in Wilson County.

EDITOR KANSAS FARMER:—I enclose the circular letter which was mailed to 640 Wilson County boys eligible to the boys' corn contest being organized throughout the State. We have a good entry list at present, including one girl, and there are more coming in.

We could not supply all locations of the county with one variety, so have selected Hiawatha Yellow Dent, Farmers' Interest White, Boone County White, and Hildreth's Yellow Dent.

All interests are cooperating to make the undertaking a success.

The Wilson County Farmers' Institute reorganized with the following officers: H. E. Bachelder, president; J. E. Thompson, vice president; Walter J. Burtis, secretary, and H. M. Starns, treasurer.

We will report again when the corn is distributed. WALTER J. BURTIS, Fredonia, Kansas.

Following is the Wilson County circular:

Fredonia, Kans., Feb. 22, 1906.

Dear Sir:—The State of Kansas is being organized for the boys' corn-growing contest for 1906.

Each county is expected to organize independent. Wilson County will be organized by the Wilson County Farmers' Institute, assisted by County Superintendent, G. L. Atkeson. The cooperation of all parents is solicited.

CONDITIONS OF CONTEST.

One quart of pure seed-corn will be furnished without charge to each farmer's boy between the ages of 12 and 18 who will agree to plant it carefully, cultivate it well, and exhibit ten ears of corn raised from that seed at the

County Institute and corn contest to be held next fall.

This institute and corn contest will be held in Fredonia at the court house sometime between the middle of October and the middle of November. Men of experience will be present and give instruction in judging corn. Each boy will be expected to prepare a brief statement as to date of plowing the ground, kind of land, methods of preparing for planting, method and date of planting, methods of cultivation, date of gathering his samples, statement of number of mature stalks in plot on the first day of August and also the number of barren stalks.

The corn should be planted where it will not readily mix with other corn, but it must not be grown on a city lot.

A medium maturing and a late variety suitable to this locality will be selected by the institute committee and held ready for distribution at the court house Fredonia, Kansas, March 31. Boys who can not come to Fredonia for their sample of corn will notify the secretary of the institute and it will be mailed to them.

Ten prizes are offered for the best ten ears of corn, in order 1st \$10, 2nd \$8, 3rd \$6, 4th \$5, 5th \$4, 6th \$3, 7th \$2, 8th \$1, 9th \$1, 10th \$1. Some special prizes by individuals will be offered to be announced later.

The following entry is to be filled out and mailed at once to the secretary, Walter J. Burtis, Fredonia, Kansas. This is to be an application for seed.

Boys' name.....
Age.....
Father's or Guardian's name.....
Township.....
Postoffice.....

To raise funds for this contest each boy is requested to solicit small subscriptions from his friends, mailing what he can collect to either the State Bank or the Wilson County Bank, Fredonia, Kansas.

This money will be carefully accounted for and if enough is collected the prizes will be increased.

All the winners in the county contests will be eligible to enter the State contest to be held at Manhattan, Kansas, under the management of the State Corn Breeder's Association, January 1 and 2, 1907.

The State prizes will be announced later. For further information, apply to the secretary.

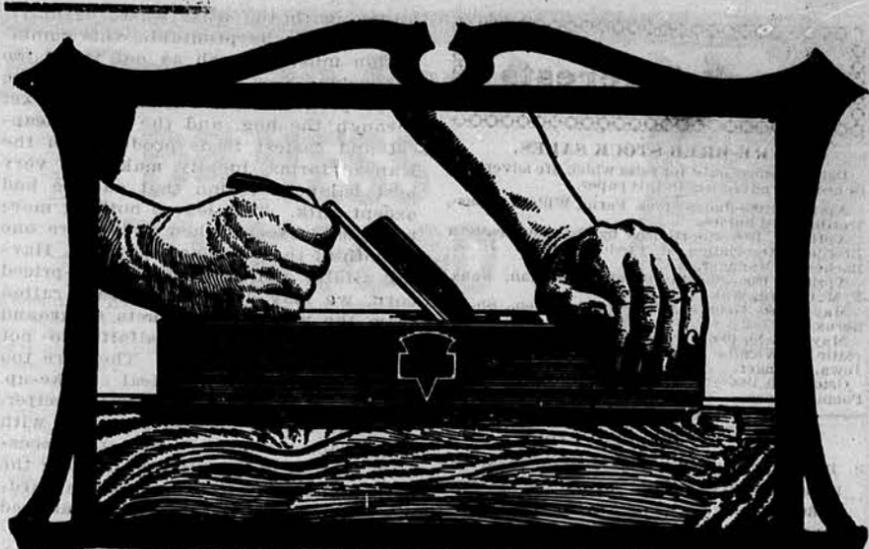
WALTER J. BURTIS, Secretary.
H. E. BACHELDER, President.

Hen's Eggs Wanted.

We've always had the "ple-habit"—now we're coming into the limelight as egg-eaters. Each year 80,000,000 of hungry Yankees want more "hen fruit" than sufficed for the previous year. It's really getting to be quite a serious question how we're going to get 'em fried, poached, and scrambled in quantities sufficient to satisfy us. Supply doesn't seem to keep pace with demand—which fact accounts for the other fact—that lots of times we don't get any eggs at all.

Now, if you travel about the country and keep your eyes open, you will be convinced that there are hens enough in sight to give every man his "two soft" seven mornings in the week, if each hen did her full duty. Which observation brings us square to the point where the "screw is loose"—they don't do it—no fault of the hens, either. The real trouble is, the hen-man doesn't know his business, or else he neglects it. He doesn't treat his hens in the way self-interest would seem to dictate. You can't expect a lot of hens confined in a closed house or yard, with no systematic or rational effort to supply what they would get in a natural state, to make a profit for the owner! Now, if you are planning to make your whole living, or even your "pin money" out of hens, there are two or three things you should certainly remember. First, don't be satisfied with scrub hens. Second (and here is the real point), don't attempt to keep them without giving a regular daily ration of a good tonic. Nothing in hen culture gives so large a return as this one thing, and the only tonic to use is Dr. Hess' Poultry Pan-a-ce-a, prepared by Dr. Hess & Clark, of Ashland, Ohio, and sold by all dealers. This has been the experience of all successful poultrymen. This preparation is not a stimulant, like pepper or something of the kind that excites unnatural production for a time.

Dr. Hess' Poultry Pan-a-ce-a does its work in a different way by assisting the hen to fully digest her food and send each element to its proper part in the hen's economy. Thus a daily feed makes bone, flesh, feathers and eggs, each to the extent of proper elements in the food. Dr. Hess tells us that a Poultry Pan-a-ce-a is a true scientific preparation. It is the result of painstaking experiment in his own yards. So certain are Dr. Hess & Clark of the wonderful value of Poultry Pan-a-ce-a and Instant Louse-Killer, that they cheerfully give a written guarantee that it will do all they say. If it does not you get your money back. Considering cost of ingredients and care taken in manufacture, these goods are remarkably cheap. It costs but a penny a day to feed thirty hens.



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"Concrete Construction About the Home and on the Farm,"

has just been received from the printers. It contains photographs, descriptions, specifications and sectional drawings for many of the smaller structures that can be built without the aid of skilled labor by the suburbanite or farmer; also much general information and many valuable hints to small contractors.

A copy of this book will be sent free upon request

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Stock Interests

PURE-BRED STOCK SALES.

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

April 3, 1906—James Stock Farm, Willard, Kans., trotting-bred horses.

April 15, 1906—Short-horns by the Southeastern Breeders Association at Fredonia, Kans. H. E. Bachelder, Manager.

April 25, 1906—Short-horns at Manhattan, Kans. F. M. Gifford, Wakefield, Kans.

May 1, 1906—George Allen, Omaha, Neb., Short-horns.

May 8, 9, 10, 1906—Great sale of all beef breeds of cattle at Wichita, Kans. D. B. Mills, Dea Moines, Iowa, Manager.

October 20, 1906—W. R. Dawling, Norcastur, Kans. Poland-Chinas.

Swine-Feeding for Profit.

R. F. NORTON, SENIOR MEMBER OF FIRM OF B. F. NORTON & SON, BREEDERS OF TOP DUROC-JERSEYS, CLAY CENTER, KANS., BEFORE THE CLAY COUNTY FARMERS' INSTITUTE.

"The feeder builds to his ideal mold; His knowledge is measured out in gold."

The environment and diet of swine have been changed to suit the profit and convenience of man to such an

Animal with the least waste of nutrients. But, to be profitable, this combination must be such as not to be too expensive. Now corn and alfalfa, the very products we wish to market through the hog, and the very cheapest and easiest feeds produced on the Kansas farms, luckily make the very best balanced ration that can be had except milk. This leaves nothing more to be said except when and where one or both of these are not available. Having alfalfa and no corn, or high-priced corn, we may supply the grain ration from the wheat by-products or ground Kafir-corn. Bran and alfalfa do not make a balanced ration. They are too much alike in chemical make-up. Shorts or ground Kafir-corn is better. Tankage is not necessary to use with alfalfa for we already have the necessary protein in the alfalfa. Having the corn and no alfalfa (here is the hardest problem), milk is an excellent feed with which to balance, or if not available, then such succulent feed as rape, beets, or sorghum may be fed. I believe I have found no better feed, aside from alfalfa or milk, that does me more good in the feed ration than amber cane, especially for growing stock. And let me say now, I believe it pays and pays well to have some succulent feed

food for 100 pounds of gain. Those weighing from 150 to 200 pounds required 480 pounds of food for 100 pounds of gain. Those weighing from 200 to 250 pounds required 498 pounds of food for 100 pounds gain. Those weighing 250 to 300 pounds required 511 pounds of food for 100 pounds of gain, or over 5 to 1. Pigs weighing 300 to 350 pounds took 535 pounds of food to make a gain of 100 pounds. This is one of the reasons why hogs are marketed lighter than formerly.

Here is the result of a feeding experiment of our own on a pig bought in January in Illinois, sired by Tip Top Notcher, champion boar of the World's Fair at St. Louis. (This hog weighed 1,120 pounds at 23 months old.) We fed shorts mixed with milk and one pound of tankage per day. The gain for seven days, ending February 24, was 17 pounds, and for the next week, ending March 3, just before he was six months old, the gain was 16 pounds—33 pounds in fourteen days. Not fat, but just growth. This pig weighed 175 pounds at six months.

Despite the efforts to the contrary of some of his near relatives, the German plutocrat, the French autocrat, and others on the other side of the waters, the American hog, the Kansas "mortgage-

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Iams' Prusant-De-Luroux (29844) Royal Belgian black boy, 4 years old, weight 2210 pounds. A "cracker-jack;" A money-maker. Imported and owned by Frank Iams, St. Paul, Nebraska.

extent that it seems little short of miraculous that they can be fed at a profit at all. But, to prove such is the case, it is only necessary to look about some farms and see the wonderful transformation in a few years brought about with the profit accrued from "feeding corn to hogs." And when we read the statistics of the business of the meat trust we naturally conclude that if there is no profit in feeding, somebody is woefully fooled.

Time was when people of corn-belts seemed to think all that was necessary to grow and fatten a hog was to give him plenty of corn and water and little if any exercise. But we have learned that although some may have succeeded fairly well by this method on cheap land and cheaper feed, yet it is too risky. Swine can not endure this treatment generation after generation and be profitable to the feeder. They must have exercise, especially during the growing period, and some more succulent food, as well as that with more protein for the building of bone and muscle. Such feeds are meat-meal, with 62½ per cent protein, tankage 60 per cent, oil-meal with 32 per cent, bran and alfalfa hay with 12 to 15 per cent, green alfalfa 5 per cent, as compared with corn with 10 per cent.

The profit of pig-feeding depends upon the cost of the feed used. Therefore, anything that cheapens the feed increases the profit, provided it is not done at the expense of the health of the animal. This calls for a balanced ration. A balanced ration is a combination of feeds that will nurture the

at all times, both for growing stock and fattening. If we depend too much on chemical analysis, however, we would discard all such feeds, but is not so much the actual nutrients we get from them as the balancer. It helps to get the most out of the other feeds and acts as a conditioner. Then if we wish to push the growth, especially of bone and muscle for breeding stock, we should use some feeds rich in protein, such as oil-meal, tankage, or meat-meal.

Now, a "balanced ration" is "all Dutch" to many feeders, so we just say do not depend on corn alone, especially for growing hogs, but give a variety and after that give them all the rape, alfalfa, or some other green or succulent feed, they want and let them balance the ration for themselves, and you can depend upon it, they will do it and do it right.

Now I will give you some facts and figures about feeding cattle and swine. Tests show that for 100 pounds of digestive nutrients consumed, cattle gain 12.7 pounds, sheep 14.3, hogs 29.2.

In a test given by the Wisconsin Experiment Station, it was shown that pigs of 15 to 50 pounds weight consumed 293 pounds of food for 100 pounds of gain, or nearly three pounds of feed for one of gain. In pigs of 50 to 100 pounds weight, 400 pounds of feed were required to make 100 pounds of gain. From 100 to 150 pounds weight, pigs required 437 pounds of

lifter," the "farm rent-payer," the "home-maker," is still doing business at the old stand.

The Live Stock Industry of Cuba.

EDITOR KANSAS FARMER:—My promise to write a short article on this subject for THE KANSAS FARMER has haunted me like Banquo's ghost, so to put it down, I will fulfill my promise.

Cattle.—The cattle industry is by far the most important. With the fine pastures of Guinea and Parana grasses, good water, and a mild climate throughout the year it is bound to increase rapidly. Before the last revolution in 1895, Spanish statistics gave the total number of cattle on the island at 2,500,000. These were practically destroyed during the war only about .06 per cent remaining. The island is being restocked with cattle very rapidly and at present there are about 2,000,000 cattle and this amount is increasing by about 400,000 head per year. About one-third of this is natural increase, the remainder being imported. About one-third of the cattle imported come from the United States (mostly from Texas and Florida), the other cattle being imported from Columbia, Venezuela, and Mexico.

The greatest plague to the cattle-grower is the ticks. The ticks not only hinder the importation of northern pure-bred cattle for breeding purposes because the ticks inoculate them with the germs of Texas fever, but the greatest damage they do is as parasites sucking the blood of cattle and reducing them in flesh. During the

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Sure relief for Pink Eye, foreign irritating substances, clear the eyes of Horses and Cattle when quite milky. Sent prepaid for the price, \$1. Address orders to W. O. THURSTON, Hindsale, Kansas.

dry winter season they are very bad and it is necessary to bathe or dip the cattle to destroy the ticks.

Screw worms are also very common and it is necessary to watch wounds on all animals to keep them free from this parasite. Little attention has been paid in the past to improving the native cattle and the old method of free breeding is extensively practiced at present, but this is giving place to the selection of the best native bulls, and a goodly number of Hereford, Shorthorn, Aberdeen-Angus, and a few Holstein bulls have been imported. The demand is for short-haired cattle with large horns, the latter being important as they fasten the ox yoke to the horns.

Horses.—Outside of the cities, the horses are of a small Spanish type and are used exclusively for saddle and pack animals. They are practically all naturally saddle gaited and take a running walk that will cover five or six miles an hour. They are hardy animals and will keep the gait all day.

In the cities are a good many American driving-horses and many American mules, the latter being used for carting. General farmwork is done with oxen, although the use of mules for farmwork is gradually increasing. The drawback to using mules for farmwork is the difficulty of getting satisfactory drivers.

Swine.—The breeding of swine seems to be one of the most profitable branches of the live stock industry. The native hogs are of the "razorback" type and get their living in the woods. The countryman takes his dogs and with a small sack of corn slung over his shoulder rides through the forests and brush, frequently cutting his way with his machete, a stout sword that they invariably carry. The dogs are large, fierce fellows that range through the dense brush and when they find any hogs they begin to bark. The hogs do not run away but gather in a bunch for protection. When the owner hears the dogs barking, he rides to the place, calls off the dogs, scatters a few handfuls of corn for the pigs and continues the hunt.

In some parts of the island are many native dogs that have run wild. These wild dogs catch some small pigs but as a rule the sows and boars successfully defend the pigs. The principal food of the hogs is the seeds of the royal palm, which are very rich, but the pork produced is oily.

We are trying some interesting experiments in crossing native sows with pure-bred Berkshire and Tamworth boars.

Sheep.—There are a few large, hairy sheep in the island but they are of little importance as there is little demand for mutton.

Goats.—There are a large number of milk goats kept in the cities and towns. They are the poor man's cows. Some of them give between three and four quarts of milk daily. The best of the milk goats are said to come from the Canary Islands. The common method of using goat's milk is to boil and burn the milk and then salt it before using.

Poultry.—Chickens are high, usually selling from 50 to 80 cents Spanish silver (\$1 American money buying from \$1.15 to \$1.40 Spanish silver). Eggs are usually worth 4 to 5 cents each Spanish silver. It would seem as if the poultry-business would be very profitable but there are many drawbacks in the shape of diseases and parasites. A number of Americans have tried the poultry-business on a large scale and have failed. Our Brown Leghorns and Black Minorcas have given excellent returns.

In glancing over this article it reminds me of a Spanish stew, in that it contains a little of everything. If you don't like the stew as a whole, you may be able to pick out some bits that will "pass muster."
N. S. MAYO.

The Veterinarian

We cordially invite our readers to consult us when they desire information in regard to sick or lame animals, and thus assist us in making this Department one of the most interesting features of The Kansas Farmer. Kindly give the age, color, and sex of the animals, stating symptoms accurately, and how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply all letters for this Department should give the inquirer's postoffice, should be signed with full name and should be addressed to the Veterinary Department of The Kansas Farmer, Topeka, Kans., or to Dr. C. L. Barnes, Veterinary Department, Kansas State Agricultural College, Manhattan, Kans.

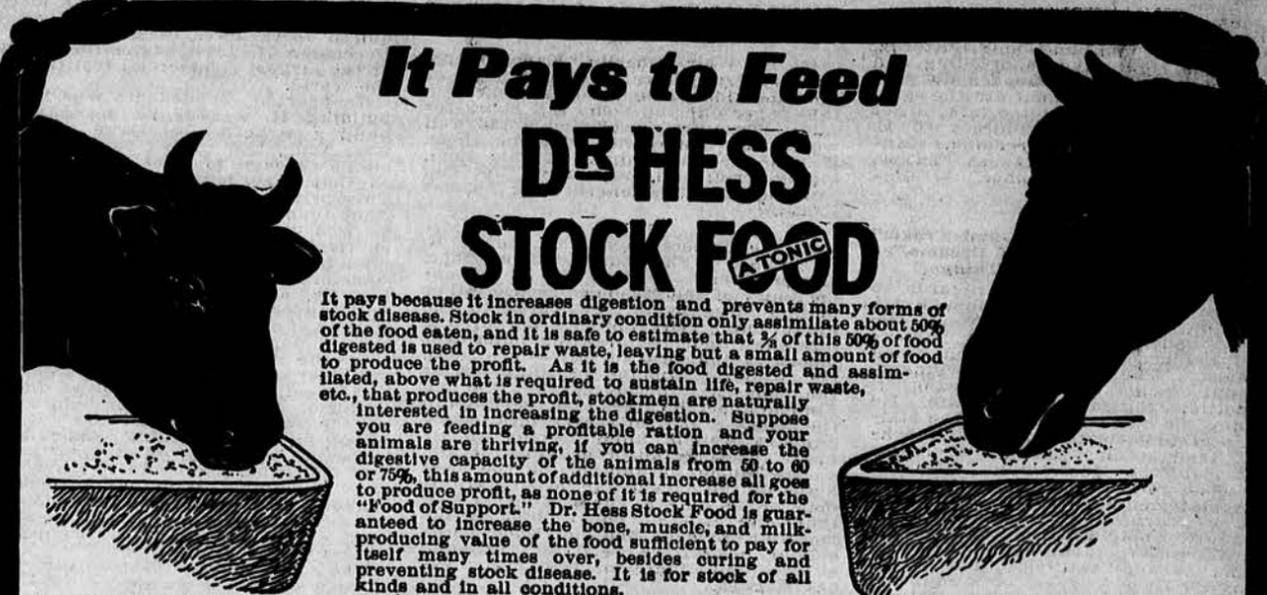
If in addition to having the letter answered in The Kansas Farmer, an immediate answer is desired by mail, kindly enclose a 2-cent stamp. Write across top of letter: "To be answered in Kansas Farmer."

Paralysis in Duroc-Jersey sow.—I have a Duroc-Jersey sow twenty months of age that has been down for two months. She seems to be in good

It Pays to Feed

DR HESS STOCK FOOD

A TONIC



It pays because it increases digestion and prevents many forms of stock disease. Stock in ordinary condition only assimilate about 50% of the food eaten, and it is safe to estimate that 2% of this 50% of food digested is used to repair waste, leaving but a small amount of food to produce the profit. As it is the food digested and assimilated, above what is required to sustain life, repair waste, etc., that produces the profit, stockmen are naturally interested in increasing the digestion. Suppose you are feeding a profitable ration and your animals are thriving, if you can increase the digestive capacity of the animals from 50 to 60 or 75%, this amount of additional increase all goes to produce profit, as none of it is required for the "Food of Support." Dr. Hess Stock Food is guaranteed to increase the bone, muscle, and milk-producing value of the food sufficient to pay for itself many times over, besides curing and preventing stock disease. It is for stock of all kinds and in all conditions.

DR HESS STOCK FOOD

A TONIC

is the prescription of Dr. Hess (M. D., D. V. S.), containing tonics for the digestion, iron for the blood, nitrates to expel poisonous materials from system, laxatives to regulate the bowels. It has the recommendation of the Veterinary Colleges, the Farm Papers, is recognized as a medicinal tonic and laxative by our own Government, and is sold on a written guarantee as:

5c. per pound in 100 lb. sacks; 25 lb. pail, \$1.60 (Except in Canada and extreme West and South.)

A tablespoonful per day for the average hog. Less than a penny a day for horse, cow or steer. If your dealer cannot supply you, we will. Remember, that from the 1st to the 15th of each month Dr. Hess will furnish veterinary advice and prescriptions free if you will mention this paper, state what stock you have, also what stock food you have fed, and enclose two cents for reply. In every package of Dr. Hess Stock Food there is a little yellow card that entitles you to this free service at any time. Dr. Hess Stock Book free, if you will mention this paper, state how much stock you have and what kind of stock food you have used.

DR. HESS & CLARK, Ashland, Ohio.
Also manufacturers of Dr. Hess Poultry Panacea and Instant Louse Killer.
INSTANT LOUSE KILLER KILLS LICE.

health; eats and drinks well, and sits up, but is unable to control hind parts. I thought it might be kidney trouble and applied turpentine, but this did not help her. What is the trouble and how shall I treat it?
F. A.
Maple Hill, Kans.

Answer.—I fear your animal is paralyzed in the back to such an extent that it will be unsatisfactory to treat her. I fear that she has received some injury that is deep-seated, affecting the nerve supply to the limbs, and in that event it would not be possible to affect a cure.

Crude Black Oil for Lice.—Will crude black oil do to use on hogs to kill lice, applying around ears, back, and legs.
B. E. M.
Wellington, Kans.

Answer.—Yes, the crude black oil can be used on your pigs. The only objection is that it may be too strong and cause considerable irritation.

Soft Lumps on Stifle Joints.—I have an 8-months-old dun-colored horse colt, that has a large lump of a soft flabby nature over or in front of each stifle joint. These swellings were there when the colt was foaled in June, but did not seem to hurt him in any way until in December. He seems to be stiff in both hind legs and steps mincingly. The veterinarian here called it an excess of joint water and prescribed an acid liniment of some kind to be rubbed on every 3 days; also says he has never seen a similar case in his 38 years of practice. His treatment has been followed for ten weeks with no improvement. Can you tell me what the trouble is and prescribe a cure?
E. S.
Louisburg, Kans.

Answer.—From the description you give of the colt's condition the flabby swellings over the stifle being there since the animal was foaled, I question whether you will be able to effect a complete cure. You might try the following liniment: Four ounces of tincture of iodine, 2 ounces oil of turpentine, 2 ounces of tincture of cantharides, 1 pint of compound soap-liniment. Mix and shake well before using; rub into affected parts daily.

Sore on Gelding's Leg.—My 5-year-old dark bay gelding has a festering sore on right hind leg, that discharges bloody water. Have used copperas, blood-root, given salts internally, and rubbed on some liniment that took the hair off. What is the trouble and what shall I do for it?
C. C. L. S.
St. John, Kans.

Answer.—For the sore on the animal's leg would suggest that you use the following dusting powder daily: One ounce of iodoform, 2 ounces of acetanilid, 1 1/2 ounce of tannic acid, 1 ounce of boracic acid.

BLACKLEG AIDS



THE SIMPLEST, SAFEST, SUREST AND QUICKEST WAY TO VACCINATE CATTLE AGAINST BLACKLEG.

No dose to measure. No liquid to spill. No string to rot. Just a little pill to be placed under the skin by a single thrust of the instrument.

An Injector Free with a Purchase of 100 Vaccinations. For Sale by All Druggists. Literature Free—Write for it.

PARKE, DAVIS & COMPANY.

DETROIT, MICHIGAN, U. S. A.
BRANCHES: New York, Chicago, St. Louis, Boston, Baltimore, New Orleans, Kansas City, Indianapolis, Minneapolis, Memphis, U. S. A.; Walkerville, Ont.; Montreal, Que.

A. M. Ashcraft Sale.
In looking through the catalogue of the Atchison sale dated for April 10, we find the offering to be by four excellent bulls that have at different times headed the herd. They are Alice Maude's Duke 117877, Acorn Duke 18th 142177, Prince George 161300 and Harmony's Knight 218509. All the offering trace to two foundation families, Imp. Young Mary and Galeeta, and all are of Mr. Ashcraft's own breeding and an excellent lot of cattle. Possibly the most uniform lot to go in any one sale this year. Mr. Ashcraft has been very careful in the selection of herd-headers and the present herd bull, Scottish Minstrel 234970, is an excellent animal of pure Scotch breeding being sired by the great Imp. bull, Scotch Mist 157620. All of the 27 cows and heifers are in calf to this good bull. The 15 young bulls are of the type and breeding wanted by good breeders and farmers, and Mr. Ashcraft extends an invitation to all to be in attendance April 10, 1906. Free conveyance from Carter's Barn in Atchison to the farm has been provided for all who attend the sale. Be sure to be on hand if you are interested in good red Shorthorns of either sex.

Shorthorn Events Extraordinary.
S. C. Hanna says of his part of the offering in the Fredonia, Kansas Shorthorn sale, April 13, that it is by far the best consignment of cattle he ever put on sale. All are of his own breeding and especially selected for this event. It is his judgment that each of the others interested are selling the best cattle they ever sold at public sale. Mr. Hanna is selling the great bull, Captain Archer, who has been considered second only to his sire the great imported Collynie, and is only parted with because a younger bull, a full-brother, can take his place in the herd. He is a great sire and all breeders in need of a pure Scotch bull of proven ability to sire just the right kind, should be on hand and try their best to land this great bull in their herd. Two of his sons are to be sold and a son of Imp. Lord Cowslip. A daughter of Imp. Callynie bred to Captain Archer is included in the sale and the great cow, Emma Tillycain, by Imported Tillycain and out of Imported Emma 33d, with a heifer calf at side by Captain Archer and bred again to Imp. Collynie. This cow should attract the attention of every breeder appreciating the best of the breed and if she is not wanted at a long figure by more than one of the best Western breeders, we will be disappointed. The bull, Choice Prince by Choice Goods 186802, is another herd-

DEATH TO HEAVEN Guaranteed



NEWTON'S HEAVE AND COUGH CURE
A VETERINARY SPECIFIC.
14 years sale. One to two cans will cure Heaves. \$1.00 per can. Of dealers, or express prepaid. Send for booklet. The Newton Remedy Co., Toledo, O.

VETERINARY COURSE AT HOME.
\$1200 year and upwards can be made taking our Veterinary Course at home during spare time; taught in simple English; Diploma granted, positions obtained successful students; cost in reach of all (satisfaction guaranteed, particulars free). **ONTARIO VETERINARY CORRESPONDENCE SCHOOL, Dept. 17, London, Canada.**



ONE MINUTE STOCK DIP

LIVE STOCK INSURANCE

The cheapest insurance you can get is a DISEASE PREVENTIVE. Don't wait to cure disease—keep it away from your live stock. You can do it with

Dipolene

which kills all disease germs, sheep ticks, scab, lice, fleas and all body vermin. Perfectly harmless. Promotes health—sprinkled about barns and lots keeps them sanitary, wards off disease. Write for FREE BOOK, "DIPPING FOR DOLLARS."
MARSHALL OIL CO., Box 13, Marshalltown, Ia.

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FREE 80 PAGE BOOK

TELLS HOW TO CURE YOURSELF of Blindness, Falling Sight, Cataracts, Granulated Lids, Weak, Congested or Sore Eyes, Scars, Seams and all other Eye Diseases at your own home as thousands of others have done. Book tells all about eye diseases, has colored pictures showing diseased eyes. Tells all symptoms of eye diseases. Contains eye testing chart. Tells how to test eyes. Tells how to care for eyes and many other interesting facts. Sent free to all—write today. Address

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FREE SAMPLE SECURITY GALL CURE.

Name your Dealer and this Paper and we will mail you a

Cures sore shoulders, necks or backs while harnessed or idle.
SECURITY REMEDY CO.
Minneapolis, Minn.

header that should please the most exacting. The others are by Imp. Mariner, Flora's Chief and Godoy Butterfly, all of the right kind in breeding and individual merit and the female part of the offering throughout are the same high quality. It is not too late to get a catalogue. If you address H. E. Bachelier, secretary, Fredonia, Kansas, and mention THE KANSAS FARMER, the same will be sent at once. Arrange to attend the sale.

Frank Iams of "Peaches and Cream" Fame, not a "Dreamer of Dreams," But a Man Who "Does Things."

Mr. Johnson: "Give my regards to Broadway," tell all the stallion buyers of Frank Iams, St. Paul, Nebr., the largest individual owner and importer of Percherons, Belgians and coach stallions. "The home of the winners" is a nut cracker. Iams is showing all competitors the race of their life. He is doing the business. Selling the stallions while his competitors are "knocking." Iams is not a dreamer of dreams but a man who "does things." He has the goods you read about. He makes every statement good. He has opened up a new barn of his noted prize winners, 80 top notchers, they must all be sold. These are Iams' famous "Peaches and Cream" stallions, that he is selling at \$1000 to \$1500 (few higher). Guaranteed better than any stallion sold to Farmers Co.'s at \$3000 to \$6000. Iams "barrel of luck and push" makes him a "mascot" to buyers. He is saving thousands of dollars to buyers. He hypnotizes you with lusty black boys at let live prices. If you will visit him and do not say this is true, you get this \$100 cheerfully. Iams gives a breeding guarantee of 60 per cent, pays freight of horse and buyers fare. You say, why can Iams sell these State prize-winners and sons of winners cheap? Iams is an up-to-date business man of 24 years' practical experience in importing and breeding horses at St. Paul, Nebr. He buys his own money, owns his farms, barns and horses; has no two to ten men as partners to divide profits with. Iams speaks the languages, this saves 20 per cent on each stallion. Iams is not in the great stallion trust, (runs his own business and has all competitors fighting him), because he sells all of his stallions at his home barns, employs no buyer or con salesman to sell you a \$1200 stallion for \$3000. Iams saves you all commissions and middle-man's profits, and sells stallions that are so good that they do not need to be peddled to be sold. Here is the milk in the cocoanut.

Our illustration on page 374 is Iams' Prusant-De Luroux (29344) Royal Belgian black boy, 4 years old, weight 2210 pounds. He is a big, massive, wide-as-a-wagon drafter with a leg under each corner. A smooth ever proportioned "black boy" with plenty of scale and finish. He stands on the best of feet and has 14-inch bone. He is a real cholly boy on dress parade. He makes all the Tony girls wink their eyes and say that is one of Iams' "Peaches and Cream" black boys that we read about. He has the goods and makes good his ad, and gives his customers a square deal. Write for greatest horse catalogue on earth. It will tell you how to save \$1000 and buy a first-class stallion. It's a business fetcher. Iams is the man behind the gun and is saving thousands of dollars to stallion buyers.

The Heath Shorthorn Sale.

In this issue will be found the announcement of the seventh annual sale of Shorthorn cattle from the Heath ranch, two miles south of Republican City, Neb. The sale is on April 4, Wednesday, and will consist of some thirty head of more or less young cows, heifers, and bulls from this, one of the oldest established herds in Southwestern Nebraska and one of the best consignments ever offered. Nearly one-half of the offering is good, strong, lusty young bulls, from ten months old up. The young cows, and heifers are nice young, well-bred animals, from a milking strain of cows, by well-bred sires such as the straight-bred Scotch bull Lancaster Royal 168270 by Imp. Prince Oderic etc. Golden Victor, Jr., 175464. While the latter bull is the sire of most of the offering, the cows old enough to breed are in calf to Lancaster Royal. Several are by Aberdeen Lad 154974, one of the grand herd bulls. In this sale are three fine Double Standard Polled Durham bulls that are bred along good dairy lines.

Besides the cattle, there will be sold a lot of high-grade Percheron horses and several teams of work-horses and bred Poland-China gilts, farm implements, and other utensils, thus making it a very important sale. The catalogue is out and will be sent on application. Send for it and come to the sale and it will be a day well spent, whether you buy or not.

A Great Shorthorn Sale.

On Saturday, May 5, Darling Bros., of Coshocton County, Ohio, will sell about two car loads of registered Shorthorn cattle at Mankato, Kansas. Darling Bros., are proprietors of the famous Evergreen stock-farm and among the best known breeders of the East. Their herd consists of the best blood found in the country. Many of their animals have never been defeated in the show ring. They have won ribbons at the State fairs of Ohio, Kentucky, West Virginia and at the great exposition at Charlestown, South Carolina. They inform us that this consignment will consist of about 25 head of bulls from one to two years old and that any one of them is good enough to be a herd-header. If you will write Cliff Darling, at Randall, Kansas, he will send you a catalogue of the consignment.

Gossip About Stock.

Col. C. M. Crews, the Topeka auctioneer so well known to stock men throughout the State, has been engaged by the Department of the Interior as auctioneer of the sale of certain town lots for the Osage Town Site Commis-

sion and the first sale of the town site of Foraker on May 1.

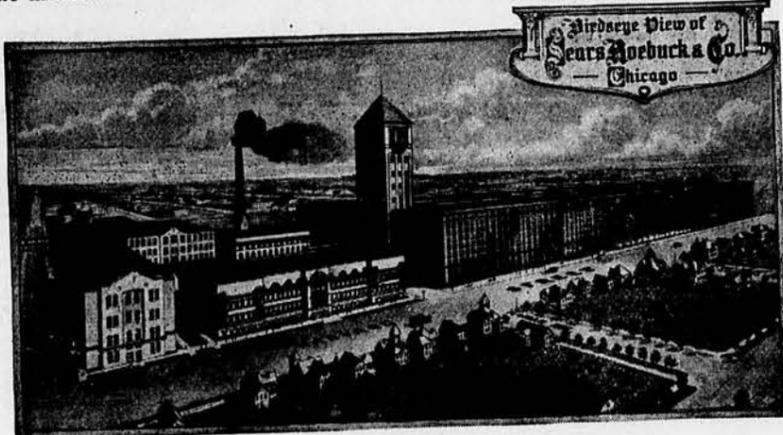
R. H. Weir, Oberlin, Kansas, proprietor of the Decatur County herd of Poland-Chinas, has an advertisement in this paper offering some fall boars for sale. These are good animals and well worth the money he asks for them. If you need an animal of this kind, kindly write him mentioning that you saw his advertisement in THE KANSAS FARMER.

In the dispersion sale of the H. R. Little herd of Shorthorn cattle at Hope, Kansas, April 26, 1906, will be the opportunity of the season to secure either heifers sired by or cows bred to the great bull, The Rustler, one of the best bred and best breeding bulls ever placed at the head of a Western herd. He is one of Robbins' breeding out of the dam of Ruberta and by the Lad For Me and the calves and yearlings in the sale of offering are typical show animals proving him worthy of his great ancestry and bespeaking for him a new home in another of the best herds of the West. In the young animals of his get are those of either sex, that our readers who are looking for material to strengthen their show herds should look after. Send for catalogue at once and kindly mention THE KANSAS FARMER.

In this issue on another page is the announcement of an important combination sale of choice Hereford cattle at Superior, Neb., on Wednesday, April 18, 1906. It is made up from a choice selection of forty head of which one-half is young serviceable bulls. The half is young serviceable bulls. The cows and heifers old enough to breed will be safe in calf, or have calves at side. The sale is made up from consignments from such well-known herds as W. N. Rogers, McCook, Hatfield and Son, McCook, Neb., P. M. Morse, Beaver City, Neb., W. R. Wonderly, Inavale, Neb., and R. N. Lewis, Eldon, Neb. There are no better whiteface cattle in the West than is found in these old established herds and those desiring to add new blood to their herds, will have a good opportunity to get it at this sale. There will also be show cattle and herd-headers for those desiring that kind of stock. The breeding is given in the sale catalogue, which will be sent on application to W. N. Rogers, McCook, Neb., under whose management the sale is conducted.

A Modern Commercial Marvel.

In 1895, when its founders laid the foundation upon which has since been erected the Sears, Roebuck & Company towering structure of business, believed the time opportune to go to the purchasing public of America with a proposition to supply them with the best of the world's markets at a price which did not represent a series of profits to innumerable middlemen. They believed that the public could be well served by an institution which would bring to them the product of field and factory at a price so low that it represented but the bare cost of production, plus one small percentage of profit. This meant the elimination of the jobber, the wholesaler, the traveling salesman, the general and special agents—these cumbersome and expensive adjuncts to business which make it necessary for the consumer to pay, in most cases double the first cost of the merchandise he uses.



On this foundation of right prices has been bulidied a superstructure into which was placed much material that is new. They sought to find the best merchandise that the markets of the world afford, and finding it, then endeavored to place it within the reach of every individual. They also taught the business world and incidentally the buying public, that the old hackneyed phrase, "Satisfaction or your money back," is not a meaningless phrase when incorporated in their literature, but that it is a sincere declaration, and that the customer can do them no greater favor than to return that which is unsatisfactory, and permit the firm to return his money and reimburse him for such expenses as have been involved in the transaction.

These fundamental principles won for Sears, Roebuck & Co. instantaneous recognition, and the growth of the business has been one of the wonders of the commercial world. The first quarters were quickly outgrown, larger quarters soon became inadequate, and since 1895 they have been moving about from place to place as the exigencies of business compelled them to seek larger quarters and better facilities for handling the business which came to them. Finally, they purchased a large building in downtown Chicago, but it was soon necessary to duplicate the structure. Still they grew, and they began leasing adjacent buildings until the business had spread to a number of the largest buildings and warehouses in Chicago. Early in 1904 they realized that this institution was growing more rapidly than they could care for it and that an entirely new plant, with every modern facility that science could devise must be provided. In the

center of a populous residence district on the west side of Chicago they acquired forty acres of ground, and on December 31, 1904, began the erection of the largest commercial institution in the world.

To provide an adequate merchandise building it was found necessary to build a structure so large that they were compelled to ask the City Council of Chicago to close certain streets so that they might build over them. This privilege was promptly accorded. They found that no such shipping room as was necessary to take care of the enormous and rapidly expanding business had ever been provided for any commercial institution. In length, breadth, and height this merchandise building would be so large that the method of conveying merchandise to the several departments, and in turn getting the several items comprising a customer's order from the several floors to the shipping room, involved difficult problems which had never before been up for solution. Then, too, it was found no inconsiderable difficulty to prosecute the work of construction on this enormous plant and to move from the numerous buildings downtown without interruption to customers. This has all been accomplished in less than a year's time.

The first shovelful of dirt was thrown on the December 3, 1904, and the first department moved into its new quarters on September 1, 1905, just eight months later.

The problem of what would give the proper foundations proved a most perplexing one, as it was found to be over 80 feet to rock. Finally, it was decided to use concrete caissons, and under the walls of the Merchandise Building they have 1,506 caissons, 4 feet or more in diameter, and from 20 to 60 feet deep. In building these caissons 65,000 cubic yards of concrete were used. In all the buildings, which are of brick and terra cotta construction, they consumed 28,000,000 brick, 25,000 barrels of lime, 130,000 barrels of cement, 15,000,000 feet of lumber and 12,800,000 pounds of steel and iron. The merchandise building alone, which is almost a quarter of a mile long, a block wide, and nine stories high, is equivalent to 308 ordinary large store buildings.

An index to the building feats accomplished in the erection of this plant may be gathered from the fact that Annex "A" of the Merchandise building, erected on an area of 79,450 square feet was completed in 30 days. Here are some further figures that will doubtless prove very interesting. The entire plant is heated from a central station, and they used, in installing the heating apparatus, 100 miles of pipe; to convey the electric current for lighting the plant and operating its machinery 4,400 miles of copper wire, weighing 400,000 pounds, were used; for the distribution of filtered heated air in the winter time, and filtered cool air in the summer, 10 miles of sheet metal pipe.

The buildings are five in number, each designed for a special purpose. This necessarily brief and fragmentary description of the several buildings comprising this new merchandising establishment will give some idea of the immense proportions to which this institution has grown in a period of 11 years, and it will also indicate what they have accomplished in the way of building and equipping a giant mercantile establishment in one year's time. It is a splendid monument to the sagacity of the American people, to

whose appreciation of values they owe all that has been accomplished. Approximately 7,000 people now labor every day from morning until night in taking care of the orders which come from 4,000,000 customers, and it will be the endeavor in the future as it has been in the past, to serve the public with the best merchandise it is possible to obtain and at a price which represents the bare cost of production, plus one small percentage of profit.

"Good stock, true to name at reasonable prices" is the motto of W. F. Schell, proprietor of the Wichita Nursery, Wichita, Kans. Any of our readers wanting trees of any kind need have no hesitation in sending to this establishment. Mr. Schell, as many Kansas people know, had charge of the Kansas horticultural display at the World's Fair at St. Louis, and has been an active member of the State Horticultural Society and understands Kansas conditions for tree and fruit culture better than most any one in the State. Write him for a catalogue and prices.

Spring Repairs.

After the ravages of winter, thrifty farmers make careful examination of their buildings. They find rotting planks, stone work that needs potting up, walls to be painted or whitewashed, and roofs that leak. The rain has worked into crannies and frozen there, and the expansion of the ice has played havoc with stone and mortar. Repairs in most cases are cheap if done in time. The weakest point in most farm buildings is the roof. Most ready roof-

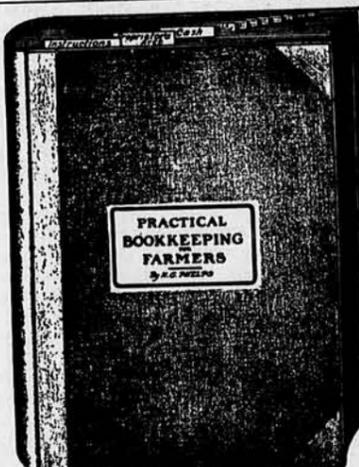


Warranted to give satisfaction.
GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.



The farmer's guide to success in farming, 200 pages 10x13 inches. 20 pages of instructions and illustrations. A full set of farm accounts worked out. The remainder of the book for use in keeping accounts. The results of a whole year's business are shown on one page which will show the farmer the cause of success or failure. Will last the average farmer three years. Price \$3.00. For a short introductory period the price will be \$2.00 delivered. Descriptive circular and testimonials free. Send us ten 2-cent stamps and we will mail you our latest book—a 50-page book on Business Writing and Lettering; or we will send you both books for \$2.15, regular price \$4.00. Address H. G. Phelps & Co., Bozeman, Mont.

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Land of Plenty**

Let me locate you on Government Land...



Can locate you on choice quarters of Government land. Many desirable bargains in patented farms and ranch lands. Write me at once for complete information concerning lands that are rapidly increasing in value.

Howard Gamble

Sheridan Lake, - Colorado

PRESIDENT ROOSEVELT SAYS:

"There may be some place in the world equal to Puget Sound, but I don't know where it is." Best year-around climate in the United States. Fertile soil and immensely rich and varied resources.

Send 4c for finely illustrated 64 page free booklet on this wonderful section of the United States.

Chamber of Commerce, Everett, Wash.

ANYONE WISHING—
UNITARIAN SERMONS AND PUBLICATIONS
SENT FREE, may address Mrs. F. O. Leland, Concord, Mass.

ings need coating every year. The best thing to do with these roofs is to rip them off altogether and lay Amalite. This roofing needs no coating at all, whether it be new or old. After it is laid (and that is an easy job), you need never to think about your roof for years to come. Amalite samples can be secured for examination free by addressing the Barrett Manufacturing Company, New York, Chicago, Cleveland, Boston, Allegheny, St. Louis, Minneapolis, Philadelphia, New Orleans, Kansas City.

About Oregon.

The remarkable growth of the great State of Oregon is well indicated by the increase in the yearly production of the fruits, grains, and grasses, and other agricultural products for which this State is so justly noted.

Oregon possesses some of the richest and most productive, and cheapest lands in the Union and it is indeed, "a land of promise" for those desiring homes in a country of almost perpetual spring and where land is sold within the means of every homeseeker desiring to acquire a competence.

The great attractions of this State are amply set forth in a beautiful and well-prepared booklet of 88 pages, entitled, "Oregon, Washington, and Idaho and Their Resources," which is sent out by General Passenger Agent A. L. Craig, to all inquirers interested in the resources of this great State. The beautiful illustrations in this booklet and explicit statements of profits made by farmers along the lines of the Oregon Railroad and Navigation Co., and the general subject matter thereof will be of deepest interest to every one contemplating making their homes in the mild climate of the Pacific Northwest.

The splendid wheat-producing country of the Palouse region, Washington, and the Walla Walla, Pendleton, and Umatilla sections of the State of Oregon, and the apple, orange, and peach lands of the Hood River Valley all receive a detailed description in this booklet. This book is sent out free, it only being necessary to enclose four cents in stamps to help pay the postage. We recommend every one reading this article to send for this publication without delay.

Those of our readers who are interested in pure-bred poultry will be glad to receive the fourth annual poultry catalogue of E. E. Vannatta, Vandalia, Mo. Such an interesting booklet helps to promote and increase the sales of pure-bred birds and Mr. Vannatta is to be commended for his enterprise in this respect.

A California trip is made doubly pleasant if it includes a daylight ride over the Rockies. This is the way of the Colorado Midland. Colonists' rates in effect daily February 15 to April 7. For full information write Morell Law, traveling passenger agent, 566 Sheldey Bldg., Kansas City, Mo., or C. H. Speers, G. P. A., Denver, Colo.

Very Low Rates Tuesdays.

Every Tuesday, balance of the year, the Chicago Great Western Railway will sell homeseekers' tickets to Minnesota, North Dakota, and Canadian Northwest at about half rate; to other territory first and third Tuesdays. Write G. W. Lincoln, G. P. A., 7 West 9th St., Kansas City, Mo. State number in party and when going.

Powderpaint in 1906.

The painting season will soon be on. There will be lots of repainting of old buildings in addition to the new ones that will be erected. Any suggestions as to where good paint may be had at a reduced price will be timely. The argument for Powderpaint set forth in another column is deserving of consideration. This is a paint without oil, a compound prepared by A. L. Rice, of Adams, N. Y., which is giving very general satisfaction. The first great claim in favor of Powderpaint is that it is so much cheaper than oil-paints. It comes in powder form and requires only to be stirred in cold water, saving as much as three-fourths of the cost. In appearance and in lasting qualities it is claimed to be not inferior to oil-paints. It is said to be even better in many cases owing to the counterfeiting and impositions practiced in mixing many oil-paints. Powderpaint has the same sort of "set" that Portland Cement has. It forms a sort of enamel coating which does not crack or powder and which is weather proof, a resister of colds and gases and to a remarkable extent of even fire. Certainly no more pleasing effect can be produced with the high-priced oil-paints than with this new painting material. It is having a large sale for farm-buildings, both outside and inside, barns, poultry-hog- and sheep-houses, etc. All particulars may be had by writing directly to Mr. Rice, North street, Adams, N. Y., for the little book on his new painting process, which he will send free of charge.

A magnificent steel engraving of Hagerman Pass, the most famous mountain pass in Colorado, has been issued by the Colorado Midland Railway. This engraving is 26 by 40 inches and suitable for framing. It will be sent to any address on receipt of 15 cents in stamps by Morell Law, traveling passenger agent, 566 Sheldey Bldg., Kansas City, Mo., or C. H. Speers, G. P. A., Denver, Colo.

To those seeking homes, no better inducement is offered than in Jewell County, Kansas. It is one of the leading counties in the State, and statistics



THE WAY TO GET READY FOR HARVEST

If you grow grain or grass of any kind, you are invited to call on any dealer who sells one of the *International Line of Harvesting and Haying Machines* and get one of the new 1906 catalogs. You will find it well worth your while, for it's full of good grain sense—harvesting talk that means *bigger profits* for you.

While you are there, take a few minutes and look at one of the harvesting machines itself.

You will find that it comes up in every way to what your ideal of a *good* harvesting machine ought to be.

It is *convenient*—easy on you and easy on your horses—because it embodies every labor-saving, draft-reducing device that the most expert mechanical skill of the past 50 years has produced.

It has *large capacity*. There is no wasted energy about it. It allows you to do the work of harvesting "in a hurry."

It is *dependable* because it is made right. The materials used in it—the steel, iron and lumber—are the products of the manufacturer's own mines and mills and are right in every particular. There is no "guess work" about them. They are tested before used.

It is an *economical* machine because it saves all your grain; it saves time; it saves labor; it saves repair bills; it saves worry and trouble.

If a machine is *right* in its design, *right* in the materials used in its construction, *right* in its workmanship—it comes pretty nearly meeting every requirement you can make of it. Convenient—trustworthy—economical. What more can you ask of a harvesting machine?

This question of harvesting means much to you. A half day's delay may make the difference between profit and loss on your crop.

The grain a poor machine or a worn-out machine *wastes*, is just so much from your profit.

It's too late now to reduce the *cost* of growing the crop—too late to *increase* the yield—your only chance is to get it *all* in the harvesting and to get it at the least expense of time and money.

If you grow grain, you need a *good* harvester. If you grow hay, you need good haying machines.

It is economy to get the *best* you can find. International dealers have them.

Champion	Milwaukee
Deering	Osborne
McCormick	Plano

Go to the dealer and see for yourself.

If you don't know him, write to us for his name and address.

International Harvester Company of America, Chicago

(Incorporated)

INTERNATIONAL LINE.

Binders, Reapers, Headers, Header-Binders, Corn-Binders, Corn-Shockers, Corn-Pickers, Huskers and Shredders, Corn Shellers, Mowers, Hay Tedders, Hay Rakes, Sweep Rakes, Hay Loaders, Hay Stackers, Hay Balers, Knife Grinders, Gasoline Engines, Pumping Jacks, Manure Spreaders, Weber Wagons, Columbus Wagons, Bettendorf Wagons and Binder Twine.

Remember:

There's a good old proverb about the impossibility of making a silk purse from a sow's ear.

It is equally impossible to make a good machine from *poor* materials—or unsuitable materials.

And likewise impossible to make a good machine even from *good* materials, without proper skill and proper facilities.

Every farmer knows how much harder it is today to get good lumber than it was 20 years ago.

Every manufacturer knows how difficult it is to get other materials of exactly the right kind at exactly the right time.

It was to overcome these difficulties that the several manufacturers of the various machines comprising the International Line, co-operated with each other in producing their own raw materials.

They cut and saw their own lumber, in their own

forests; they dry it in their own kilns, and they have it ready when they need it.

They mine their own iron and coal; they make their own coke and steel, and they produce much of the other materials used in their factories.

The result is that they do not have to try "to make a silk purse from a sow's ear." They have the *proper materials* at hand, when they need them.

Nor is that all. The International Line of machines for harvesting and haying embraces *only* machines which have stood the test of time and bear the stamp of approval of the American farmer.

Consequently there is always a good demand for them, and this demand makes possible the employment, in their manufacture, of the most expert workmen and the best facilities that the mechanical genius of the world has produced.

It is these things that make the International machines so satisfactory to the user.

show that land is lower in that county than in any other when we compare the soil and farming conditions with those of other counties. Prices of land range from \$25 to \$30 per acre, which if in other counties, would command 50 per cent more. If you desire to buy a good home it would pay you to write Morris & Woolsey, of Randall, Kans., who handle Jewell County farms and they will answer any inquiries. Mention the KANSAS FARMER and ask for a list of land which they have for sale.

Barbed Wire Fences.

The man who uses ordinary soap for shaving will soon find out how a horse feels when he gets mixed up with a barbed-wire fence. You can buy a new horse but you can not buy a new face, no matter how irritated or blotchy it gets or how badly it itches. Avoid

laundry or toilet soap for shaving, as you would a barbed-wire fence. Williams' Shaving Soap is made especially for shaving and in another column of this paper is an offer of a free trial sample if you write them and inclose a 2-cent stamp. "For the sake of your face, try it."

The annual sale of Gifford's Short-horn cattle is an event that is always looked forward to by the fraternity with considerable interest. The twenty-second annual sale will be held in the sale pavilion, at Manhattan, Kans., on April 26, 1906, and as usual the offering will be an attractive one, comprising 20 extra good red Scotch-topped bulls from 12 to 20 months old, all in

fine condition, the get of Red Gauntlet 3d 147509, a Cruickshank bull of exceptional quality. The female contingent comprises 20 of the best cows and heifers ever offered from the Gifford herd. All are bred to Scotch bulls, Senator Bruce 226244 and Cordella's Knight 161501 (the best son of Red Knight). The herd bull, Cordella's Knight, will also be included in this sale. He is sound and all right and a great breeder. For catalogue address F. M. Gifford, Wakefield, Kans.

Paper gloves and stockings are now made. When finished they closely resemble wool in appearance.

The Grange

"For the good of our Order, our Country and Mankind."

Conducted by George Black, Olathe, Secretary Kansas State Grange, to whom all correspondence for this department should be addressed. News from Kansas Granges is especially solicited.

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Lecturer.....Geo. W. F. Gaunt, Mullica Hill, N. J.
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KANSAS STATE GRANGE.

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Production and Care of Home-Grown Seed.

READ BEFORE MANHATTAN GRANGE, NO. 748 BY J. W. HARTLEY.

It is not always practical and convenient for farmers to produce and care for the seeds used on their farms. But great benefit will be derived if they endeavor to produce and care for the principal seeds they expect to plant; those on which they rely the most for their support and income such as corn, wheat, oats, alfalfa, and a few others. In this fertile land of ours we have neglected the production and care of seed, depending mostly upon the fertility of our land, favorable growing seasons, and the small amount of cultivation that we are wont to give our crops for our returns. It is only during the last few years that the farmer has begun to look seriously toward the kinds of seed that he is going to plant on his farm. Pedigreed seed or thoroughbred seed was not thought of by him then. Breeders of live stock are far ahead of the breeders of plants. We think sometimes, when we look upon a fine horse or a fine cow, that the breeders of live stock have reached the acme of perfection. But when we hear of an ear of corn being valued at \$100 and a pint of wheat of a certain variety being valued at \$50, we are forced to believe that the plant-breeders are making rapid strides toward perfecting their products and will soon be abreast of their friends, the stock-breeders, who have had hundreds of years the start.

We are now living in an age of plant improvement and perfection. Colleges, experiment stations, and the Government are showing and teaching the farmers the great benefits to be derived from the use of good seeds on their farms. They are showing them that seed that has been well-bred, well-grown, carefully selected, properly cured and tested for vitality is a tremendous factor in the production of a profitable yield.

The farmer has not always the fertility in his land that he would like to have. He can not always have the rains come and the sun to shine when his crops most need them, nor can he always cultivate when he should. Hence some forces of nature are beyond his reach. Consequently, it is to his advantage to direct those forces of nature that are placed under his power. And the "production and care of the seed" that he expects to plant is one of the forces of nature that he can turn to his advantage, and one which is a prime factor in the successful raising of good crops.

PRODUCTION OF SEED.

To tell the best methods of producing different kinds of seeds would be a task beyond my power and an impediment to your present happiness. But in producing seed we must remember that the seed we obtain contains certain characteristics derived from two parent plants—the mother plant from which the seed is obtained and the father plant which furnishes the pollen. Of course, in the plant world the same plant can and often does perform the functions of both sexes, but by experiments it has been found that where cross-fertilization is employed, the seed resulting therefrom is of greater vitality and produces a better progeny than does the seed from self-fertilized plants. But the physical characteristics of most of our farm plants, having, as they do, the reproductive organs so complicated and so intricate make it impracticable for the farmer

to get seed from plants that have been cross-fertilized. Consequently, he has to look for his ideal characteristics in the mother plant from which he selects his seed. This is where the breeder of live stock has the advantage over the breeder of plants. But in a plant like our Indian corn the farmer can get seed from plants that have been cross-fertilized, and it will pay any farmer to have a seed-patch of corn where he can select seed from plants so treated. Send for a bushel of thoroughbred seed-corn. Get it as near your home as possible, as corn that will yield well at a distance might not yield well on your farm. Corn must become acclimated or accustomed to its environments before it will do its proper duty in returning wealth to its owner. Select from this bushel twenty of the best ears. Next number the ears, one, two, three, etc., in order of their proximity to the ideal. Do not plant kernels from the tips of the ears as they do not produce well. Make twenty rows and plant one ear in each row. Have your seed-patch some distance away from any other variety of corn. Cultivate well; shallow cultivation is the best. Just before the tassels are ready to distribute their pollen, go through the patch and cut off all the tassels on the inferior plants in the even rows. This will leave the best plants in the even rows to fertilize the silks on the plants in the odd rows. From these odd rows select your seed for your next year's crop.

SELECTION OF SEEDS.

The farmer should always select his seed when he has the most seed to select from. This of course will be in the fall of the year. Do not wait until your bins are nearly empty for if you do the cows, pigs, chickens, or something else will have devoured some of your choicest seed, and thus lowered the quantity as well as the quality of your next year's crop. Have ideals of each variety in your mind and select such seed as approaches in likeness these ideals. If this method is followed year after year, our crops will not grow less. I have heard farmers say that they must make a change in their seed as they have been growing the same varieties for years on the same land. They claim that such methods will cause the land to "run out" or fail to produce well. Such is not the case. It is the lack of attention to seed-selection that has caused the deterioration and not the continued growing of the same varieties on their farms. If proper care is taken in the selection of seed, farmers need never change their seed. If they do change their seeds, let them be sure and secure it from one that gives yearly attention to the principles of proper seed-selection.

CARE OF SEEDS.

After the seeds have been properly grown and selected, another very important part is to preserve their vitality. Within each seed is a tiny bit of life waiting for proper conditions and surroundings to make it a full-grown plant bearing the golden harvest for the farmer. By a little injudicious care of our seeds during the winter, we can weaken or destroy that little bit of life stored up in them so as to greatly reduce our crops. The object, then, in the care of seed is to preserve the vitality of life-force stored up in each grain of seed so that when it is placed in the ground in the spring this bit of life will bound forth with great strength and rapidity, able to battle with the unfavorable conditions that are likely to overtake it, and thus yield to its preserver a bountiful crop.

To preserve, then, the vitality and strength of each embryo plant stored away in each seed is to keep each seed dry and away from extremes of heat and cold. Any means that secures a thorough drying of seed soon after it ripens and keeps it dry until the seed is planted will be a success. After the seeds have been dried in the fall, place them in such a manner that a free circulation of dry air can get to them. Do not place seeds where there is a great excess of moisture. The seeds absorb moisture and this weakens their vitality and also greatly reduces their power to withstand freezing weather. Freezing weather will not damage seeds much if they are perfectly dry. Do not place your seeds in a loft over stock as the moisture from the animals will be absorbed by the seed. Seed-corn should be left in ear-form until time to plant. Place the ears so they will not touch each other in a pigeon-box arrangement so that air can reach all the ears. Place seed-potatoes on slats a few feet from the ground and not too many in a place. If left on the ground, they absorb moisture and put forth sprouts which reduce their vitality.



AND AMATITE SPELLS SATISFACTION

If you want a ready roofing that will last for years without painting or coating, buy Amatite. If, on the other hand, you want something that will "do" for a time Amatite won't interest you. It is too good. It will last too long for a man who wants a temporary roofing.

Amatite is made to wear. It is strong, tough, and durable with a protective mineral surface such as no other Ready Roofing can offer.

Its strength lies in the toughness of the materials which go into its make-up—real wool-felt and coal tar pitch—the best water resisting materials known.

Pitch is used in water-proofing all the big buildings, tunnels and subways throughout the country. Recently the old New York Central tunnel was uncovered and some pitch which had been in use for over thirty years was unearthed and the engineers in charge of the work found it just as

pliable and water resisting as the day it was put in.

When you buy Amatite you are sure of getting a roof that will keep out the water—Pitch is absolutely impervious to water.

We are so sure of the superiority of Amatite over any other ready roofing that we are anxious that you should see a sample which you can submit to any test you like. We are certain that Amatite will give better service for a longer period, at less cost, than any other ready roofing made.

You may not be in need of a new roof at the present time, but we would like to have you know about Amatite, so that you will not need to investigate the roofing question when the need of a new roof arrives. Write to-day for the free sample to the Barrett Manufacturing Co., at New York, Chicago, Cleveland, Boston, Allegheny, St. Louis, Minneapolis, Philadelphia, New Orleans, or Kansas Kansas City.

RAILROADS IN CONTEST OVER EXCURSION RATES.

Three Groups of Lines at War as Result of Homeseekers' Rates to Different Sections of the Country.

The three groups of railroads representing the Northwest, the Southeast, and the Southwest are engaged in a three-cornered war over homeseekers' excursions.

Fuel was added to the flames yesterday by a proposition which the Rock Island submitted to make homeseekers' rates effective to the Southwest territory every Tuesday in the month. If the plan is negated by the Western Passenger Association lines, independent action will be taken by the Rock Island. John Sebastian, speaking for the latter road yesterday, said:

"The Rock Island and Frisco systems stand flatly for the development of the Southwest, into which territory a heavy immigration has been induced by spending a large amount of money and by liberality which has had immense results in the way of colonizing. We believe the location of settlers is vastly more important than the loss of a few dollars through the manipulation of cheap rate tickets. The lines I represent have no objection to any basis of homeseekers' rates which may be inaugurated into other territories, but so far as the Southwest is concerned we shall insist upon protecting that territory by as liberal inducements as are offered by the lines in any other territory."

TROUBLE OF LONG STANDING.

The trouble which has grown serious, had its origin several years ago when the Rock Island and other lines began to put in low rates in the interest of developing the Southwest. For years the Western roads had accepted tenders of low rates made by the Southeastern roads with a view to colonizing the South and Southeast. When the Western lines tendered low rates in the interest of their territory, the Southeastern roads demurred and have ever since been calling for a conference.

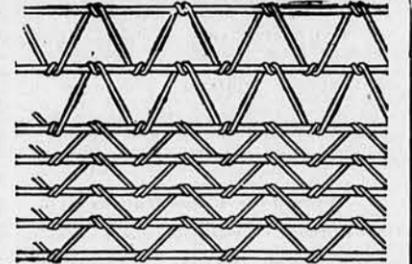
Such a conference was held in St. Louis last week, at which the Southeastern interests asked the Southwestern roads to take out their low rates, applying from Memphis territory. Objection was especially made to the round-trip rate of 75 per cent of the one-way fare which is put into effect during the fall months. All roads except the Rock Island expressed a willingness to raise the rates.

In the meantime the Northwestern lines had given notice that they would run homeseekers' excursions every Tuesday in the month instead of every third Tuesday, and the Rock Island declared it would not permit the Southwest to be sidetracked for any other territory. It is rumored the Rock Island's next move will be to extend its cheap rates to the Birmingham territory, which it has refrained from doing hitherto in consideration of the Southeastern situation.—Chicago Record-Herald.

Second thoughts, they say, are best.—Dryden.

Scandalous gossip is destroying the masses.

THE FIRST Hartman Stockade Woven Wire Fence



Ever built was erected 17 years ago and is still in use as durable and strong as when first put up. The Hartman is a perfectly woven wire fence that is strong enough to keep in the maddest bull and fine enough to keep out the chickens. It is made of the best quality galvanized steel wire and contains much more material than fences more cheaply constructed. That's why it lasts so long. If your dealer doesn't handle it, write for catalogue and prices. Address GLEN MFG. CO., 145 Mill St., Ellwood City, Pa. Also Mfrs. Hartman Steel Picket Fence, Hartman Flexible Wire Nails and Glen Steel Mat.

Two Years Test



You don't want to make a mistake when you buy a buggy. We arrange matters so you can be sure you are right. We have our own factory and make what we sell. We will ship you this buggy or any other vehicle you may select from our catalog on

30 Days Free Trial Freight Prepaid

Then if you can find any flaw in it within two years we will replace it free and make you satisfied. Are we fair? We couldn't do this if we were selling other people's goods. And we couldn't do it unless our own were of highest quality. Don't forget, our prices are just about half dealers' prices. Send for catalog showing all styles, and see for yourself. Address Dept. J.D.

The Apex Mfg. Co., Bloomington, Ill.

More Money Made as Local Agent FOR FARMERS FIVE YEAR ACCOUNT-BOOKS

Also Five Year Diaries. Address Chas. H. Allen Co., Rochester, N. Y.

AGENTS WANTED Sell 1/2 bottle Sarsaparilla for 50c, best seller; \$50 per case profit. Write today for terms, F. M. Green, 116 Lake St., Chicago

Miscellany

Two Kinds of Click-Beetles and Their Wire-Worms.

ELBERT S. TUCKER, MUSEUM ASSISTANT IN SYSTEMATIC ENTOMOLOGY, UNIVERSITY OF KANSAS, LAWRENCE.

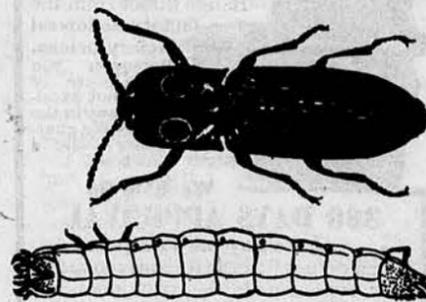
A specimen of the Eyed Elater, (*Alaus Oculatus*, Linnaeus), was received with each of the following letters, both of which are brief, yet indicative of the curiosity with which this species of insect is generally regarded. The localities and dates as given add to our knowledge of its appearance in Kansas in a most definite manner.

"I send you to-day a creature the like of which I never saw before." Iola, Kansas, May 25, 1905.

The second letter was addressed to Professor F. H. Snow:

"I mail you a peculiar bug which I found on my water bucket. I have never seen any like it before. Can you inform me what it is—the common name, I mean—and what it lives on? It is of such a peculiar shape and its big eyes make it look so mournful. I feel quite interested." Arkansas City, Kansas, July 15, 1905.

This insect is one of the clicking-, snapping- or spring-beetles which are classed in a family called Elatridae. More than 500 kinds of these beetles are known in the United States alone.



Eyed Elater (*Alaus oculatus*, Linn.) and larva. (Natural size.) After Harris.

Many of them are familiar to most people and especially to boys under the name of "skip-jacks," though their larvae are better known as "wire-worms." The adult Eyed Elater derives its name, both common and scientific, from two large eye-like spots on its thorax. The place for the real eyes, however, is on each side of the head as with other insects.

To the person who beholds the insect for the first time, its unusual form together with the ornamental eye-like spots are apt to induce startling as well as mistaken impressions regarding it. Its structure is also remarkable by reason of the stout curved prong extending backward on the under side between the joints of the thorax, and with which the insect is enabled to snap itself violently. Still in this respect, it is like all the other members of its family.

It is not often found, but is well known to entomologists. In fact, many kinds of common insects are liable to be considered as strange if not rare creatures by persons who have never seen or known of such before. I can distinctly remember finding my first specimen of this kind of beetle, when, as a boy living in Pennsylvania, I had just begun to collect insects. My astonishment on beholding it was somewhat mingled with fear, but I finally mustered up enough courage to capture it, and it was esteemed as a prize for many years.

I am not aware that this insect has been found farther west than in Texas, Kansas, and Minnesota. The University collection contains Kansas specimens from Neosho as well as Douglas County, I myself having taken it here in Lawrence, in June. In the first list of Kansas Coleoptera, furnished by Professor E. A. Popenoe in 1876 and printed in volume 5 of the Kansas Academy of Science, this species was reported as occurring in "Eastern and Middle Kansas."

All that need be said further about this insect is comprised in a popular account written by the eminent authority, William Saunders, in his work on "Insects Injurious to Fruits," from which the figures and description given herewith are borrowed with kind permission of the publishers, J. B. Lippincott Co., of Philadelphia, Pa.

"This is the largest of our Elaters, or spring-beetles, and is found with its larva in the decaying wood of old apple-trees. The beetle, (see figure), is an inch and a half or more in length, of a black color sprinkled with numerous whitish dots. The thorax is about one-third the length of the body, and

is powdered with whitish atoms or scales; the wing-cases are ridged with longitudinal lines, and the under side of the body and legs thickly powdered with white. It is found in the perfect state in June and July.

"The mature larva (see figure), which attains its full growth early in April, is about two and a half inches long, nearly four-tenths of an inch across about the middle, tapering slightly towards each extremity. The head is broad, brownish, and rough above; the jaws very strong, curved, and pointed; the terminal segment of the body blackish, roughened with small pointed tubercles, with a deep semicircular notch at the end, and armed at the sides with small teeth, the two hindermost of which are long, forked, and curved upwards like hooks; under this hinder segment is a large fleshy foot, furnished behind with little claws, and around the sides with short spines; it has six true legs—a pair under each of the first three segments. Early in spring the larva casts its skin and becomes a pupa, and in due time there emerges from it a perfect beetle.

"This beetle, when placed upon its back on a flat surface, has the power of springing suddenly into the air, and, while moving, turns its body, thus recovering its natural position. This unusual movement combines with its curious prominent eye-like spots to make it a constant source of wonder and interest. Since it feeds mainly on decaying wood, it scarcely deserves to be classed with destructive insects; yet, being occasionally found in the trunk of the apple-tree, it is worthy of mention here."

Much of the success of fruit-culture depends upon effective contest with insect pests wherever fruit is grown. The enforcement of proper remedial treatment against the greater number of the various kinds of injurious insects has become an established practice towards insuring most profitable yields, either of fruit or other crops. Prompt action is sometimes necessary to save fruit-trees or other fruit-bearing plants from sudden outbreaks of a destructive foe, while at any time, the interests of the fruit-grower require that he should know about the important enemies liable to be encountered, and also the practical methods for their control when possible. The importance of having reliable information at hand as a guide to direct one in recognition of an enemy and what to do to suppress it is readily perceived. Such a guide may prove of incalculable value to a person in need, particularly in times of emergencies. Erroneous advice if followed is most costly than absolute neglect, for, not only is labor then lost, but needless expense incurred.

Mr. Saunders wrote his book, "Insects Injurious to Fruits," after an experience of over twenty years as a fruit-grower in connection with his entomological work, all of which shows how well qualified he was to produce a work that has long held an enviable reputation for standard authority, and the second edition, lately offered, indicates that it is meeting with widely extended sales. The plan of the book consists in treating of the important pests of each kind of fruit under separate headings, according to what they attack and whether injuring the fruit itself, or the roots, body, leaves, buds, or flowers of the plant. Facility is thus afforded to a person, unacquainted with the name or classification of an insect pest, to find reference to it by merely knowing its habits. For instance, when the fruit-grower wants to learn about a certain pest, he turns to those pages of the book which are devoted to a discussion of the enemies of the particular fruit or its plant that is attacked, and there before him are the figures and descriptions that enable him to identify his specimens in ordinary cases with ease. With this much gained, the desired information is assured. The entire work covers 266 subjects and is illustrated with 440 excellent wood-cuts which represent natural enemies—the beneficial insects—together with various stages of the injurious hosts, thereby rendering a very valuable aid towards a more intelligent understanding of the reading matter.

(This book can be ordered through THE KANSAS FARMER. Price, \$2.00.)

The fact has been brought out that such trees as afford suitable breeding places for the Eyed Elater are those having rotten portions in which the worms live, consequently, healthy trees would not be subject to its invasions. Actual damage from wire-worms, then, is caused by other kinds which injure crop plants. The following account of one of the more common kinds is here reproduced from a University leaf-

let, copies of which were formerly prepared for distribution by Professor V. L. Kellogg:

THE COMMON WIRE-WORM OR CLICK-BEETLE. (*Melanotus communis* Gyll.; Order, Coleoptera).

Diagnosis.—A long, slender grub of yellowish-white or light-brown color and unusually hard body, feeding on the roots of cereal and garden plants.

Description and Life-history.—The worms or larvae vary much in size, being, when full grown, from four-fifths of an inch to an inch and a quarter in length. They are sub-cylindrical in form, nearly smooth, shining, and with the head, thoracic, and last segments considerably darker than the rest of the body. The duration of the larval stage is at least three years. The change from larva to pupa usually occurs in July, and the adult beetle issues about one month after pupation. The adult, which is one of the click- or snapping-beetles, is rather slender, dark brown, glossy, and is about one-half an inch long. The body is clothed with fine, short, grayish hairs. The eggs are probably laid in the spring or summer, but the exact time of egg-laying is not known.

Remedies.—For this species and other species of wire-worms no practical remedy against the larva is known. The attention must be given to the adult insects, the beetles. These may be trapped in large numbers on baits of poisoned clover or of poisoned, sweetened corn-meal dough. A handful of freshly-cut clover may be dipped into a mixture of water and Paris green and placed on the ground where the beetles abound. The clover should be covered with a small board to prevent drying. The dough is made by mixing one part of sugar with ten parts of corn-meal, and sufficient Paris green to make a dough.

Fall plowing is excellent for killing the adult beetles which have not yet come from the little earthen cases made by the larva just before pupation.

Quick Carriage Painting.

The following is from a lady: "We have a general-purpose carriage which can not be idle long enough for regular carriage painting, and still it is in need of paint. What can I put on that will dry and harden quickly, and still protect for a time? How will linseed oil, boiled or unboiled, do with coloring matter, or will it require white lead. And can we use the same paint on wood-work and on iron?" For regular painting a coat of lead and oil should be put on first, with a little color in it. Then if you wanted a black finish, a coat of good black paint should be used. But black does not wear long unless covered. There is no body to lamp black. So one or more coats of varnish are put over the black. This varnish dries hard and will wear, if it is of good quality. Lead and oil, colored, will not wear like varnish, and it will not dry quickly and hard enough for your purpose. At any rate you can do better. Buy some good carriage paint, ground in No. 1 coach varnish, of the color you desire. It comes in cans of various sizes, pints, quarts, etc., and any color you wish. Perhaps a quart will be enough to put one good heavy coat on your carriage. But I do not know just how much wood-work there may be on it. This paint will have a body to it and varnish in it instead of oil. It will dry quicker and harder and look and wear better than oil-paint would. Get a fine varnish brush to put it on with. The temperature of air, carriage, and varnish should not be less than 75 degrees for some hours before you do the painting. It will be better if it is 80 degrees, or more. The paint will go on easier and you can do a better job. You will need to work fast and use some care to prevent streaks and running. A coat of first-class paint of this kind will wear quite a while and the carriage can be used in a day or two, if necessary. Wash it in cold water before using. Avoid dust and mud at first as much as you can. If you get any on rinse off promptly with cold water, but don't rub it. With a little care at first your carriage will look quite well for some time. If you can not get choice paint of the color you desire, and ground in No. 1 varnish of your dealer, Montgomery Ward & Co., Chicago, will send it to you for about 50 cents a quart. A good prepared paint of this kind, mixed by machinery by experts, will do better than you can make from varnish, lead, and color.—T. B. Terry in Practical Farmer.

A man of pleasure is a man of pains. Young.

Thoroughness is mastered by few.

PAINS

AMERICAN WOMEN FIND RELIEF

The Case of Miss Irene Crosby Is One of Thousands of Cures made by Lydia E. Pinkham's Vegetable Compound.

How many women realize that it is not the plan of nature that women should suffer so severely.



Thousands of American women, however, have found relief from all monthly suffering by taking Lydia E. Pinkham's Vegetable Compound, as it is the most thorough female regulator known to medical science. It cures the condition which causes so much discomfort and robs these periods of their terrors.

Miss Irene Crosby, of 313 Charlton Street, East Savannah, Ga., writes:

"Lydia E. Pinkham's Vegetable Compound is a true friend to woman. It has been of great benefit to me, curing me of irregular and painful periods when everything else had failed, and I gladly recommend it to other suffering women."

Women who are troubled with painful or irregular periods, backache, bloating (or flatulence), displacement of organs, inflammation or ulceration, 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, Lynn, Mass., for further free advice. She is daughter-in-law of Lydia E. Pinkham and for twenty-five years has been advising women free of charge. Thousands have been cured by so doing.

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Every pain in the breast, difficult breathing, palpitation, fluttering or dizzy spell means that your heart is straining itself in its effort to keep in motion. This is dangerous.

Some sudden strain from over-exertion or excitement will completely exhaust the nerves, or rupture the walls or arteries of the heart, and it will stop.

Relieve this terrible strain at once with Dr. Miles' Heart Cure. It invigorates and strengthens the heart nerves and muscles, stimulates the heart action, and relieves the pain and misery.

Take no chances; make your heart strong and vigorous with Dr. Miles' Heart Cure.

"I suffered terribly with heart disease. I have been treated by different physicians for my trouble without results. I went to a physician in Memphis, who claimed that I had dropsy of the heart. He put the X-ray on me, and in connection with his medicine he came near making a finish of me. Some time before this a Mr. Young, of St. Louis, was in our town. He saw my condition, and recommended Dr. Miles' Heart Cure to me. I gave it little attention until my return from Memphis, when I concluded to try it, and am pleased to say three bottles cured me.

CHARLES GOODRICH, Caruthersville, Mo. Dr. Miles' Heart Cure is sold by your druggist, who will guarantee that the first bottle will benefit. If it fails he will refund your money. Miles Medical Co., Elkhart, Ind.

Home Departments

CONDUCTED BY RUTH COWGILL.

Ministries.

The memory of a kindly word
For long gone by,
The fragrance of a fading flower
Sent lovingly;
The gleaming of a sudden smile
Or sudden tear;
The warmer pressure of the hand
The tone of cheer;
The hush that means, "I can not speak
But I have heard."
The note that only bears a verse
From God's own Word—
Such tiny things we hardly count
As ministry,
The givers deeming they have shown
Scant sympathy;
But when the heart is overwrought,
Oh, who can tell
The power of such tiny things
To make it well.

Amos R. Wells.

Training for Domestic Life.

M. W.

With other innovations of modern times, the care of the household and other domestic problems have taken on a dignity that has heretofore been lacking. This is evinced partly by the fact that the subject is worth discussing at all, and partly by the term under which all problems of this kind are classed. Until recently the subject has been so neglected that there was not even a name for it; but now the term "Household Economics" is frequently heard abroad in the land in one or another of its frequently discussed phases. Better still, "Domestic Science" seems a singularly appropriate and fitting term, classing it, as it does, with the other branches of knowledge which are plainly and indisputably worth studying.

THE SCIENCE OF MANY SCIENCES.

There is one striking difference, however, to be noticed. While each of the sciences has a special field for its operation, one who is versed in domestic science must have accurate and useful knowledge of many other branches. For under this head we consider all questions relating to the care and management of the household, the general atmosphere, home comfort, the decorations, the care of the family, the management of the help, and the cooking. To be thoroughly capable, therefore, of competing with the daily problems arising from these varied interests, it is evident that the ideal housekeeper should be thoroughly conversant with many subjects, for instance, the laws of chemistry, in preparing healthful foods; of physiology and hygiene, in sustaining health; of natural philosophy, in judging temperature and heat. Besides all this, the ideal housewife should have more graces of mind and character than are allotted to any other human being, to meet the trials and vexations so constantly arising to trouble her.

"LIGHT HOUSEHOLD TASKS."

Till within recent years, the system of household economy has been left to its own devices, to its own developments. There have been households and households since the beginning of time, but the management thereof has been left to the intuition or natural capabilities of the housewife, for good or ill, as the case might be. This subject was not considered worthy of the weighty discussion which was often lavished on trivial and, if we may suggest it, less important matters. On the one hand, the common fallacy, seemed to be that this was just woman's work, and therefore was simple and easy, requiring no brains or thought. Ignorance on this subject still prevails. How often we have come across the expression, "Light household tasks," which seems to be the poet's favorite delineation of a housewife's duties. The minds of the initiated travel back to their own experience therein, sweeping, dusting, baking, scrubbing, ironing, cooking—"light household tasks," forsooth!

HOUSEKEEPING NOT INSTINCT.

On the other hand, it was generally conceded that if a woman encountered difficulties in her work, her intuition would help her in any emergency. We are inclined to scoff at this idea, for woman would be a most remarkable creature if she were endowed by nature with the knowledge that she needs, which might include: How to cook an appetizing meal from which her lord and master will not contract dyspepsia; how to manage the fresh air and control the temperature so as not to give the babies cold; how to take care of unexpected company gracefully and graciously; in fact, how to run the house smoothly and keep victoriously

above all its petty vexations. Would not woman, indeed, be a most glorious creation if she knew these things instinctively? It is a fact, sad to relate, but alas! too true, that many women have no instinct whatever for home-making, but this seems in no wise to deter them from taking the responsibility of a household upon their shoulders whenever opportunity offers.

THE HOMEKEEPER'S RESPONSIBILITY.

Nineteenth and twentieth century reformers have found here a wide field for operation, and in spite of some opposition and some lack of interest great strides have been made in this comparatively new domain. It is generally understood that a great many evils in our land may be traced directly to badly-managed and poorly-kept homes. What of the poor working man who is attracted by the brightly-lighted saloon as he contrasts it with his own dingy home? What of the clerks who almost faint from exhaustion because of the lack of nutritious food? Think of the hundreds of men holding subordinate positions and doing inefficient work, perhaps for the very same reason. Think of the great mortality of infants and children, due very largely to the mothers' ignorance of the laws of health.

As to the importance of this subject, then, there are no two opinions. We agree that it is the foundation of our civilization, our happiness, and our business prosperity. When we consider the comforts of home, the relaxation from business cares, the training of the children, the food that we eat, can we measure what potent factors they are in shaping the tastes, the ambitions, and the career of each member of the family?

IMPORTANCE OF DOMESTIC TRAINING.

As for similar evils due to ignorance, the remedy has been found in education. Not education in the generally accepted sense only, but in addition the training that will fit this particular need. We would almost say "instead," rather than "in addition," if necessary. We should call it quite absurd for a young man intending to be a doctor to pass through the general college course in sciences and classics, and then put up his shingle and be ready to practice. His patients would perhaps be slow in trusting themselves to his care. A minister must not only have a general education, but he must know his own profession, not by intuition or natural capability, but through study and training. A man can not be a successful carpenter because he is well educated. He needs training and practice in his business before we would trust our houses to him. We would not give our dresses to a dressmaker with neither training nor experience. Nay, verily! Not even though she be a graduate of Vassar! But the lives of thousands of children and the welfare of hundreds of homes are entrusted to the management of women who have no aptitude for this vocation, no training whatever, and no knowledge except that which they gain slowly by bitter experience.

BEGIN WITH THE CHILDREN.

Since fully one-third of the women of our country marry, why should the training necessary for them in their life work be entirely neglected? A great step in advance has been made by the introduction of manual training into our public schools. As in the case of other innovations, this idea has gained ground slowly, partly, perhaps, from the fact that the school curriculum seemed already crowded. And indeed, with the children taking special lessons in drawing, paper cutting, bugs, and butterflies, clay modeling, water colors, beadwork, and raffia, where was the time, after a little had been given to reading and arithmetic and the other branches that used to be considered important, for work in sewing and lessons in tidiness and housekeeping?

But it has been decided that there are things more important for the average child to know than these interesting, but superfluous items, and that perhaps time spent in training eye and hand and brain in the lines of future usefulness may be of practical benefit. The experiment is at least worth trying. So the boys are learning to plan and draw and carve, and the girls are learning to sew and cook, and we wonder why this was not thought of long ago so that many generations of boys and girls might have had this training.

When using baking powder it is always economy to buy the Royal.

Royal makes the finest, most wholesome and delicious food.

Who knows what might have been the improvement by this time in the homes of this land of ours?

And so, I say that women should not be willing to take up the duties which will come in home life, without some preparation. It is surely an important vocation, since the health and happiness of the whole family depend upon it. When our girls decide that they will not take the responsibility of a house and the cares of a family upon their shoulders without studying and being trained in household duties and the care of children, there will surely be much less discontent, greater comfort, and even better chances for health and prosperity for every member of the family.

Uses for Stale Bread.

New Boston Brown Bread.—Many a frugal New England housewife, who knows that to "waste not is to want not," never allows one bit of stale bread to be thrown away, and she is able to use many pieces in new Boston brown bread. Soak one and one-half cupfuls of stale bread in two cupfuls of cold water over night. In the morning run through a colander; add three-fourths of a cupful of molasses, one and one-half cupfuls each of rye-meal, granulated corn-meal, and Graham flour, mixed and sifted with three teaspoonfuls of soda, and one and one-half teaspoonfuls of salt, and one and one-fourth cupfuls of cold water. Stir until well mixed and steam in the same manner as Boston brown bread.

Bread Crumbs.—Cut bread in moderately thick slices; place in a pan in the oven and let stay until thoroughly dry (not brown). When crisp, remove from the oven and crush in an ordinary meat-grinders place in glass jars and set away for use. These crumbs if thoroughly dried keep indefinitely. Bread-crumbs may replace cracker-crumbs in almost every instance. They may be used for all scalloped dishes, for frying oysters, croquettes, etc., for use in soups instead of thickening, and if mixed with melted butter and browned may be used for garnishing vegetables and meats.

Fritters.—Stale bread, ground or soaked in milk, makes delicious fritters. Use milk enough to soften the bread in addition to two eggs beaten light and a little salt; then add enough flour to make it the right thickness to stick together, and fry in hot butter or other fat. Eat with syrup or beef or chicken gravy.

By an unfortunate transposition of the poetry quoted in Mrs. Kellogg's excellent paper on "The Right One" in last week's KANSAS FARMER, much of the beauty of the thought was obscured and she was made to appear to be an egotist whereas she is exactly the reverse, never overvaluing her own merits and always generous to others of whom she thinks, speaks, or writes. Those who have retained their KANSAS FARMER of March 29 should turn to page 348 and reread Mrs. Kellogg's paper reversing the positions of the quotations.

Natural history always interests children, who usually recall explanations of the phenomena in their own way. An account of the habits of the cuckoo, for instance, was apparently absorbed at the time, but was reproduced thus a few days later: "The cuckoo? Oh, that's the bird that doesn't lay its own eggs."

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The Young Folks

Attractions of Our Early Homes.

My little birds with backs as brown
As sand, and throats as white as frost.
I've searched the summer up and down,
And think the other birds have lost
The times you sang so sweet, so low,
About the old house, long ago.

My little flowers, that with your bloom
So hid the grass you grew upon,
A child's foot scarce had any room
Between you—are you dead and gone?
I've searched through fields and garden
rare,
Nor found your likeness anywhere.

My little hearts, that beat so high
With love to God, and trust in men,
Oh come to me, and say if I
But dream, or was I dreaming then,
What time we sat within the glow
Of the old house hearth, long ago?

My little hearts, so fond, so true,
I searched the world all far and wide,
And never found the like of you;
God grant we meet the other side
The darkness twixt us now that stands,
In that new house not made with
hands.

—Alice Carey.

Fleetfoot: The Autobiography of a Pony.
MARION SEWELL.

CHAPTER I.—LIVING AND LEARNING.

Somewhere out on the prairie my life began. It was in the spring time when old Earth was at her best, and, as with all young animals, the greater part of my days was spent in sleep, but during the intervals of wakefulness when I took the trouble to look about me, I was much pleased with what I saw and heard.

The soft grass and blooming flowers impressed me favorably, while the sweet music of singing birds and the unceasing murmur of a brook near by had a cheering and uplifting effect upon my mind.

Had I been older and wiser, it is likely that the satisfaction which I felt in the present would have been lessened by thoughts of the future. It is possible that across my mind's eye would have come a vision of a frozen brook and my mossy bed transformed into a bank of snow, and I could have foreseen myself confronted by emptiness and desolation.

Happily, then, for my peace of heart, I was entirely unaware of the existence of winter or of anything else that was not comfortable. Consequently, my only two ideas were that life was sweet and that it was always spring.

But alas! one can not dwell long in this world and remain ignorant of trouble. If we live we must learn; and surely I was young enough when I received my first lesson.

This eventful day was not as clear as usual; to put it plainly, a heavy fog had settled over the landscape and a drizzling rain sifted down from the darkened skies.

The flowers which had been the source of so much pleasure to me in my waking moments now appeared only as blurs in the tall grass, and I was unable to distinguish one color from another.

I had never before known my bird friends to be anything but artists in the way of song, but at that time they gave nervous little squeals and gasps, and eventually dropped into a drowsy silence.

The brook which I loved so well on account of its soft and soothing ways, feeling, I suppose, that it was called upon to relieve the situation, gradually worked itself up into an unpleasant roaring sound, thereby making matters worse than ever.

The moisture which was collecting upon my thin coat gave me a chilly feeling, but more than all other distasteful sensations combined, there came upon me suddenly the perception of a great loss and I felt very helpless as I staggered about on my wobbly legs.

The cold rain fell faster and faster, everything seeming each minute to grow less distinct, and a dull misery crept into my heart and took possession of me.

But I decided to try to make my way onward for it was only by moving about that I could hope to find my friend, the one who had taken such good care of me, but who was now lost somewhere in the thick fog.

What was that? The clatter of advancing hoofs! Now surely my friend is coming back to me and the chill will be taken out of my stiffening limbs by the warmth of her breath, and the soft, caressing whinny will tell me that I need not be afraid.

But no, they have passed by and left me far behind. Still I am resolved to keep on going and perhaps after a

while I may find light and with it will return the dream-like beauty of yesterday.

Yesterday! how long ago that seems! Surely it is ages since I have had anything to eat, since I have lain joyfully and contented in the warm sunshine.

But there! what a little stumbler I am; my feet turn under me at nearly every step. It is hard to make one's way in the dark; but I will be very careful and pretty soon I shall find the light.

Ah, there it is! but only for a moment; one great, white flash, and it is darker than ever. And that heavy, rumbling sound, filling up the place where the light ought to be; I never heard a noise like that before.

More lights far away and more rattling sounds so near that they frighten me. I am proving myself a coward, but I think it because everything is so strange and black.

Now, I am afraid to take another step forward; however, I need a rest, for my legs ache and ache and I am trembling all over. I wish the grass wasn't so wet so that I could lie down and sleep.

Did I fall? Well I will remain here a little while, but I know that I can not sleep, for I am so cold and so hungry, and oh, I am all alone.

CHAPTER II.—BIG JAKE.

I do not wish to go into details concerning the lack of knowledge which I possessed in the early months of my life, but will endeavor to give my readers the benefit of an advanced and hard-earned education.

I did not know the name of anything then and had but limited reasoning powers. Of course, all that is different now, and by looking back over past years I am pretty well able to tell what took place from the time when I awoke to the realities of life, that is to say, the two days and one night when I was lost, and wandered, panic-stricken, through a dense fog which later developed into one of the most severe thunder-storms of the season.

I am not sure how long I lay on the wet grass when I dropped down, a forlorn little heap, worn out by hunger and aimless wandering, but when I again opened my eyes a great change for the better had taken place.

The air was clear and there wasn't a cloud in view. The sun shone dazzlingly bright, and its heat was very good to feel after the long hours in which I had been chilled through and through.

I was a long distance from the brook and could not hear it now even when it roared, but the birds were more melodious than usual as they hopped about singing their sweetest; it must have been a song of thanksgiving in which they all united because the clouds had disappeared and the awful noises and strange flashing lights were gone, leaving and world just as it was before—full of peaceful beauty.

I was thankful also, but I had no heart for music, nor did I feel like gambling about and showing my pleasure in a coltish way, for I was too hungry and lonely to display any signs of joy.

Raising myself and looking around, I could find but small encouragement in the miles and miles of green sward. Then suddenly out of the distance appeared a multitude of heads, and in a few moments a large body of high-spirited horses came rushing in my direction. I hastily arose on all fours, filled with confusion and not a little dread, not knowing how I could escape being trampled by those flying feet.

Somehow they went past without even so much as touching me, and my knees bent under me with involuntary devotion as I looked after them, dazed and grateful. Then, to my surprise, I saw one of the herd, the very largest and apparently the leader, turn his head and come cantering slowly back.

The others, though they were going at their best speed, noticed the large horse's movement and wheeled about with the intention of accompanying him, but it was evident that he had no desire for their society just then, for he elevated his long neck and gave a ringing neigh in which even I, inexperienced though I was, caught a note of warning.

After a moment's hesitation his disappointed followers changed their course and trotted off in the opposite direction, leaving him to make his return journey alone.

Although I was relieved to know that the reckless galloping troop was not coming my way again, I still felt far from easy in my mind, and I had, to all appearances, good reason to be afraid, for as the long-necked captain



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of the herd continued to approach he seemed to assume gigantic proportions, and the deliberate canter with which he made directly for me promised more danger than had the mad rush of his comrades, since I was fortunate enough not to lie in their path.

When at length he reached me I sank down close to the ground, and shutting my eyes tight expected the worst. But somehow he seemed in no haste to devour me, for when he came within a few feet of where I crouched, the heavy hoofs ceased to move, and raising my eyelids the least bit I saw him stretch his neck and lay his head near the ground in order to scrutinize me more closely.

Presently he walked up and touched me gently with his warm nose, and his long mane seemed to fall over my back and cover me like a shawl. Then for the first time I gathered courage enough to open my eyes and I saw with pleasure that, notwithstanding his mammoth size, the intruder was not such a fierce creature after all.

In the first place, he was very fleshy, and perhaps this fact helped to make him so much larger than any respectable horse ought to be.

In color he was a dark glistening bay, and the wavy black mane and tail almost swept the ground. Just now as I peered anxiously up at him, he regarded me solemnly through a luxuriant black foretop, and in the depths of the kindly brown eyes I felt that a knotty problem was trying to solve itself.

He was surely at a loss to know what to do. He looked at me helplessly, then neighing softly raised his head and glanced in the direction of his retreating comrades. Bending down again he tore up a great mouthful of grass and held it between his strong white teeth. This last act seemed to afford him an inspiration, for the troubled look left him at once and he began to shove me about with his nose; so insistent did he become that I had no other choice than to rise to my feet. This accomplished, the big horse was greatly encouraged. His next step was to gather small quantities of grass and as it left the earth with a musical ripping sound, I was charmed into imitating him.

We traveled slowly on, and before I realized what I was about, the dreadful gnawing hunger had left me, and I was almost comfortable. The heat of the sun, added to the exercise I was taking, warmed me thoroughly and for the time being I forgot my sorrowful plight.

After a while we came to a spring where the water gushed up as clear as crystal. My new friend bent his head and drank long, delicious sips, and watching him I quickly learned to do the same. The big horse seemed pleased with my aptness, for after looking at me a moment with unmistakable admiration he laid his heavy jaw upon

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Suitable for flat or steep roofs.
Write for Booklet and Sample and learn more about it.
BUCHANAN-FOSTER COMPANY
448 Chestnut, Philadelphia

my neck and appeared to be taking in the beauties of the landscape.

Feeling as I did such gratitude for his kind attentions, it would have been the height of impoliteness to give any sign of weariness, even though I languished under so great a burden, for I verily believe that the big horse's head weighed more than did my whole body.

As soon as courtesy would allow, I drew gradually off and made a pretense of nibbling the tender grass. This seemed to bring my friend to his recollections, for after glancing lazily about him, he started in a cumbrous trot up a nearby hill while I followed closely at his heels.

At the brow of the hill we came suddenly upon two men who were digging deep, round holes in the ground. They were so busily engaged in work and conversation that they did not notice us at first and the big horse, taking advantage of this fact, scratched his chin against the loose board on top of the fence.

Those being the first persons I ever saw, I watched them very closely and also a little fearfully, not having much trust in strangers, and although I walked up quite near, I was prepared to spring off at the least sign of danger. Still the pair worked on entirely regardless of me and my timid feelings; nor did they even turn their eyes in our direction until my companion, growing reckless with the vigorous exercise he was taking, bent the board so far back that it snapped sharply and then fell clattering to the ground. Both men looked up hastily, but instead of being either frightened or angry they laughed good naturedly.

"Well, if that isn't Big Jake!" exclaimed the younger of the two, dropping his spade and advancing toward us, at which action I wisely retreated but still remained within hearing distance.

I knew my name wasn't "Big Jake," but of course could not tell what means might be adopted in order to capture me; the bay horse was less suspicious, in fact, he appeared not in the least disturbed.

"Don't you know me, old fellow?" queried the man as he came nearer, then gladly, "Of course you do, and you are as fat as ever and as wise as ever, and, Jakle boy, where did you get that poor, starved-looking little colt?"

Big Jake, who was nibbling softly at the speaker's hat, laid his head on the broad shoulder and whinnied gently.

"Ah, you say he just followed you. To be sure he did, and I don't blame him either. Didn't I follow you many and many a time myself?"

Just then the other man came up, mopping his face with a large, blue handkerchief. The sight of his friend discoursing with Big Jake seemed to amuse him very much. He stood in an attitude of mock attention, leaning his head forward as if to drink in every word. His fellow workman, knowing nothing of all this, went on talking.

"And don't you remember, old man, the day you refused to go over the railroad track? How I thought you had balked and how I scolded you because I was in a hurry? And you, wise chap, never stirred an inch, and I was just in the act of lashing you when the train thundered by. That was one of the times you saved my life and, Jakle, do you know that I have always since been glad that I am slow to use the whip?"

I drew a little nearer, and the jolly man who was listening with so much mockery ceased laughing. Big Jake tossed his head carelessly, as if to say, "No horse would have gone over the railroad track just then."

There was small doubt but what those two had been old acquaintances. The voice went on, thrilling with the memory of days gone by.

"That awful snowy night when we were delivering the Christmas things. Every horse on the whole force but you, Jake, gave out, and your poor hoofs were a sight to see. Have they grown out? So they have, and are just as good as new. No one would guess that you ever suffered, old fellow, you have such a prosperous appearance. Something like myself, eh? Well, it's just as good to keep a brave front, but we won't forget what we went through together. Let me see if I can find the scar where the shaft pierced. Oh, that reckless snob! Yes, here it is, covered up, of course, with glossy hair.

"I can never forget how you moaned, Jake, and when the Vet. said you couldn't get well I looked all over town for the heartless villain that had killed you. He was gone, though,

The Food Value of a Soda Cracker

You have heard that some foods furnish fat, other foods make muscle, and still others are tissue building and heat forming.

You know that most foods have one or more of these elements, but do you know that no food contains them all in such properly balanced proportions as a good soda cracker?

The United States Government report shows that soda crackers contain less water, are richer in the muscle and fat elements, and have a much higher per cent of the tissue building and heat forming properties than any article of food made from flour.

That is why Uneda Biscuit should form an important part of every meal. They represent the superlative of the soda cracker, all their goodness and nourishment being brought from the oven to you in a package that is proof against air, moisture and dust—the price being too small to mention.

NATIONAL BISCUIT COMPANY

slipped out in the night like the coward that he was. But you pulled through all right after all. It takes a good deal to destroy a hero."

As he concluded he stepped back in order to better admire the hero, at the same time coming down stoutly on the other workman's toes, and was thereupon brought back to earth and present things by a vigorous shaking.

When Jake's old friend had regained his hat which had fallen from him in the midst of the scuffle, the two men went off together laughing, but when they had gone only a few feet one of them turned and called back merrily, "Goodbye, Jake; see you later," and my big comrade replied with an energetic nod and the pricking up of his long ears.

After watching the retreating forms of the workmen until satisfied that they were not coming back, Big Jake opened his jaws in an expansive yawn, then slowly and laboriously bent his knees under him and stretched himself with a contented sigh on the soft grass.

Immediately I felt lonely, and covering the short distance that lay between us, I bent low over the mammoth head. Big Jake, the hero, was actually snoring!

The Little Ones

Fay Folk.
Some nights I try to keep awake
To see how fairies really look.
(You have to watch so sharp and still,
So says my mamma's Fairy book.)

I squint my eyes a tiny space
And then I see them—one by one—
Come trooping in from Fairyland
With funny little hop and run.

They nod and whisper to themselves—
Then scamper off across the floor
As if they'd never, never seen
A little boy like me before!

Yet if you ask me how they look—
Somehow I can not seem to tell;
For pretty soon they've slipped away—
And then I hear the breakfast bell.
—Laura Simmons, in Lippincott's.

Mr. Whirligig.
"Look at it! Look at it quick, Helen!" cried Ruth.
"Do you 'spose its dissy? Oh, it's

just a butting its head into that board!"

"Acts just 'zactly like our little kitten did when it had a fit," said Helen, resting her hands on her knees and bending above the strange insect.

Ruth came running up to me flushed and breathless. "Can you come very quickly, mother? A poor little bug is having a fit or something," she said.

I walked down the bank at once. Ever since the little girls had begun to watch the ant-hill they seemed to have become more interested in the insect and animal life about them.

I followed her to the edge of the pond, where Helen bent above a very large whirligig beetle.

"Oh, that's Mr. Whirligig," I said. "Did you never see him before? He isn't having a fit, and he isn't crazy, either. That's just the way he intends to act. You see he is named Mr. Whirligig Beetle because he spins round and round like a top."

He was of a bright, bronze color, and he was using his hind legs for oars, and his fore legs for rudders.

He looked very funny, and I was not surprised that the little girls concluded he was crazy.

"Do you see his eyes, Ruth?" I said. "He has a pair of eyes on each side of his head. One-half of the eyes look up and one-half down. Isn't that strange? The eggs are put on leaves or stems above the water, and a silk case or bag is spun to hold them. Mr. Whirligig is usually a small beetle and whirls, whirls, whirls. Then he keeps still for a second and then begins again.

"He is interesting, but I think that some of his cousins are more so. Mr. Whirligig lives near shallow water like this."

"What are some of his cousins," asked Helen.

"Oh, he has a great many, for Mr. Beetle belongs to a very large family. Did you ever notice, perhaps out on the rose-bush, a tiny, horny little thing? It is bright red and shining, and has little black specks all over its back."

"Lady-bug, Lady-bug, fly away home, your house is on fire and your children will burn!" cried both the little girls at once.

"Yes, you've guessed it. We call her the Lady-bug, but she is one of Mr.

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The "old reliable" KANSAS FARMER, established in 1863, the best genuine agricultural weekly paper in the West. It solves the problems for the busy farmer. It helps and interests every member of the farmer's family. It has 12 regular departments. Its contributors are expert authorities. It contains 24 to 32 pages each week. Sent on trial three months free. Test it. Clip the coupon below.

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Topeka, Kansas.**

I accept your trial offer to new subscribers to send me the KANSAS FARMER three months free. At the end of the three months I will either send \$1.00 for a full year from that date or write you to stop the paper, and you are to make no charge for the three months' trial.

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Before you buy roofing for any building, from a small poultry house, to the largest mill or factory, it will pay you to get samples and complete proofs of quality from the oldest makers of ready roofing in America. (We originated the roll of roofing ready to lay with fixtures packed in the center.) Our concern was

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We can show you why "Paroid" is the best of them all—lasts longer and saves most in repairs. Drop us a postal to-day.

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New York, Washington, Chicago, Hamilton, Ont.

ROOFING

Whirligig's cousins. In its life the beetle makes three changes. First of all is the little white or light-colored egg; then a fat, greedy, white worm, not at all attractive looking. This is called the larva, and means 'a mask.' It's a very good name, too, for you would never guess that the fat, white worm you find hidden away under a stone, or in the earth, is a child of Mrs. Beetle. It does not look in the least like her. After this it becomes a pupa—and that means 'a baby.' It is in a case now, or a cradle which looks much like a hen's egg. It is folded up in this little cradle, with its wings packed close by its side, its jaws and feelers laid on its breast, and it has nothing to do but wait. When it becomes like its mother, we call it the 'image state.' People like to study beetles because they are so easy to get, and many of them are very beautiful to look at. Sometimes the beetle-cases are dotted and lined in such a wonderful and perfect way that they look as if they had been carved from wood. In olden times there was an insect of the family of rose beetles in Egypt. The Egyptians considered it sacred and worshiped it. Sometimes they would wear a stone or wooden image of it about their necks to keep off harm. This kind is called the golden beetle and is very pretty. It does not hold the wing-cases apart when it flies, but wide, thin gauze wings come from beneath them. The body, head, legs, and wing-cases are a beautiful golden green with silver lines and spots. It's a very brilliant looking insect as it darts about in the sunshine. But people do not like it for all that, for it spoils rose-bushes. The farmers dislike all kinds of beetles for they are such a large and greedy family. They spoil trees and crops.

"They are nice to learn things about, but I believe I like our ants better," said Ruth.

sible for any one to have entertaining and wholesome reading—no matter how remote he may be. These are especially well adapted to the needs of women's clubs in the country. It was through the work and influence of club women that this benefit can be enjoyed. These libraries will be sent to any group of persons to be used for six months. There is no charge made for their use, but \$2 is charged to defray the expense of sending them. That is a very small amount when divided among all the members of the club. Every club in country or town where there is no public library should arrange to use these.

FAMOUS WOMEN.

Madame De Stael.

- I. Life of Madame De Stael.
 - II. Madame De Stael's literary merits.
 - III. "Corinne."
 - IV. Madame De Stael and Napoleon.
- I. One of the most brilliant women that ever lived is the subject of this sketch. She was precocious as a child and was given every opportunity by her admiring and wealthy parents, both as to instructors and society, and fortune smiled upon her from the first.
- II. While she was especially noted for her social successes and attainments, she towered above the women writers of her time. Her literary career began before she was twenty and ripened with age. She was fifty when death overtook her, but even then she was pronounced the most intellectual woman in the world.
- III. "Corinne" was published in Paris ten years before she died. One writer says of it: "It is one of the few immortal books which the heart of the world cherishes." It will make interesting reading and a review of it would be interesting.
- IV. Napoleon and Madame De Stael were enemies. While she believed as he did in politics, she had no confidence in his sincerity and detested him as soon as she saw him and opposed and defied him. Her bitter sayings and ridicule so irritated him that he banished her from her beloved Paris.

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.

- Women's Literary Club, Osborne, Osborne County (1902).
 - Women's Club, Logan, Phillips County (1902).
 - Domestic Science Club, Osage, Osage County (1898).
 - Ladies' Crescent Club, Tully, Rawlins County, (1902).
 - Ladies' Social Society No. 1, Minneapolis, Ottawa County (1888).
 - Chalitto Club, Highland Park, Shawnee County (1902).
 - Cultus Club, Phillipsburg, Phillips County (1902).
 - Literateur Club, Ford, Ford County (1905).
 - Sabeau Club, Mission Center, Shawnee County Route 2 (1899).
 - Star Valley Women's Club, Iola, Allen County (1902).
 - West Side Forestry Club, Topeka, Shawnee County, Route 8 (1908).
 - Fortnight Club, Grant Township, Reno County, (1908).
 - Progressive Society, Rosalia, Butler County (1903).
 - Pleasant Hour Club, Wakarusa Township, Douglas County (1899).
 - The Lady Farmer's Institute, Marysville, Marshall County (1902).
 - Women's Country Club, Anthony, Harper County.
 - Taka Embroidery Club, Madison, Greenwood County (1902).
 - The West Side Study Club, Delphos, (1902).
 - Prentiss Reading Club, Cawker City, Mitchell County (1903).
 - Cosmos Club, Russel, Kans.
 - The Sunflower Club, Perry, Jefferson County (1905).
 - Chaldean Club, Sterling, Rice County (1904).
 - Jewel Reading Club, Osage County.
 - The Mutual Helpers, Madison, Kans. (1906).
 - West Side Study Club, Delphos (1908).
- (All communications for the Club Department should be directed to Miss Ruth Cowgill, Editor Club Department.)

The Traveling Libraries.

There are many things to be enjoyed in this world of which we do not have to avail ourselves. One of these things that is "free for nothing" is the pure, fresh air. Most people are too much absorbed with other things or too lazy to take in more than half a breath, when long, deep breathing would send the blood through the system giving renewed life and energy to the whole body.

But I started out to tell about the Traveling Libraries which are rendering such splendid service to thousands of people who have availed themselves of their opportunities and advantages, and to urge the clubs that have not enjoyed their benefits to proceed to do so at once. One of the long-felt needs of people living in small towns and the country has been that of plenty of good literature—such as is afforded by the free libraries of the cities—and these libraries fill this want. They are made up in cases of fifty books each to suit the individuals ordering, thus reaching the needs and tastes of the people. These libraries make it pos-

Federated club departments will be conducted in the following Chautauqua assemblies during the coming summer: Ottawa, June 19-29; Winfield, June 19-29; Pittsburg July 2-12; Clay Center, July 27-August 5; Lincoln Park (Cawker City), July 27-August 5.

THE INTERNATIONAL SUNDAY-SCHOOL LESSON.

(Copyright, 1906, by Davis W. Clark.)
Matt. 1:24-25; I Cor. 8:10-15; Eph. 2:19-22; I Tim. 6:17-19; II Tim. 2:14-19. April 1, 1906.

Lives That Endure (Consecration Meeting).

The human soul covets the quality of permanence. It revolts from the ephemeral. It seeks something which will resist both time and change. This is what the pyramids and Coliseum mean. But after all this quality is not found in any material substances. It is the characteristic excellence of the human spirit alone. After the material structures that are in the world, even the most enduring of them, have been burned up, the characters of the builders, be they good or evil, will survive. Goethe falls a little short of the Christian ideal when he says, "What we poor mortals have to do is to keep ourselves upright as well and as long as we can." There is a hopeless tone in that which is not characteristic of the teaching of Jesus. He who does the will of God abides forever. He builds on bed-rock, and may defy all winds and floods. In no other way will the human craving for permanence be satisfied. After elements melt and heavens are rolled together, character will survive and endure.

Homeseekers and investors are beginning to realize that the fine irrigated lands of the famous Arkansas Valley in Western Kansas and Colorado possess the greatest value of any farm lands of the country. These lands yield annually over 50 bushels of wheat per acre. The average net returns from sugar-beets is \$85 per acre. The well-known firm of D. H. Bane & Company own many thousand acres under irrigation, and are offering them at prices per acre within the net returns of a single year's crop. Crop failures are unknown in that rich section where the United States Government is spending three million dollars for the benefit of homeseekers and investors. Write to P. C. Reilly, 824 Kansas Avenue, Topeka, Kans., for detailed information about this wonderful region.

Attention is directed to the new advertisement of the Jumbo squabs and Buff Orpingtons and Buff Leghorns as described in the new catalogue from our advertiser, W. H. Maxwell, 1220 Quincy Street, Topeka, Kans. To breeders of the variety named and squab-breeders this catalogue will be of special interest and it will be sent free to any one requesting the same.

19.90 CREAM SEPARATOR
TWO MONTHS' FREE TRIAL

\$19.90 IS OUR PRICE FOR THIS WONDERFUL NEW IMPROVED 1906 MODEL HAND CREAM SEPARATOR.

AT ABOUT ONE-FOURTH the prices charged by others, we furnish the highest grade hand cream separators made in the world. Compare with any other separators made, ours has greater capacity, skims closer, skims colder milk, runs easier, is stronger, less liable to get out of order, will wear longer, and besides our price is a mere fraction of what others charge. We give you two months' free use and free trial, we issue a binding twenty years' guarantee, we take care of your separator for you free from the day you receive it, and we will always in the years to come furnish you any needed repair or part promptly on a day's notice.

IT IS SO EASY TO HANDLE that by following the simple printed instructions we send you, anyone without previous experience can operate it at once, and do better and more work than can be done with any other separator made.

OUR SEPARATOR WILL SKIM 1,000 POUNDS OF MILK PER HOUR

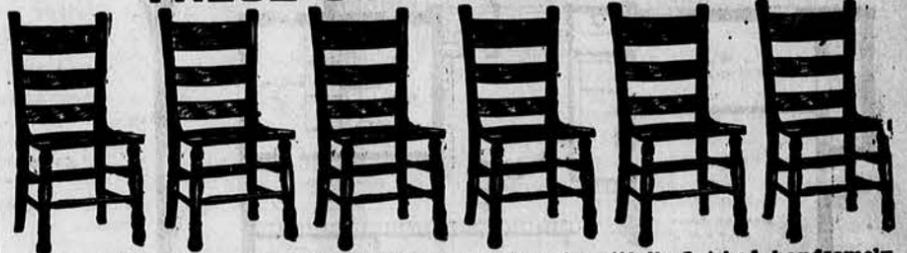
and do it closer, better and easier than any other separator of like size will skim 500 pounds in one hour.

OUR SEPARATORS will skim twice as close, twice as much, twice as easy, last twice as long as any other hand cream separator made, and yet we furnish it for just a few dollars compared with the prices charged by others. Our price is based on the actual cost of material and labor, and is a small part of what others charge, **AND OUR TERMS ARE SO LIBERAL TOO.**

OUR GREAT FREE OFFER.

On a postal card or in a letter to us simply say, "Send me your Free Cream Separator Offer," and you will receive by return mail free, postpaid, our very latest special hand cream separator catalogue (just out), with pictures of our machines, copies of medals, diplomas and awards taken at different exhibits all over the world in competition with other separators, pictures of all the parts, full descriptions, testimonials, official and general endorsements and our great \$1,000.00 quality challenge, also copies of our guarantees, etc. We will also send you our two months' free trial proposition, and we will send you our latest and the **MOST LIBERAL CREAM SEPARATOR OFFER EVER MADE.** Our separator will save you \$10.00 to \$15.00 a year on every cow you keep, paying for itself several times over in a year, besides two months' use costs you nothing. Don't fail to write and let us mail you our free book and wonderful free trial separator offer.

THESE SIX CHAIRS FREE.

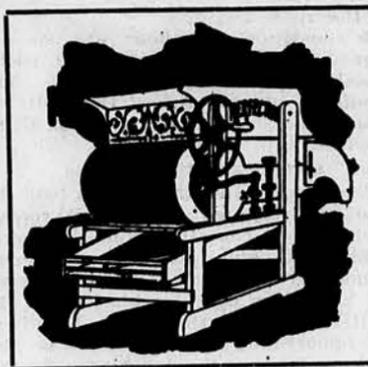


We will send you free these six large, full size, beautifully finished, handsomely embossed, hardwood cane seated chairs when all your orders to us have amounted to \$50.00, or you can have your choice free of many other valuable pieces of furniture or other useful things: a buggy, harness, saddle, bedroom suite, organ, couch, dresser, or your choice of hundreds of similar valuable articles. All this will be fully explained when you write for our Free Cream Separator Offer. On a postal card or in a letter to us today be sure to ask us to send you our Free Cream Separator Offer, and get all we will send you free by return mail, postpaid. Address,

SEARS, ROEBUCK & CO., CHICAGO.

Do You Know?

That one handful of noxious weed seed to a bushel of your grain, if planted, will absolutely ruin the crop. There are many cleaners that will remove all but that last handful of the weed seed from your grain, but the "Perfection" is the machine that does the work the way it should be done. Better own the machine that is easy to operate, easy to understand, and yet does its work so perfect that your crops are increased 25 per cent to 50 per cent. :: ::



A "Perfection" cleans, separates and grades anything from Corn to Red-Top.

Write us today and we will tell you what it will do as well as show you how it does it. Be sure and tell us the kind of grain you raise.

THE LEWIS-TUTTLE MFG. CO.

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Of Irrigated Land in the Arkansas Valley of Colorado and Kansas

You can till as large an acreage under irrigation as without. The idea that an irrigated farm has to be only a small garden patch, is an exploded theory. You can make a good living on a small irrigated farm and you can not on the other kind, but you can also manage a large irrigated farm with marvelous ease and profit. Send for detailed information to

P. C. Reilly 824 Kansas Avenue, Topeka, Kansas

WHEN WRITING OUR ADVERTISERS PLEASE MENTION THIS PAPER.

FOR A Y. M. C. A. BUILDING AT THE KANSAS STATE AGRICULTURAL COLLEGE.

(Continued from page 383.)

and Rockefeller. Perhaps this would not succeed in any case, and it may be objectionable to many Kansas farmers who would themselves prefer to endow such a building at their own Agricultural College.

A. M. TENNEYCK.

A History of the Movement.

The movement for a Young Men's Christian Association Building was publicly inaugurated May 22, 1904. On that

ent scheme of enlisting the sympathy of the farmers of the State will result in a speedy completion of the project.

LOCATION.

The building will be located on the Association lots, corner Fremont and Ninth Streets, just north of the north-east corner of the Park. This location has several advantages, among which may be mentioned (1) nearness to the Park, (2) center of the student population, and (3) location on the proposed paved road to the college.

GENERAL DESCRIPTION.

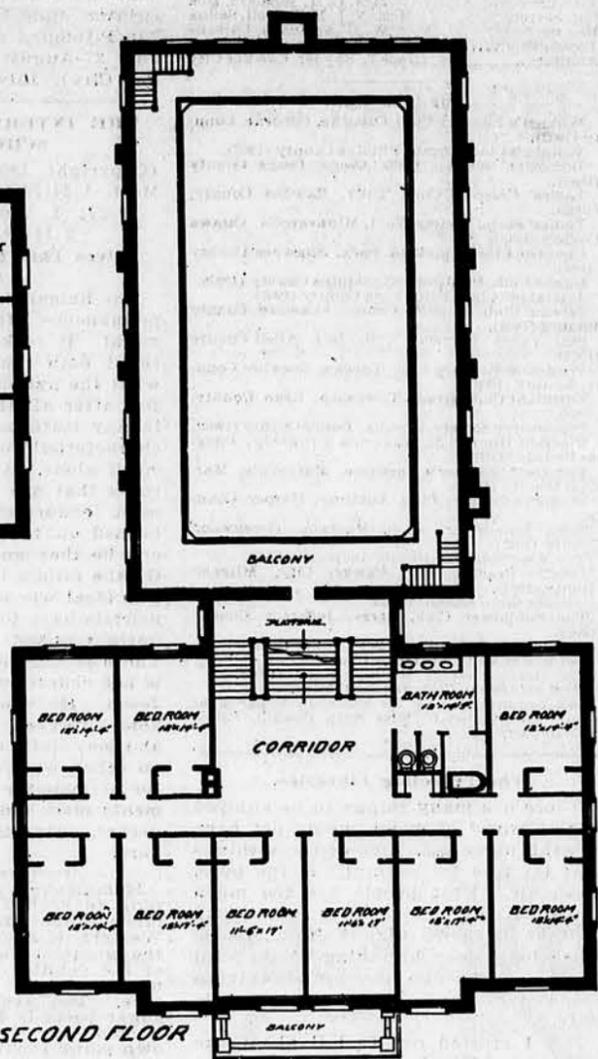
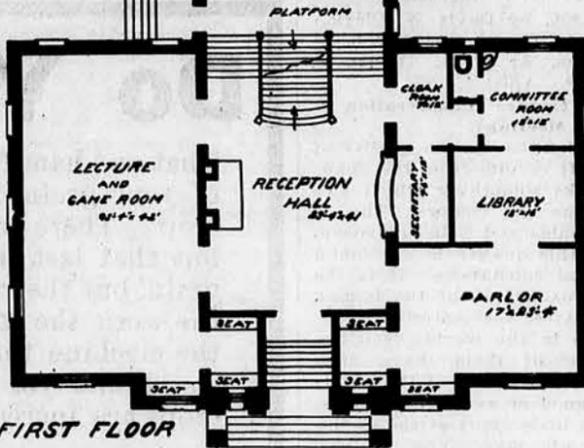
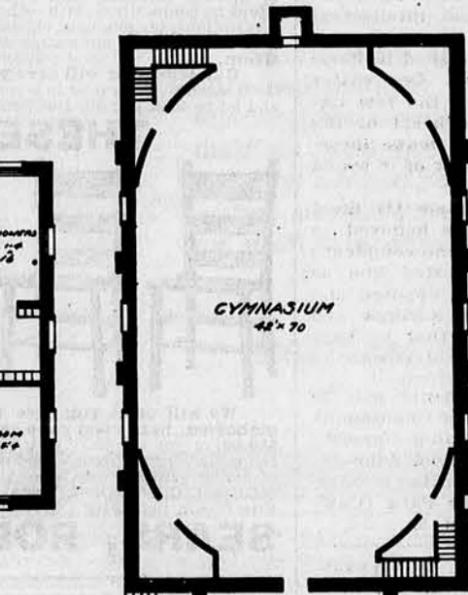
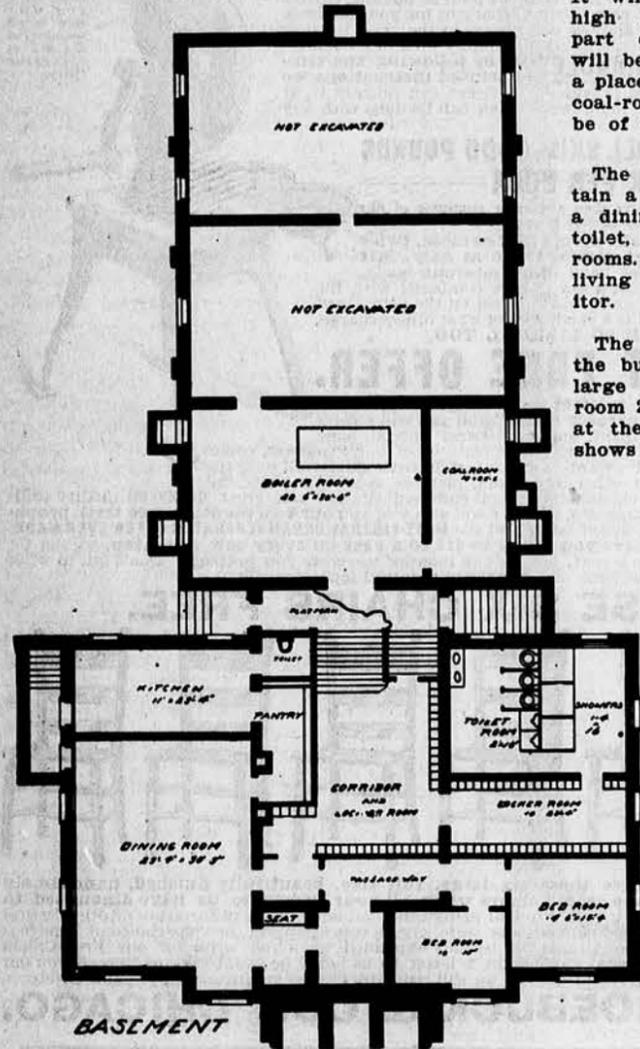
The building will be of stone, 76x45 feet, with gymnasium annex 70x42 feet. It will be three stories high and basement. A part of the gymnasium will be excavated to make a place for the boiler- and coal-rooms. The roof will be of slate.

BASEMENT.

The basement will contain a kitchen 11x23 feet, a dining-room 23x30 feet, toilet, bath and locker rooms. There will also be living rooms for the janitor.

FIRST FLOOR.

The Main Entrance to the building opens into a large lobby or reception room 23x41 feet. A glance at the first-floor drawing shows that this reception



day Mr. E. T. Colton, of the International Committee of the Young Men's Christian Association, made an eloquent appeal for an Association Building at a mass-meeting of the young men of the college. Nearly \$6,000 was pledged by the students at this meeting, and by the close of the term \$3,000 more was added. The average student gift at this time was about \$40.

During the next year \$5,700 more was subscribed by the students so that altogether over \$11,000 was pledged by students alone. This heroic giving has not been done by wealthy students, but for the most part by young men earning their way through college. Thirty-six of them have so realized the importance of a Y. M. C. A. Building that they gave \$100 apiece. No one can estimate the amount of sacrifice that the students are putting into this movement.

During the summer of 1904 a canvass was carried on among the alumni who responded quite liberally. In the fall, invitations were sent out to the business men of the city asking them to a banquet at the Hotel Gillette. Fifty-five of the most prominent business men of Manhattan responded favorably. H. M. Beardsley, of Kansas City, was present and made an address concerning the need for and purpose of an Association Building. A deep impression was made by Mr. Beardsley's excellent talk. A canvass of the business men was made immediately following this banquet.

On February 17, 1905, an offer of \$1,000 was made through the International Committee of the Y. M. C. A., by an unknown philanthropist in the East, provided the Association could raise \$5,000 more in three months. This offer stimulated giving to a great extent and the \$5,000 was raised.

The whole amount now subscribed is a little over \$22,000.

During the past six months the movement has not made much progress. The field around Manhattan is practically exhausted. Efforts were made, but without success, to get some man of wealth to give the sum required to complete the necessary amount.

It is earnestly hoped that the pres-

ent hall opens into a social or game room, 23x42 feet, to the left, a reading room, 17x23 feet, and a library room, 12x16 feet, to the right in front, and the coat room, secretary's outer office, 7x12 feet, and inner office, 12x12 feet, to the right in the rear.

The rooms on this floor are so arranged that in case of large social functions all can be utilized. The meetings of the Association will be held in the social room, which is to be provided with folding chairs.

SECOND AND THIRD FLOORS.

The second and third floors will be used entirely as dormitory rooms. Each floor contains nine sleeping rooms, bath and toilet rooms. These rooms will be among the best in town and will bring considerable income. In addition to this, there will be given the opportunity of concentrating the working force of the Association in one building.

GYMNASIUM.

There is an unmistakable demand for a gymnasium, as the college does not provide one. Even when it does there will still be need of a smaller gymnasium. The Association building will contain a gymnasium 70x42 feet. A running track will also be built.

CLASSIFICATION OF SUBSCRIPTION.

No. of contributors.	Amt. of each contribution.	Total.
11	\$1	\$11
6	2	12
2	3	6
1	4	4
86	5	430
2	6	12
2	8	16
171	10	1,710
11	12	132
28	15	420

3	16	48
73	20	1,460
1	24	24
102	25	2,550
1	27	27
17	30	510
1	32	32
2	35	70
1	36	36
18	40	720
2	45	90
56	50	2,800
1	52	52
12	60	720
7	65	455
61	75	4,575
9	100	900
2	150	300
4	200	800
1	250	250
1	1000	1,000
695		\$22,332
Average subscription,		\$32+

Miscellany

How to Kill a Hedge.

EDITOR KANSAS FARMER:—I want to kill some Osage orange hedge. It is cut close to the ground. I want to stop it from making any growth again. Is there any way except to grub it out of the ground root and branch? I know by experience that it has the staying qualities.

ED. CARR.

Coffey County.

The subject of killing hedge was discussed at considerable length in the KANSAS FARMER a few years ago. Following are some of the letters then published:

"It may be well to tell how we had some hedge killed nearly twenty years ago. We cut it down for poles in the spring and enclosed it in a lot about five rods wide, put the shoats in it in the spring and fattened them there in the fall. This killed the stumps very effectually. I think the tramping did the work." A. MITCHELL. Cherokee County.

then cut is liable to sprout badly, while a hedge that never has grown beyond the bounds of a good fence rarely gives trouble. Even the neglected one usually gives a good return for the land used when the crop of posts is cut, and the wood is probably the best grown.

"If the woven wire fence takes the place of the hedge around the horse pasture, there will be less cause to regret its going, but the Osage orange has been of good service to the horse-raisers, and will probably continue to furnish posts for many upland farms, where the catalpa does not succeed."

ALBERT DICKENS.

"Replying to inquiry in KANSAS FARMER of August 13, I will give my method of killing hedge. Remove soil from each side of hedge-row, say about one spade deep. Then fill up with crushed rock salt, about 300 pounds of salt to 100 feet of hedge."

Rice County. J. F. SMITH.

"In answer to E. Southwick, I tried mulching a few rods of hedge last year with fresh stable-manure. It proved quite successful; but as I find a few green roots this spring, I think it will take two years to clean it out, mulching the second spring the same as the first; and if any sprouts should come through, they should be pulled up, not cut down; they will pull easily."

H. D. SHINN.

Montgomery County.

"One of your subscribers wishes to know how to kill hedge. I can tell you a cheap and sure way.

"Cut the hedge about four or five inches above the ground and take the ax and maul and split the stump like the letter X as deep as you can. Cut off a round pin and drive down into the center of the stump and fill full of strong salt (any dirty salt will do). This should be done any time from May 1 to July 15, and in one year you can plow up the stumps unless they are very large. It will surely kill them. After a heavy rain if the salt is washed out, put in a new supply. With a little attention I can kill the biggest hedge in the State in one season, or any other tree. I have used this for twenty years." A. M. MASON.

Crawford County.

"Replying to Mr. Southwick's inquiry, will say that the practice of

"Killing hedge is no easy matter. If thoroughly grubbed, the sprouts will cause trouble for some time. Cutting the hedge down during growing season, piling the brush on the row and burning when the new sprouts are well started is about as severe a check as can be given, but even then sprouts are sometimes very troublesome.

"If you grub it, about the easiest way is to trim the hedge high enough to allow you to work a plow close up to the hedge and then, with a road-plow and plenty of horses, get as close as you can before resorting to the spade and grubbing-ax.

"There are two sides to the hedge question and every one must choose his side. It costs considerable time and more patience and pety to keep a hedge-fence in good condition, but when well-kept it makes a handsome fence and is not likely to injure crops for any considerable distance. When neglected, it is certain to cost more. A hedge that is let run to posts, and

mulching to kill hedge is quite common in this (Saline) County. After the hedge has been removed, usually by grubbing deep enough to allow plowing the ground, the row is covered with about three feet of mulch, preferably coarse manure and litter, as they pack closely and do not blow away. The mulching is left till late summer and then set on fire. The burning continues some time, and according to my observation kills nearly all the hedge the first time." A. Saline County.

February Imports and Exports.

Two-thirds of the fiscal year, ending June 30, 1906, has presented its commercial record, and the growth of commerce has been sufficient to justify the assertion that for the year both imports and exports will exceed those of any earlier like period. The exports of 1905 exceed those of any earlier year; yet the exports of that part of the fiscal year 1906 recorded are 190 million dollars in excess of those of the corresponding months of 1905. The imports of 1905 were also greater than in any earlier year, yet the import figures for the eight months ending with February, 1906 are 71 million dollars greater than those of the corresponding period of last year.

This growth in imports and exports is shown in detail in a statement just issued by the Department of Commerce and Labor through its Bureau of Statistics. It shows in exports a growth of 190 million dollars, manufactures being 45 million dollars in excess and agricultural products 133 million dollars in excess of the total for the corresponding period of last year. The large increase in exports of agricultural products occurs chiefly in wheat, wheat flour, corn, oats, and provisions. Of wheat and wheat flour, the exports in the eight months ending with February, 1906, were in round terms 64 million dollars in value, against 30 millions in the corresponding months of the preceding year. The exports of corn during the eight months were nearly 20 million dollars in excess of those of the same months of last year, while oats show an increase of over 10 millions and provisions an increase of 33 millions over corresponding exports last year. Exports in each of the great groups—products of agriculture, manufactures, the mines, the forests, the fisheries, and miscellaneous articles—show an increase over the exports of the same months of last year.

On the import side all groups show an increase except articles of food, which in the eight months ending with February, 1906, amounted to but 171 million dollars, against 184 millions in the corresponding months of last year, the decrease occurring chiefly in coffee, tea, and sugar. Coffee shows a fall of nearly 12 million dollars; sugar, 5 millions, and tea about 2 millions, the decrease in these three items being nearly 20 millions, while in other articles of this class the increase is sufficient to make the net reduction in the entire group about 13 million dollars.

The most remarkable increase in the imports occurs in manufacturers' materials. The class "articles in a crude condition which enter into the various processes of domestic industry" shows for the eight months ending with February, 1906, a total of 264 million dollars, against 243 millions in the same months of last year; while the class, "articles wholly or partially manufactured for use as materials in the manufactures and mechanic arts," shows a total of 112 millions, against 92 millions in the same months of last year. Thus manufacturers' materials show a total gain of over 40 million dollars in the eight months ending with February, 1906, compared with the corresponding months of the preceding year, and seem likely to make by far the largest total of such imports in the record of our foreign commerce. The increase in the partially manufactured materials occurs chiefly in tin, copper, iron and steel, and chemicals. The increase in raw materials occurs chiefly in tin, copper, iron and steel, and chemicals. The increase in raw materials occurs chiefly in fibers, hides and skins, leaf tobacco, and raw silk.

The increase in exports of manufactures, aggregating 45 million dollars, occurs chiefly in cotton goods, which show an increase of about 8 millions; iron and steel manufactures, an increase of 16 millions; cars and carriages, an increase of 5 millions, and manufactures of wood, mineral oils, and leather, and manufactures thereof, each show an increase of about 2 million dollars, as compared with the same months of last year.

The rapid growth in the exportation of manufactures is illustrated by comparing the February, 1906, exports with those of February of each year during the preceding decade. It will be seen from the table which follows that the February exports in 1906 were nearly three times as great as those of 1896 while the growth of exports of manufactures for the entire eight months is correspondingly great, the total for the eight months ending with February, 1895, being 144 million dollars, against

387 millions in the eight months ending with February, 1906.

Exports of domestic manufactures from the United States during the month of February, 1896 to 1906.

Month of February—	Total.
1896.....	\$17,259,459
1897.....	20,248,989
1898.....	21,080,901
1899.....	24,489,860
1900.....	34,226,128
1901.....	30,302,592
1902.....	31,740,842
1903.....	32,612,784
1904.....	38,189,012
1905.....	39,386,084
1906.....	46,586,585

Growing of Pitted Fruits.

We have exceptional climatic and soil conditions in Harper County for the growing of pitted fruits. Experiments conducted by the writer for the past ten years confirm this. We can grow abundantly the best peaches, plums, and cherries. The old peach orchard on the Firestone farm has fruited almost every year for nearly fifteen years; most of that time the orchard has been in the care of tenants, and has been without care save an occasional plowing. The fruit has been uniformly excellent.

Experiments with American plums indicate that the Damsons, large and small, and the Chickasaw do well; the Wild Goose rusts and drops its fruit.

The Japanese do splendidly but are subject to black knot on rich soil; this is particularly true of Abundance and Burbank. Prunes promise well in growth; the writer has a tree which will fruit this year.

Cherries have long been such a successful crop that it is strange the planting has not been larger. The tart sorts are practically all that are set, the early Richmond, Montmorency and English Morello comprehending ninety-five per cent of the planting. A sweet cherry has fruited several years on C. C. Whitman's lots; it was planted by Judge Cade. Although a shy bearer and favored by the birds, a good deal of excellent fruit is saved from it each year. The writer has a sweet cherry, Gov. Wood, which will fruit this year; he has grown many cherry-trees but never had another as fine and thrifty as this tree. Cherry-trees on rich soil are subject to occasional blight; if three-fourths of those set mature to fruiting time, they are doing well. When weeds and grass are permitted among them they are short lived usually dying in fifteen or twenty years, mostly from starvation. Cherries should be set twenty-four by thirty feet to do well; apples should be twenty-four by thirty-two feet. All orchards should be protected by a wind-break entirely around them but thickest on the south and west.

A splendid wind-break can be made of Russian mulberry, set four feet apart and headed low, for the outside row; then a row of Osage orange six feet apart, with an inner row of the Osage orange set twelve feet apart, the rows to be ten feet apart. The mulberries will grow ten or twelve feet high, while the next row will grow twelve to twenty, and the inner row should reach twenty-five to thirty feet in height in ten years or even less time.—W. E. Blackburn, in Anthony Republican.

Corn at the Kansas Experiment Station.

The following questions have been asked regarding the experiments with corn at this station:

1. What variety made the highest yield in 1905, and where was the seed obtained?
2. What place did the Hildreth corn hold in comparative yields of different varieties?
3. Where do you place Reid's Yellow Dent corn in order of yields?
4. What place did Kansas Sunflower corn hold in the test? Is it an early or late maturing variety, and from whom did you originally secure the seed?
5. Do you or do you not believe that white corn will give larger yields on average Kansas soil than yellow corn?
6. What are the two best producing varieties of any color of corn which have been tested at the Experiment Station?

In our variety trial of corn last year (1905) some 80 different varieties were planted. Those varieties giving highest yields are as follows: Bicker's Choice (yellow dent), Hildreth (yellow dent), Golden Row (yellow dent), McAuley's White Dent, Kansas Sunflower (yellow dent), Justin's White Dent, Warner White Dent, Elton White Dent, Forsythe's Favorite (white dent), Griffing Calico, Combination, Rummold (white dent), Hammett White Dent, and Leaming (yellow dent).

The highest yield recorded was 66 bushels per acre, by Warner's White Dent. This corn was tested for the first time last season, and was only a small



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plot about one-half as large as the others. The seed came from J. Warner, Manhattan, Kans., and the corn was originally brought from Missouri, where it had been grown on the same farm for fifty years, according to Mr. Warner's statement. I do not know whether Mr. Warner has seed of this corn for sale or not.

The next highest yield was given by Combination which yielded 58.75 bushels per acre. This corn is sold by the Zimmerman Seed Co., Topeka, Kans., and is a mixed corn. This was the first trial of the corn made at this station, and on account of its mixed type it is less desirable than pure-bred varieties. The third highest yield, 57.3 bushels per acre, was given by McAuley's White Dent. The Griffing Calico ranked fourth with 56.6 bushels per acre. Justin's White Dent ranked fifth with 56.4 bushels per acre. This is the first year that this corn has been grown here. The seed was received from J. M. Justin, Manhattan. This is a red-cobbed white corn, very similar to the St. Charles White. I do not know whether or not Mr. Justin has seed for sale. The Elton White Dent (seed secured from E. F. Elton, Waldo, Kans.) yielded 54.7 bushels per acre; Golden Row, 53.75 bushels. Seed of this corn was secured from the Nebraska Experiment Station. The Hildreth corn yielded 51.75 bushels per acre; the Kansas Sunflower, 51.1 bushels; Hammett White Dent, 48.4 bushels; Boone County White, 46.3 bushels; Silvermine, 45.9 bushels; Reid's Yellow Dent on one plot yielded 45.1 bushels, and on another plot 42.3 bushels per acre.

The Kansas Sunflower corn dropped a little this year, but the average for the three years is well up toward the top. It is a medium late-maturing variety, and I consider it very hardy and one of the best for general planting.

As an average for three years the Hildreth ranks first, and in my judgment McAuley's should rank second, although we failed to secure the yield on it for the first year of the three. It ranked above Hildreth for two years.

We secured seed of the Kansas Sunflower corn from John Moody, Eudora, Kans. The Hildreth is an excellent corn, only rather late in maturing. Our supply of seed-corn is exhausted, except a little third-grade seed of McAuley's White Dent.

You will see that the Reid's Yellow Dent does not rank up with some of the native Kansas corn. It is a good early maturing corn and in Northern Kansas perhaps will rank better, as compared with late-maturing varieties, than it does at this station or further south. It is true, however, that the Reid's corn seems to be running out a little. We find a great many ears with smooth kernels—a tendency to flintiness—at the tips of the ears. Also some ears have shallow kernels, and the shoe-peg type of kernel is too prevalent. This corn also has the fault of often having too tapering a kernel, the kernels being very tight together at the crown but separated at the tip. By selection we are removing these defects, but this is the way the corn appears when we bring it from Illinois. I have little doubt that some of our best producing native Kansas corns will soon outrank the Reid's both in yield and in the winning of prizes at corn shows. Up to this time, however, Reid's Yellow Dent has stood well in contests because we are able to select a uniform type and well-finished ears.

As to whether white corn will out-yield yellow corn depends upon the variety and also upon the conditions. Some varieties of white corn yield better than other varieties of yellow corn at this station, while the reverse is also true, certain varieties of yellow corn yielding better than other varieties of white corn. It may be true that white corn varieties, as a rule, have been those which have been grown under adverse soil and climatic conditions, producing hardy types of corn and good-yielding varieties under more unfavorable conditions. Under the more favorable conditions of fertility, moisture, and climate, varieties of yellow corn may out-yield varieties of white corn; however, the question is a matter of variety rather than of color.

We have made tests for three years

with some varieties of corn. I place the McAuley's White Dent first as being the best producer of the white dent type. I am not so sure which variety should take second place, but the Boone County White is among the best. For your section of the State the Hammett White Dent might class second, or even first. The Hildreth corn stands at the head as the best-producing variety of yellow dent corn as an average for the three years' trial, while the Kansas Sunflower may rank second. Last season, however, as you will observe from the enclosed copy of letter, several of the new varieties tested outyielded the varieties named. There may be other varieties of corn equal or superior to those named, but we have not tested others for sufficient time to be able to recommend them as preferable to the varieties named. A. M. TEN EyCK.

Sow Alfalfa Without Nurse Crop.

I have ten acres of well-tilled corn ground which I wish to put into alfalfa. Would like information as to how and when to prepare seed-bed, time to sow, quantity of seed per acre, and what to use as a nurse crop. Any information you may see fit to give will be thankfully received. D. M. VAN PELT.

Mitchell County.

Prepare a seed-bed at once by disking and harrowing and sow as soon as possible. We are now (March 31) seeding alfalfa. Twelve pounds of good seed is sufficient to sow per acre. Sow without a nurse crop. Alfalfa seldom makes a good stand when sown with a nurse crop. Clip the weeds with the mower two or three times during the season, but do not cut the alfalfa close to the ground early in its growth. Raise the sickle-bar so as to cut 4 to 6 inches high. If the young plants are cut off when they are small and tender and before a good root-growth has been established, the alfalfa is likely to be destroyed. I have mailed to you a copy of Bulletin No. 114 giving further information regarding the seeding and culture of alfalfa. A new bulletin, No. 134, will soon be published on this subject, a copy of which you may secure by writing to J. T. Willard, director of experiment station. A. M. TEN EyCK.

A woman recently engaged to a widower asked his son, a little fellow of seven years: "How would you like me for your stepmother?" "First rate, as far as I am concerned," he replied. "You will have to speak to pa about it, though."—Illustrated Bits.

The Great Salt Lake, in Utah, is now crossed by a trestle bridge over twenty miles long. It is the longest trestle bridge in the world, and bears a railway, thereby saving a circuit of forty-four miles.

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A. L. Craig,
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Horticulture

The Wellhouse Rabbit Trap.

At this season of the year when the damage wrought by the rabbits is seen at its worst, inquiries are sent to the KANSAS FARMER as to measures to be taken against this pest. One of the most successful plans is to trap the rabbits. This has been the method pursued for protection of the Wellhouse orchards for many years. THE KANSAS FARMER has frequently published descriptions of the Wellhouse trap. The illustration heretofore used was not quite accurate, so at the request of the editor, Master Walter Wellhouse, grandson of the apple king, has prepared an accurate drawing from which was made the engraving herewith. The

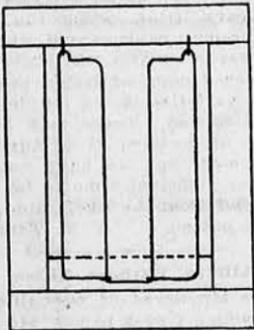


Fig. 1, Front.

test of materials used will be found useful. Following is the description as dictated by Judge Wellhouse several years ago:

MATERIALS USED IN MAKING THE WELLHOUSE RABBIT TRAP.

Four pieces 1 by 6 by 21 for sides, top, and bottom, one piece 1 by 6 by 8 for back; one piece 3/4 by 3/4 by 3 1/2 for door stop; 2 3/4 inches wire for door; 22 inches wire for trigger; 4 1/2 inch staples made of number 15 wire; 480 feet or twelve pounds No. 12 galvanized-iron wire and one pound of staples are required to make one hundred traps.

The Wellhouse trap is a box made of 6-inch fencing, old boards preferred. It is 21 inches long. The front end is closed only by a wire door which is hung from the top and opens inward. A cleat across the bottom prevents the door from opening outward. In setting the trap the door is fastened open by a wire which is attached loosely along the under side of the top board of the trap. This trigger-wire is bent downwards near the rear end of the trap and formed into a loop or a figure 8, so that as the rabbit crowds into the rear end of the box he is sure to push against this wire and thus move it backwards, releasing the door, which falls and makes him a prisoner.

The cottontail is generally looking for some dark hole in which to hide as a protection from enemies and cold, and this trap easily suits his mind. The great advantage of the Wellhouse trap is that it catches the rabbits. About three of these traps are used to the acre. They are not baited in any way. They may be placed in rows with the open ends in one direction in one row and in the opposite direction in the next row, so that when the boy goes to get the rabbits he can see into one row while going one way and into the next row while returning.

For jack-rabbits, greyhounds and the gun are perhaps the best remedies.

Care of Peach-Trees.

EDITOR KANSAS FARMER:—Having been highly interested in horticulture for many years, will bring up a matter which I consider of vital importance to the fruit-raisers of Kansas in particular. This relates to some means to prevent the destruction of the peach crop by frost. After several years' study and investigation of the matter, I believe that we may be able to raise a crop each year by pruning and protecting the trees. One instance which came under my observation is this: I noticed a tree by a ditch, which had been blown down and turned over by the wind. It was lying on the ground. Some straw was thrown over it in the fall and remained all winter. In the spring it came out in full bloom and yielded a crop of peaches. Another instance was where a tree was partly under a straw stack and was protected from the frost. It came out in full bloom in the spring. In both of these instances, these were the only trees

in the orchard that had a peach on them.

The plan I have in view is this. First give each tree a thorough treatment of pruning. In the fall by means of a draw rope, such as we used to draw our corn shocks together, bring the limbs close together. Then take old stack-stuff or ducking and sow around the tree from the body up, so as to form an enclosure, leaving it open at the top. Now take a step-ladder and through the opening in the top, fill the enclosure with chaff or fine straw, shaking the tree thoroughly to pack the straw. Next take a piece of oil-cloth and sew over the top and the job is completed. This can be done at an expense of not to exceed 50 cents per tree, over the labor. Two men can treat from 20 to 30 trees in a day. Think of having 20 or 30 trees full of fine peaches in an orchard in an off year—or an entire orchard—with no others in the locality.

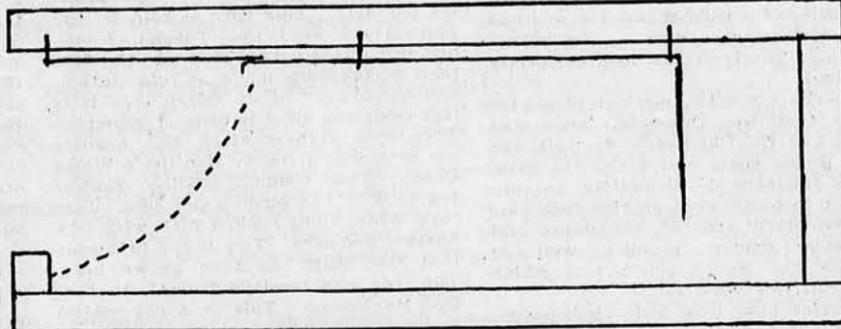


Fig. 2, Section.

The Wellhouse Rabbit Trap.

I am very confident that this will work and I expect to try it another year. G. F. LOUGHMILLER, Jackson County.

English Walnuts.

EDITOR KANSAS FARMER:—Having read in some paper about a successful attempt to raise English walnuts in the State of New York, I thought I would write and ask a few questions concerning them.

Can English walnuts be grown in Kansas? Has any one ever tried to raise them here? Will pecans grow here? I have seen them growing in Bates County, Missouri, and they were better flavored and had a thinner shell than those purchased at the stores.

Will Burbank's Logan berries grow here? Where could I procure the Burbank white blackberry?

JOSEPH G. CUMMINGS, Atchison County.

We have never heard of an attempt to grow the English walnut in Kansas. This tree, as ordinarily known, will not thrive and bear where there are late spring frosts or very hot days in summer. It is grown to some extent throughout the Southern part of the United States, but does not thrive well so as to be profitable commercially except in certain parts of California, and, perhaps near and along our Southern sea-coast.

It has been grown as far north as the Southern line of Pennsylvania for sometime in a small way, and lately, it is said, some have been fruited in the vicinity of Niagara Falls, grown from seed raised near Philadelphia, Pa.

According to Prof. L. H. Bailey, the pecan-tree grows as far north as Davenport, Iowa in the Mississippi valley. The writer has seen this tree growing near the Missouri river but a few miles southeast of your place. These trees are native, growing in the woods as other hickory-trees grow. The nuts are small. Varieties from the South probably would not be hardy with you. The trees do not always come true to seed. They are now usually propagated by grafting.

The Logan berry has been planted by some of our horticulturists, but has not been growing long enough to determine anything of its value in our climate. We have been told that our Agricultural College is experimenting with it.

F. W. Dixon, Holton, Kans., can furnish the Burbank white blackberry. WALTER WELLHOUSE.

Grape Growing.

No fruit grown is more slightly profitable, or nutritious than the grape. No fruit-yielding plant of permanence yields so quickly, so abundantly, or for so many years. Vines are growing known to be three hundred years old, while the fruit of a single vine has yielded as much as twelve tons in one season. The vines will not only fruit quickly, but they can be planted so as to occupy no tillable space, or take up any room above ground. By planting in succession, the table may be sup-

plied for six weeks each year and plenty over for canning or for grape-juice.

Practically all the vines which die in this section may be said to be lost from overbearing. Even a moderate crop will kill a vine if the soil-moisture is shared with weeds, trees, or grasses. A few tender varieties winter kill; vines of the Labrusca (Concord) family, have shallow spreading roots and suffer severely in dry years with even a light crop of fruit.

For table use plant Campbell's Early, a black grape; Green Mountain, white; and Headlight, red; all ripen from August 1 to 10. Then Worden, black (of the Concord family but larger and ripens earlier and even); Beacon, a black, finely flavored grape, excels the New York Concord; Niagara, large, refreshing white grape; and Delaware, a medium red grape. These sorts are ripe from August 10 to 25. In setting a vineyard for table use, plant half of

the patch in the Delaware; it is the finest American grape and does splendidly here. For late fruit set Norton's Virginia, small black; America, medium black, most productive grape grown; Catawa, large red, fine. Xlnta, large black, fine. Jaeger's 43, medium, black, productive. Late grapes color early and hang long on the vine, but must be protected from birds by netting or sacking; this last list will ripen from August 20 to September 15.

There are many other excellent sorts; these are given because they have done well in the writer's experimental plot. The Concord is not listed owing to its habit of ripening very unevenly and shelling off the bunch as soon as ripe; the Worden is a Concord seedling and does better in every way.

Do not plant grapes without intending to give clean cultivation and close pruning. The joints on the canes furnish a fair guide in planting; when four to eight inches long, plant eight feet apart; from eight to ten, ten feet apart; from ten to fourteen inches, plant twelve feet apart; all rows should be ten feet apart and every sixth row fourteen feet apart to permit a wagon being driven through. Vine rows should always be north and south to minimize wind damage and give both sides of the vine the benefit of the sunshine.

Transplanting Large Evergreens.

President Frank Holsinger, of the Kansas State Horticultural Society, favors us with the following directions for moving large evergreens. These were sent to Major Holsinger, at his request, by Mr. W. B. Evans, of Delphos, Kans.:

"I will endeavor to tell you how I have successfully transplanted large evergreens. We will suppose that we have an Austrian pine seven feet high that we wish to move several miles. We will first procure a low wagon; now go to the tree and remove about two inches of the top soil and leaves that have accumulated under the branches; then with a long-handled spade make a trench about two feet wide around the tree with the tree in the center of a block of earth about 4 feet in diameter. Dig this trench about 14 inches deep, then jog in about 12 inches and dig down about 12 inches more. This will make a trench next to the tree 26 inches deep. In digging this trench around the tree, be very careful not to crack the block of earth that the tree is in, as it is very important that this block of earth shall not be cracked or broken in any way. Now take a sharp square-cut spade and turn back toward the tree and trim off this block of earth making it round and smooth and about 2 1/2 inches less in diameter at the bottom than at the top, with the tree as near to the center as possible. It will have the appearance of a tree in a large flower-pot. Now take the spade and cut under about 5 or 6 inches with the back of the spade next to the tree. The depth of this block of earth depends on the kind of soil. If it is clay, it will not be necessary to go so deep,

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FIFTH TERM JONES' NATIONAL SCHOOL of Auctioneering and Oratory Davenport, Iowa 5th term opens July 23, 1906. All branches of the work taught. Students now settling in 18 states. For Catalogue write Carey E. Jones, President

When the block is smoothed up it should be about 3 1/2 feet in diameter at the top, and about 20 inches deep. Now we are ready to wrap the block with burlap or canvass, with slats or pieces of barrel staves about 20 inches long (old straight ones are good) tacked on about 2 inches apart. Put the canvass next to the earth and draw tight. Now take No. 12 wire and put one strand around the center and draw tight by twisting the ends together. I find it a good plan to cut slits in the canvass between a few staves and run wire through to keep the earth from slipping down and getting loose. Now put one wire near the bottom and then one next to the top and with a pair of pincers put kinks around in the wire to tighten it. If there is any space between the earth and canvass at the top, crowd the earth in with the hands so as to make it as solid as possible. We are ready now to commence to dig under, but we must be very careful not to disturb the ball of earth in the jacket. When we dig under all we can conveniently, we take a spud and drive down slanting all around the tree and finally drive the bar down on one side and push down, and the tree and ball of earth will lay over on one side. Then take a spade and trim off the earth on the bottom of the block smooth, but a little full in the center. Back the wagon up at right angles with the tree close enough so that one end of a 14-foot plank will go under the tree and the other end will rest in the wagon. Then put a couple of boards about 4 feet long, with cleats nailed across at each end, under the tree with a piece of 1 1/4 inch gas-pipe between. Now tip the tree up, take a rope long enough so that when it is doubled it will go around the block of earth, and to this hitch a block and tackle and by keeping rollers between board and plank, three men can easily load a tree with the block of earth that will weight 1,000 pounds. When it is on the wagon leave one roller under the tree. In moving smaller trees, I dig them the same way but instead of putting a board under the tree, I take a stout gunny-sack and by tipping the tree over, I work the sack under and with a man at each corner, we can slide quite a large tree up a plank into a wagon and leave the canvas under until we get the tree unloaded.

I have transplanted Scotch pines this way, that would make from 16 to 18 inches growth from the center bed the same year, so I think they might be safely moved with much less earth attached, but they would have to be anchored to keep the wind from tipping them over until they were firmly rooted. Now is a good time to transplant evergreens. I have moved them after they had commenced to make a growth, but there is usually plenty of time before."

The Farm Orchard.

H. F. SMITH, WELLSVILLE, BEFORE THE WELLSVILLE FARMERS' INSTITUTE.

It is scarcely necessary in this age of the fruit-growing industry to go into an argument to show its advantages to the farmer. The fruit itself, and the healthfulness of it is sufficient proof. A treasure is added to every farm, be it large or small, that has an orchard on it. So, this leads me to consider the "Farm orchard and its care." On the size of the farm depends the size of the orchard; a forty-acre farm should have a three- or four-acre orchard; a farm of eighty acres should have seven or eight acres in orchard; and a farm of a hundred and sixty acres should have at least ten acres set aside for the family orchard and small fruits.

The farm home, be it ever so small or large, without an orchard, is unsightly, not finished, is not well balanced. Fruit-bearing trees, vines, plants, and flowering shrubs are among the Creator's best gifts to man for food and home adornment.

The orchard should be located as near the house as possible, for the convenience of the family. It should be fenced to itself, and cultivated annually with the tools best adapted to keep it clean.

As a rule, the farm orchard is the most neglected part of the farm. There is a wide difference in the flavor of apples grown in some old, neglected orchards and those grown in a well-kept orchard. Apples grown in an orchard that has been cultivated five or six times a year are twice the size, and look better, taste better, and sell for better prices. The orchard will live longer and your grandchildren may have the pleasure of eating apples grown on trees set by grandfather, when he was a young man.

I have eaten pears and apples from trees, when a boy, planted by my great-grandfather in Illinois. This matter of

cultivation must not be overlooked, for whatever size your farm may be, there will be seasons when your other crops may partially fail to meet your needs financially, then the orchard may be at its best, and then enable you to keep out of debt.

The farm orchard should embrace: (1) apples; (2) cherries; (3) peaches; (4) pears; (5) plums. While the orchard should all be in the same enclosure, each variety should be set together; they should not be mixed like forest-trees. Plant cherries nearest to the house, and back of the cherry-trees follow with peaches, then with plums and pears; and should you not have time to cultivate all the orchard, you can pass the plum and pear department.

Start head of apple-trees about three and a half to four feet from the ground, and peach-, cherry-, and pear-trees about two feet. Do some pruning every year. Do not allow a thick mass of tangled wood-growth in any orchard fruit-tree. One of the old rules for training the head of peach-trees is to cut off a third of the wood-growth every year for three years. Then after two or three years fruiting cut off the top, then start a new growth of bearing-wood. There should be no vacant places about the farm orchard. When a tree dies, replant the same variety that you lose, no matter what the cause is of the death of the tree. An orchard looks bad when there are great gaps here and there.

Among the crops that are best suited to grow among young trees are potatoes, rutabagas, beans, or any low-hoed crops. Corn, though a hoed crop, is too tall a growth, shading the trees too much.

All sown crops of small grain are bad, grass-seeds are worse, and meadows are ruinous. Repeated cultivation is an absolute necessity, from planting to fruiting.

Even after the orchard is at the age of full-bearing, it should be kept in a full state of cultivation.

There are hundreds of old orchards in the old counties in the Eastern part of this State that are bearing a few poor apples, that could be renovated and renewed with some of the vigor of their youth by cultivating and fertilizing the soil near each tree. If any of our friends in this association have old orchards, or even a few trees of varieties that are worthy of having a few more years of useful necessity, try the experiment of renovation.

Begin this year by digging narrow radiating trenches five or six inches wide and the same depth, and within four feet of the trunk of the tree, directly out from it several feet. These trunks may be filled with a compost of barnyard and chicken-house manure. It should be done in the fall; but it can be done any time in winter or the spring season, and if we do not have a dry year, you will have a renovated tree ready to bear a revised edition of apples in 1907.

The farm orchard should have a succession of the earliest and the latest varieties of cherries, apples, and peaches, so that the table may be supplied from the beginning of the earliest to ripen to the latest fall apples. But the greater part of the orchard should be winter apples as the farmer has more time to sell the surplus, if he has any over the want of his own family.

In addition to the family orchard, every farmer should have a few grape-vines, currants, and gooseberries, and the best of the berry fruits, a strawberry patch and a raspberry patch. The berry season may be prolonged about six weeks by planting the earliest sort of strawberries and the latest kind of raspberries.

A well-kept orchard including a good-sized family berry-patch will be known through the neighborhood. Your neighbors will be more neighborly and more ready to exchange work, when one needs help. Should the time come when one desires to sell his farm and move to the city or a warmer climate, the attractive orchard and berry fruits will enable him to sell the farm for a higher price.

Many farmers look on the work in the fruit department of their farms as work from which they receive small returns for labor bestowed, but if they will persevere, and try to grow in love for the adornment of their homes, they will discover that the fruit department is a source of profit, not so much in the dollar as in the pleasure it will give their families in noting the growth of the trees, plants, vines, and flowers. It is so different from the ordinary farm-work that the time bestowed on the fruit department will be a season of rest to the body and growth to the soul.

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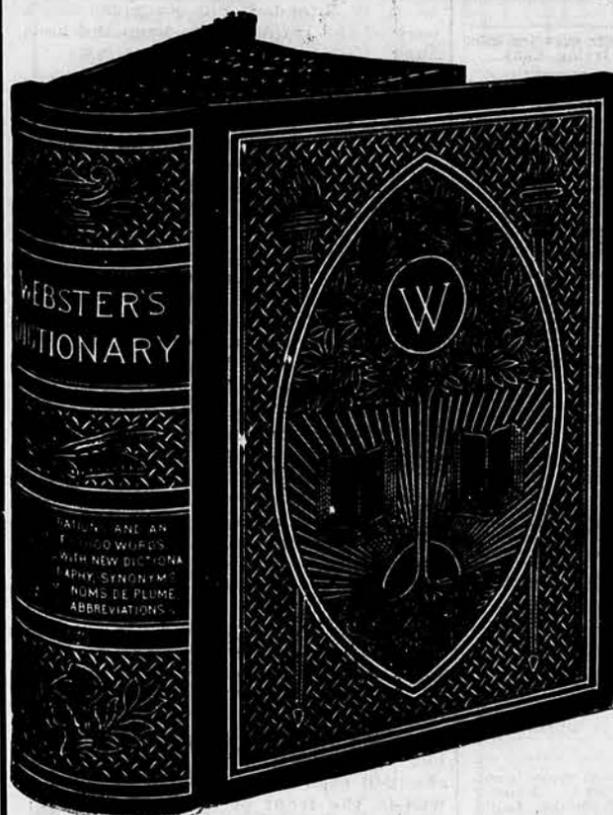
"Pride of Nishna" is a golden yellow, 16 to 24 rows; deep grains and small cob; matures in 96 to 100 days; of great vitality and strength to resist drought and other unfavorable conditions; outyields any other yellow corn in existence, making from 60 to 100 bushels per acre on good land. "Ratekin's Silver Mine," white, has greatest record for large yields of any white corn in the world—averaging 176 bushels per acre in seven states; full counterpart of Pride of Nishna. Our Seed all grown from absolutely pure stock, especially for Seed purposes, is carefully selected, sorted, and butt and tip ends taken off, and is all graded to uniform size. Seed corn shelled and graded or in the ear. It is the kind that pays to plant. Change your seed and grow bigger and better crops. Price, \$1.35, shelled, sacked on board cars here. Our big Illustrated Catalog of all Farm and Garden Seeds is FREE if you mention this paper. Write for it today.

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WHITE PLYMOUTH ROCKS EXCLUSIVELY Eggs, \$2 per 15; \$3 per 30. All orders given prompt attention. R. C. Capron, Route 7, Winfield, Kans.

BARRED PLYMOUTH ROCK EGGS—From free range stock, no other fowls kept on the farm. Price \$1 for 15; \$5 for 100. Mrs. C. F. Brown, Box 61, Manchester, Oklahoma.

EGGS FOR HATCHING from large high-scoring M. B. turkeys, \$2 per 9; S. C. and R. C. Brown and S. C. White Leghorns, S. Spangled Hamburgs, S. C. Black Minorcas. Prize-winners in every pen. Eggs, \$1 per 15. Vira Bailey, Kinsley, Kans.

BLUE BIRDS—Parred to the skin. Hawkins Ringlet strain. Eggs, \$1 per 15, \$5 per 100. Minnie K. Clark, Lyndon, Kansas.

LIGHT BRAHMA EGGS from prize-winning birds, \$1.25 for 15; \$2 for 30; \$2.50 for 45; \$5 for 100. Carefully selected. N. Van Buskirk, Blue Mound, Kansas.

EGGS FOR HATCHING from my flock of pure-bred B. P. Rocks. Pullets scoring 93; flocks headed by males scoring from 90% to 92%. \$1.25 per 15—\$5 per 100. Incubator orders a specialty. Eggs carefully packed. Address Mrs. Chas. Alsworth, Eureka, Kansas, Route 1.

BLACK LANGSHAN EGGS at \$1 to \$1.50 per 15 from Hetch strain of World's Fair winners. Mrs. E. Forward, Bayneville, Kans.

ROSE-COMB BROWN LEGHORN EGGS—For sale; also a few cockerels. Bertha Gresham, Bucklin, Kansas.

IN ALL THEIR BRILLIANCY—Rhode Island Reds, Rose-Comb and Single-Comb. Write for circular describing origin, prices of eggs, etc.; it is free. H. A. Sibley, Lawrence, Kansas.

EGGS FOR HATCHING—From one of the best laying strains of S. C. Leghorns in the West, at \$1 per 15 eggs, both brown and white. Special prices on larger lots. L. H. Hastings, Quincy, Kansas.

BARRED AND WHITE ROCKS—Seventeen years breeder of exhibition birds scoring 94% to 96%. Eggs, \$2 per 15; \$5 per 45. Chris. Bearman, Ottawa, Kansas.

PARTIBIDGE COCHINS—Toulouse Geese, pure-bred; farm raised. Eggs \$1 per 13 and 7. Mrs. O. A. Rhoads, R. 6, Columbus, Kans.

CHOICE WHITE WYANDOTTES—Farm range. Eggs 75 cents per 15. Henry Harrington, Clearwater, Kans.

TWENTY-SIX PURE Black Langshan eggs for \$1. Mary McCall, Elk City, Kans.

BLACK LANGSHANS—Bred by W. F. Cox, Clifton, Kansas. Eggs for sale at \$2 per 15.

STAY WHITE—S. C. W. Leghorns and Buff Rocks. Winners at State Fairs. Eggs, \$1 per sitting. J. W. Cook, Route 3, Hutchinson, Kans.

RHODE ISLAND RED EGGS for sale at \$1.25 per 15 eggs, or \$2 per 30 eggs. Mrs. G. F. Kellerman, "Vinewood Farm," Mound City, Kans.

BARRED PLYMOUTH ROCKS—Exclusively. Eggs, \$1 for 15; \$1.50 for 30; \$4 per 100. T. B. Wilson, Route 7, Osage City, Kans.

BARRED PLYMOUTH ROCKS—Either cockerel or pullet. Mating pens headed by 91% to 93 point birds; females 91% to 93%. Eggs, \$2 per 15. Utility pen cocks, \$1 to 92%; \$1 per 15. \$5 per 100. Silver Penciled Wyandottes headed by "Patsy," 1st cock Detroit 1904, score 94%; females \$7 to \$1. Eggs, \$2 per 15. Mrs. Chas. Osborn, Eureka, Kans.

EGGS—S. C. White Leghorn, exclusively. Blue ribbon winners: 15 for \$2; from flock, 100 for \$5. W. C. Watt, Walton, Kans.

FOR SALE—Throughbred Gold-laced Wyandotte. Eggs, \$1 per sitting. H. A. Montgomery, 310 Parallel St., Atchison, Kans.

GOLDEN WYANDOTTES EXCLUSIVELY—My flock of vigorous farm-raised hens culled by Standard to 60. No stock for sale. Eggs, \$1 per 15; \$5 per 100. Mrs. S. Goldsmith, R. F. D. 3, Abilene, Kans.

BARRED PLYMOUTH ROCKS—Bradley strain, prize winners; won 1st on ch. last three years at Harvey county poultry show. Eggs from pen \$2, yard \$1 per 15. R. Harmon, R. R. 6, Newton, Kan.

WHITE WYANDOTTES EXCLUSIVELY—Eggs, 15 for 75c; 100 \$3.50. H. F. Brueggemann, Route 2, Herington, Kans.

PURE BRED White Wyandotte eggs for sale; \$1.00 for 15. Mrs. C. E. Williams, Irving, Kans.

S. C. W. LEGHORN cockerels and pullets scored by Rhodes 92 to 94% points. Write for prices. A. F. Hutley, Maple Hill, Kansas.

BLACK LANGSHAN EGGS—From main flock, 15 for \$1.00; 100 for \$5.00; from pen, \$2.00 for 15. Mrs. Geo. W. King, Route 1, Solomon, Kansas.

WHITE PLYMOUTH ROCK exclusively—bred direct from a pen of U. R. Fisher's birds. Eggs for hatching from pen No. 1 \$2 per 15. Satisfaction guaranteed. J. A. Kaufman, Abilene, Kansas.

BARRED ROCK EGGS, \$3 per 100. Mrs. R. A. Galbraith, White City, Kansas.

WHITE PLYMOUTH ROCK EGGS from high-scoring show birds, \$1.50 per 15; \$2.50 per 30. Incubator eggs, \$5.00 per 100. M. B. Turkey eggs, \$3.00 per 11. J. C. Bostwick, Route 2, Hoyt, Kansas.

GREAT BIG S. C. BUFF ORPINGTONS are the winter layers. Eggs \$1.50 per 15; \$2.50 per 30. Mrs. J. R. Cotton, Stark, Kans. 225 Main Street.

VANNATTA'S SINGLE COMB WHITE LEGHORN—Great layers. Won \$100 Cash at World's Fair. Eggs for hatching. Catalogue free. E. E. Vannatta, Vandalla, Mo.

ONE DOLLAR buys 15 eggs of either Rose Comb R. I. Reds or Barred Rocks from prize-winning stock at the college show. Mrs. A. J. Nicholson, Manhattan, Kans.

FOR SALE—All kinds of fancy pigeons, also Toulouse geese eggs at \$1 per sitting. Pekin and Rouen duck eggs, 18 for \$1. Muscovy duck eggs, 10 for \$1. Turkeys, Peacocks, Barred Rocks, Buff Cochin, Houdans, S. S. Hamburgs, Rhode Island Red, Orpingtons, White Buff and Brown Leghorns, White, Buff and Silver-Laced Wyandottes, Games, Golden Sea-bright Bantams, Pearl and White guineas, hunting dogs. Poultry eggs 15 for \$1. Write D. L. Bruen, Platte Center, Neb.

WHITE PLYMOUTH ROCKS—12 years breeder of choicest birds. Eggs \$1.50 per 15. Member American White P. R. Club. J. E. Shinkle, Lakin Kans.

BARRED ROCKS—40 cockerels, \$2 will buy a good one 50 pullets, \$1 each, bred by a pure Bradley cock. I have an orchard flock of 60 pullets mated with large, standard males, eggs \$1 per 15; \$5 per 100. A. C. Bait, R. R. 4, Junction City, Kans.

BARRED ROCK EGGS—Pen No. 1, \$1.50 per 15; pen No. 2, \$1 for 15. Mrs. W. A. Shreter, Argonia, Kb.

The Poultry Yard

Sweet Corn vs. Indian Corn as Poultry Feed.

EDITOR KANSAS FARMER:—Will you please give in the columns of your paper the relative value of sweet corn for poultry feed as compared with Indian corn. **FRANK RANDLETT, JR., Elk County.**

Answer:—Sweet corn is a more valuable feed than Indian corn for poultry as well as other stock. In an article on relative values of feeding stuff in the 15th biennial report of the Kansas State Board of Agriculture, Professor Cowgill of THE KANSAS FARMER has figured out that in 100 pounds of dent corn there are 7.8 of protein, 66.7 of carbohydrates, and 4.3 of fat, the value of these digestible nutrients being 50 cents, while in sweet corn there are 8.8 of protein, 63.7 of carbohydrates, and 7.0 of fat, a total value of 54 cents. He values protein at 3.37 per 100 pounds, carbohydrates at 0.82, and fat at 0.56. Sweet corn therefore is worth as a feeding material about 4 cents per 100 pounds more than dent corn.

Poultry Notes.

Kerosene is invaluable around a poultry-farm. It is a simple remedy for many troubles. Put it on the roosts frequently; it will keep the lice in check. Dilute it with sweet-oil (about one-third sweet-oil and two-thirds kerosene) and inject in nostrils, roof of mouth, and corners of eyes if your fowls have colds. Scaly legs are cured with it if properly applied, and an internal dose will help in many cases. An easy way to apply kerosene to the legs and feet of fowls to destroy the insects which cause the excrescences which sometimes appear is to fill an empty can two-thirds full of water, pour two or three tablespoonfuls of kerosene in the water, and dip the feet and legs of the affected fowls therein. Two or three treatments will prove effective.

Hens take on fat in winter when the flock is being pushed along for selling and showing purposes. This retards the early production of eggs and especially of fertile eggs. The proper thing to do is to take off a large portion of their feed, enough to make them hustle to get enough to eat, and gradually work off the extra fat; and after this is done they will lay. After laying is fairly begun, they should be well and suitably fed to keep up the supply.

Millet seed should be a regular diet for the laying hens, and it should be kept on hand and in a convenient place for use. When you go into the yards and the hens run to you for food, which they will do even if fed frequently, scatter millet seed for them and let them seek the seed among straw or hay. Mustard seed, hemp seed, or any small seed will answer; a handful or two of seed is sufficient as it is intended, not so much as a part of the ration, as to keep the hens busy.

Turning the Eggs.

That turning the eggs in an incubator is an essential requisite of incubators is well known, but how to do it is not so clear. Some incubators have patent devices for turning the eggs by simply pulling a slide; others have an extra tray which is placed over the trayful of eggs and by reversing the trays, the eggs are all turned at once. Manufacturers of other machines claim that the better way to turn the eggs is by hand, handling each egg separately so as to be sure that all are turned each day.

Quite an interesting experiment along this line has just been completed at the experiment station of Cornell University. It was recognized that the old hen was a pretty reliable authority on this matter and, for the purposes of experimenting, four hens were set on fifteen eggs each. The eggs were marked by numbering them from one to fifteen, and a chart made of the location of the eggs each day. The results were surprising. In every instance it was found that each egg had been moved during the day. Not only were the eggs turned over every day, but their location in the nest was changed each day. For instance, No. 1 was in the front of the nest one day; the next day it would be in the middle or side of the nest; the next day again it would be in the back part of the nest. The same was true of all the other eggs in the nest. Of the twenty charts furnished for each day, not one of them showed the eggs in the same

position as any other day. This goes to prove that the patent devices for turning the eggs is not sufficient for successful incubation, for they simply turn the eggs over from one side to the other, but do not change their location in the trays. It would seem, therefore, that the only proper way to turn the eggs in an incubator is to do it by hand, emulating the old hen as near as possible by changing the eggs from the ends and sides to the middle of the tray and vice versa, so as to make a constant change in the position of the eggs. By so doing all the eggs will have an even chance of hatching; for no matter how good the incubator may be, there are different degrees of temperature in it, the central portion and that nearest the lamp being the hotter and the out-sides of the tray being the cooler portions. It behooves users of the modern incubator, therefore, to take a lesson in egg-turning from the lowly hen; for however proficient we may have become in the use of this modern invention, it goes without saying that the original incubator was an old hen, and that she knew all about the egg-turning business is fully demonstrated by the millions of progeny she has left behind her, all following the same old method that she taught her children, even unto the last generation. If it had not been done properly, our chickens to-day would have all been ducks.

Training for the Show-Room and Notes About Exhibition Poultry.

It is quite impossible to overestimate the value of the good training of fowls intended for the exhibition hall. For the training of these specimens, coops of the proper size, to conform to the size, shape and general make-up of the pens that are to be used in the show-room, should be selected. In this the fowls should be kept, first for a few hours at a time, and then finally confined therein for a day or two in succession until they become perfectly familiar with living within the coop, and lose all timidity from being confined therein and handled by those who have them in charge.

These fowls should also be taught not to become frightened at the presence of strangers, women, children, dogs, and animals that might possibly visit the exhibition hall where they are to be kept. If you have a lot of exhibition fowls so well trained for the coop that they will scarcely notice the approach of strangers, and will simply look somewhat excited at the presence of a barking dog, you may feel reasonably well assured that the specimens will stand the test of the disorder and surroundings of the exhibition hall.

Considerable trouble comes to those who fail to teach their fowls to stand naturally in the coops and to confront those who approach them rather than to turn from and cower into the corner of the coop. A specimen that will walk boldly up to the judge as he approaches the door of their coop and look at him as much as to say, "Well, here I am for your inspection," wins the admiration and confidence of the judge at once. Those that turn from him and do anything they can to avoid being handled seldom, if ever, gain the much-desired awards.

Teach your specimens that you send to the exhibition hall to be ever ready and on the alert for some one to open the coop door and handle them. Such a specimen is usually designated as a perfectly trained specimen, properly prepared for the examination of the judge and the eyes of the exhibitors. Such a one has many points in its favor, even before a partial examination for quality has been made. The first impression of the specimen in the coop has a lasting influence on the judge so long as he has this specimen under consideration.

For the final finishing touch for the show-room, be absolutely certain that the specimen is thoroughly clean and free from dirt or bad color of any kind. It is always best to thoroughly wash a specimen before it is sent to the show-room. No matter of what breed, variety, or color it may be, it will be greatly improved by a thorough washing. Even though this may not be done the comb and head parts should be thoroughly cleaned with luke-warm water and a sponge, the shanks and feet thoroughly washed and scrubbed with a good stiff brush, so that when the specimen is shown it will be as clean as it is possible to have it. This is called good condition, and nothing counts for more than this in close competition.

When the specimen is taken to the show-room, always see that it is carefully placed in the exhibiton coop sev-

POULTRY BREEDERS' DIRECTORY.

BLACK LANGSHANS—Hens scoring 83 and upwards—headed by 2d and 4th prize cockerels from Kansas City 1906 show. Eggs, \$2 for 15; \$3.50 for thirty; special price by hundred. Can fill orders at once. Mrs. C. S. Cross, Fair Acres Farm, Emporia, Kansas.

BUFF PLYMOUTH ROCK eggs for sitting, \$1.50 for 15. Jay S. Buck, Okaloosa, Kansas.

BARRED AND WHITE ROCK EGGS for hatching from choice birds; farm raised. White Rock eggs, 15 for \$1; 30 for \$1.85; 45 for \$2.65. Barred Rock eggs, 15 for 75 cents; 30 for \$1.45; 45 for \$2.10. D. S. Thompson, Welda, Kansas.

FOR SALE—White Plymouth Rock cockerels from high-scoring birds, and a few hens and pullets. Eggs for sale at reasonable price. Mrs. M. Luse, Nortonville, Kansas.

WHITE WYANDOTTE EGGS for sale, \$1.50 per 15. Only breed of birds kept. Mrs. John W. Smith, Lawrence, Kansas.

WHITE HOLLAND TURKEY EGGS—\$1.50 per 9. T. J. Sweeney, Route 2, Maple Hill, Kansas.

SILVER LACED WYANDOTTES—Thoroughbred cockerels, \$2; pullets, \$1.50. Jewett Bros., Dighton, Kansas.

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eral hours before it is to be judged. It is best to coop, water, and feed them the night before. Give them plenty to eat and drink at this time. Then, if they are to be judged in the morning, do not feed or water them any more until after they have been judged.

The time to begin to prepare for the exhibition hall is as soon as the young chicks commence to run about. Carefully look them over and examine them so as to become familiar with their contour and make-up. As the feathers begin to grow, the color and markings will quickly tell those of experience what the prospective qualities of those young chicks are, and by giving special care and attention to the best of them you will grow to maturity a lot of young fowls that will prove to be much better than they would have been if allowed to continue to go on in one flock, all receiving the same attention.

To make a show winner is not the work of a few days or weeks prior to sending them to the exhibition hall. It demands a series of long months of care and attention to bring them to the finest finish, and grow them to a proper size, strength, and muscular conformation that is demanded for the best. The present demands of the show-room do not accept medium quality as the best, so it is absolutely necessary to commence early in the game to make next winter's exhibition fowls.

Those who succeed never allow the grass to grow under their feet, as the saying is, but are continually on the watch to have and maintain a flock of exhibition fowls throughout, so that from year to year everything they possess is of that quality which makes the blue-ribbon winners. They never neglect the least or most simple thing they can do that adds to the comfort, growth, and handsome plumage of their stock. This is the price that must be paid for quality. The best of quality can not be had in any other way. If you desire to be successful in the show-room, gird on the armor of determination and continued efforts to have them as they should be.

The selection of the best is a problem that confronts every grow of standard-bred poultry. In the first place, the one who selects must be thoroughly conversant with the demands of the exhibition hall and the pranks and self-opinions of the judge, if you will. But above all things remember that you must be almost if not quite as expert at selecting the best before you leave home, as will be the judge who will pass upon them when they reach the show-room.

It is never too soon to begin the proper feeding of the specimens intended for the exhibition hall. These may be frequently chosen when between six or eight weeks old, providing the eye and experience of the selector is equal to the occasion. Such ability only comes after long experience. The reason that the older breeders are the most successful in the exhibition hall is because they have studied the problem, and improve by their experience gained through hard knocks and long-continued care of their poultry at home and in the exhibition hall.

Often we are tempted to select but a few in preparation for the exhibition hall. It is better by far that you should select all the likely specimens at first and colonize them to themselves, and as they improve and grow older, select those of the poorest quality and ship them off for the filling of orders. This will leave in your possession the cream of all you have grown that season, and it is never a difficult problem to sell the best; never be in a hurry to do this, for if you will succeed as an exhibitor and breeder the following season you can not possess too much of the highest quality for your matings from which to grow your future stock.

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Dairy Interests

Developing a Cow.

When we stop to think that all kinds and breeds of cattle undoubtedly originated from the same pair that the good Lord created at the beginning, we begin to realize what an artificial production the cattle of to-day are, how that environment, conditions, and tastes of men have developed them along different lines, until to-day we have many different breeds with characteristics peculiar to each breed, and each breeding true to the type, color, and conformation of its own peculiar breed. Of course this was the work of ages, and requires a great deal of skill, patience, and perseverance; but it shows what can be accomplished if we have a definite aim in view.

Cows, like men, are good or bad oftentimes because of their environment, bringing-up, and education. We look for and expect men to be good if brought up in good and religious families and communities. I have often heard it said, "give me the first six years of a child's life and I will tell you with a certainty what the future of that child's life will be." So I believe that the conditions under which an animal is reared determines in a large measure her future usefulness or uselessness.

As with men the parentage is of great value and we look for and have good reason to expect cows to be better cows from a long line of productive ancestry, so this then is the stepping-stone in the developing of a dairy cow.

A profitable cow in my estimation is one that can produce in a year, or still better a series of years, a good maximum yield of butter at a cost that will yield a good profit to her owner and also produce a strong healthy calf each year. One of the requisites then in securing the sire for the head of the herd is not only to see that he is from a productive strain, but from a family of regular breeders also, because he not only reproduces his good qualities, but often intensifies his weak points as well. See that he is as near perfect in conformation and dairy makeup as possible, for with all the care we may exercise in the mating of our animals, some faulty ones will develop that we had not figured on; so if we have looked well to this end, to see that the sire is right, and that the dams we are to use for foundation are right, we have gone a long way toward their development.

I recently heard of a breeder who examined every little heifer calf that came into the herd and if it did not have so many developed teeth and the udder and teats just so well developed, it was knocked in the head. I want to say that if we had practiced such a method in our herd, we should have slaughtered some of our most valuable animals, for we have found that all heifers do not develop alike; some are veritable little cows at six months old, while others do not develop real good cow-qualities until three or four years of age.

Calves should be fed in such a way as not to impair their early growth or digestion for later on we are going to ask them to take care of a lot of feed so that they may develop and be profitable animals; but if fed and cared for in a careless and harmful manner, their digestive faculties become impaired and they simply say "We can't do it."

I still believe that heifers should not freshen too young; if allowed to drop their first calf at from twenty-eight to thirty months of age, they will get a little more growth and strength and we believe their digestive abilities are also strengthened.

There are many things that enter into the development of the dairy cow, and possibly if any one was dropped out the best of results could not be obtained. The man that uses that part of his body above his ears the most freely usually succeeds best.

We have come to believe that a large part is due to the feed end of the question; the organs of digestion, like the other organs and muscles of the body, are developed best by constant use. The breeder that through neglect has not provided in some way for the emergencies that always come is short-sighted. We all know that when a cow once shrinks in her milk how hard it is to get her back, and quite often it is impossible even with the best of feed; so it stands us in hand to provide in some way for these times and either have some soiling crops growing or enough silage stored up to supplement the short pasture of summer, also to

supply succulent feed for winter use. I believe there is such a thing as compelling success. Every breeder should have such a complete understanding of his business and the individual needs of each animal, that there is no time in the year when she may not have an abundance of good, rich, juicy foods, best suited for milk-production.

The successful development of cows rests largely on the breeder's equipment. Loretta D's, Yeksa Sunbeams or Shadybrook Gerbens do not come by "happenstance." They are the result of equipment. The important requisites for the developing of a good dairy cow are (1) right breeding; (2) right feeding; (3) right care.

One man in writing of cows says: "The cow does not make her milk from running brooks or sunny skies." To be sure she does not, yet I believe the water and the sunshine are quite important factors in the best milk-production. Convenience for watering and at the right temperature means something, and the pleasantly situated cow-stable with plenty of windows for the sun to shine through means something; good, warm, clean, well-ventilated stables, balanced rations, kindness, patience, watchfulness, "sticktoitiveness," all mean something.—F. H. Scribner, Rosendale, Wis., in Jersey Bulletin.

Location of Barn and Care of Yard.

In the production of clean milk, no one thing is of more importance than keeping the cows out of the mud. Many yards into which dairy cows are turned each day for their drink and exercise are knee-deep with mud and manure during the winter and spring, if not nearly the entire year. In summer when the cows are on pasture, they would keep comparatively clean were they not obliged to wade through a filthy yard in going to the stable.

In locating a dairy-barn care should be taken to have a gentle slope from the barn in at least one direction, affording good natural drainage for both barn and yard. If the barn is already built and poorly located, drainage and grading will do much to remedy the evil. In most cases it would take but a small amount of labor with plow and scraper, when the ground is in suitable condition to handle, to give the surface of the yard a slope from the barn sufficient to carry off the surface water. Even if dirt has to be hauled in from outside the yard to accomplish this, it will not be expensive. Tile drainage alone under a yard is not sufficient, as the tramping of the cattle soon puddles the surface, preventing the water from passing down to the tile.

After the grading is done, the yard should be covered with gravel or cinders. By putting the coarser in the bottom and the finer on top, a good hard yard can be obtained and at a comparatively small expense where material of this kind is available. If this can not all be done in one year, it is of the utmost importance that a beginning be made by grading and graveling a portion of the yard next the barn, so that the cows may have some place on which to get out of the mud and filth. By grading a part of the yard each year and applying a thick coat of gravel or cinders to the graded part, the entire yard will, in a few years, be in good condition. When gravel does not contain enough clay to pack hard, a small amount of clay should be mixed with the top layer. It will then form a firm surface.

A portion of the yard should be bedded, thus affording the cows a place to lie in the open air on pleasant days. If straw is scarce, the cleanest of the soiled bedding from the stable will answer this purpose. When the straw and manure on this bedded portion of the yard become too deep and soft, they should be hauled into the field and the bedding commenced again on the solid yard.

It is advisable to haul the manure directly to the field from the barn, but if this is not feasible, it should be removed at least 100 feet from the barn. In no case should it be allowed to accumulate against or near the dairy-barn, and no swine-pen should be nearer than 200 feet on account of the odors being readily absorbed by the milk. W. J. FRASER.

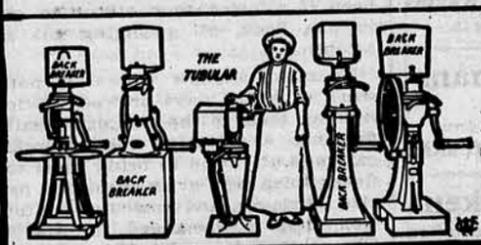
Western Farmers and Western Butter.

The time was when Western butter had a poor place in the market. Gathered cream butter was often pretty poor stuff. Methods of manufacture changed, and the time was when Western butter commanded top price. This was when the farmer brought the whole sweet milk to the factory and the operator made the cream as well as

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L. A. Strickler

TOPEKA BUSINESS COLLEGE, Topeka, Kans.

the butter. Now, the time is when the buyer wishes to be shown the goods if they are from the West. There is no dodging the fact that a very large per cent of the butter made in our Western creameries is poor, poor because the cream from which it is made was poor. Seeing this, it has been the pleasure of many writers to take a whack at the farmer, holding him responsible for all this trouble and loss. The truth of the matter is, the separator agent and the creamery managers are more to blame than the farmer for the poor cream that the farmers send in.

There is no question about the hand-separator being an economical instrument for the farmer who sells cream. So long as this remains true there is no use in trying to keep him from using one. Neither should we try, for anything which makes more money for the producer will encourage him to stay in the business. This insures continuance of work for the manufacturer and greater business. Moreover, it is both theoretically and practically possible to make just as good butter from hand-separator cream as from power-separator cream. Yet the fact remains that such good butter is not usually made. The farmer has been scolded and thoroughly "lambasted" for not taking better care of his cream, with what result? Poor cream continues to come, and bad butter continues to go.

The hand-separator agents who have taught and are still teaching the farmers that once or twice a week is often enough to wash their particular make of machine should be the first men laid out, and with them the company they represent for allowing them to do this thing which in most cases is against the orders of the house. So much has been said on this point and the agents themselves know the truth so well that I was surprised at learning from one whose word can not be questioned, that at the implement dealers' convention, at Kansas City, Mo., this company was heard to tell a farmer that his machine was "washed with the crank." We all know, and he knew, that any and all machines or tools used about milk must be well washed if first class goods are to be produced, or, in any other words, this man then and there sold his honor as an honest man for the price of his commission on a cream-separator. For temporary personal gain he jeopardizes the whole industry. Is it not al-

most time, the State dairy inspectors were placed on the trail of these men, and at least publicly expose them and their company when such criminal nearsightedness is practiced. Their teaching is more filthy and a greater source of evil than the farmer's dirty barn.

The second man to be slain is the creamery manager, for he, though howling most lustily, is, after all, the chief offender. He lies in accepting at first-class prices cream which no mortal man could make into good butter. In fact, the competition among the creameries of the West has been too keen for the permanent welfare of any, even the producers. During the past two years their mad chase for more business has led all to take any old stuff named cream and, what is worse, pay a good cream price for it. There is in man a trait which keeps him from putting into any article any more work than is necessary to get the price out of it, and why should he? Last summer the creamery companies sent out personal appeals and instructions by the car-load to the farmers to take better care of the cream, but to no use.

In a little town in Eastern Kansas one day last summer a farmer brought in a can of ideal cream. This man was well known as a neat farmer. While he stood there talking to the station operator a slovenly, unkempt, dirty farmer came in with some cream as badly off flavor as himself; one cream was fit for the table and one fit for the sewer, yet the same price was paid for each. One man went away contented in his dirt, and the other rightfully disgusted.

Inspection is often recommended and it might do some good, but in my opinion such inspection should not be made. The people who buy the goods should do their own inspecting and grading. When the farmer sells smutty wheat or musty corn or scabby potatoes or rusty apples or stale eggs, he gets a price according to the value of goods delivered, and this without any official inspection.

Healthy competition to keep up prices is a good thing, but a warlike competition to get stuff at any cost may prove worse than no competition, even to the producer. If quality has value, as we all know it has, it should be paid for. It is now up to managers of the creameries, both large and small, to grade cream in fact as well as in words, and make a good substantial difference between first-grade and second-grade stuff. When the creameries thus give backing to their own words concerning the value of better cream, the farmers will give that extra care necessary to have good cream. A difference of four cents per pound fat between first and second grades and two cents between second and third grades would seem to be just and have the desired effect.

All creameries, both large and small, should agree to live up to these or some similar rules, and then do it. Western butter is now standing trial; the creamery managers are the jurors who will decide its fate.—R. M. Washburn, State Dairy Commissioner of Missouri.

Galvanized Iron Silo.

EDITOR KANSAS FARMER:—I am a subscriber of your paper and consider it worth more as a farm paper than any I have ever taken.

I am starting in the dairy business and need all the advice I can get. I have 25 head of cows, which number of course necessitates a large quantity of feed. Since receiving your paper and reading the favorable discussion on silos, I have decided to make one to use principally in storing alfalfa hay. As lumber is very high at present I feel as though it would cost too much to experiment with it, so would ask your advice about using galvanized iron—about 22 inch iron—which I can obtain for 3½ cents per pound. A silo 16 feet in diameter and 20 feet deep will cost about \$60 if I do my own work.

Do you think if I put three coats of paint on the inside that the enilage would effect the iron? Would also like to know whether alfalfa has to be chopped up to put into a silo? Also what make of gasoline engine would you advise for general farm use?

Would be pleased to receive a bulletin on dairying. P. M. FORD, Leavenworth County.

Three coats of paint on the inside of the galvanized iron will prevent it from rusting or corroding as long as the paint lasts. Care must be taken in filling the silo to prevent scraping or rubbing, the inside of the silo should be inspected, and wherever particles

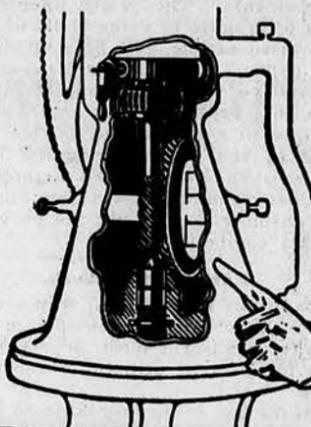
DE LAVAL LEADS IN SEPARATOR IMPROVEMENTS

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Isn't it foolish to buy any separator until you are sure it won't eat up all your profits in repair bills?

Of course it is. But, if you keep cows, you must have a cream separator—just as you must have a plow on the farm and a cook stove in the house.

The thing to do is to use good business judgment—in other words, plain common sense—in selecting your separator.

What is it that makes trouble in machinery of any kind? Why, intricate, complicated parts. It's

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plain, then, that you want a simple cream separator—one with few parts. But that isn't all. The parts in it must be made right. You want a well constructed separator—one as nearly mechanically perfect as you can get.

If you keep these two important considerations in mind, and examine every cream separator on the market, do you know what you'll do? You'll buy an

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There's no doubt about it. If you don't want to buy a cream separator you better keep away from the EMPIRE. It's so simple in construction and so well made that even a casual examination will convince you that it can't get out of order. Thousands of them have been in use for years and years without costing a dollar for repairs.

Well, when you add to this the fact that it turns more easily than any other separator and that it is more quickly and more easily washed than any other separator, you can't help deciding that it's the separator for you.

I wish you'd let the EMPIRE folks tell you more about this great machine. You're just as interested in finding out which separator is the best for you—as they are in selling EMPIRES. Write to them to-day. Tell how many cows you keep and what you do with the milk and they'll send you their books on Dairying. Just address

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Long Life:—The Cleveland has the fewest parts of any separator made and gets results at the slowest speed. Parts can't wear out that are not there. The Cleveland is a guaranteed perfect skimmer.

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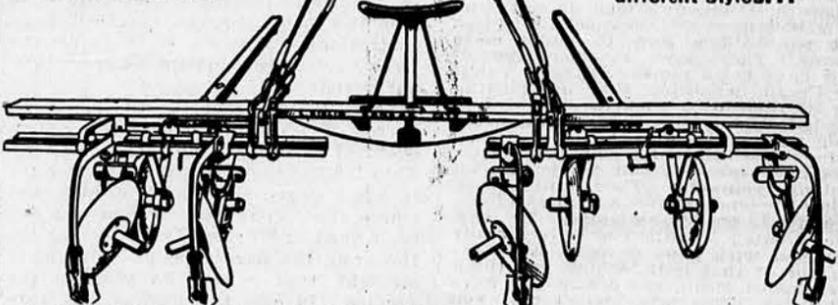
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of paint have been removed, fresh paint should be applied. Alfalfa should be run through the feed-cutter the same as corn or any other grain before putting into the silo. It will then pack much better and exclude the air, which is an important factor in the preservation of ensilage.

We have used only two gasoline engines at the Experiment Station, and both have proven very efficient. One is manufactured by the International Harvester Co., and the other, the "Ell," is manufactured by the John Deere Plow Co. I am sending you a bulletin on dairying.

Milking Machine a Success.

The writer had the pleasure of viewing the working of a milking-machine erected on W. B. Barton's farm in Dalton, Mass.

This plant, as well as another erected on the farm of S. A. Hickox, of Williamstown, has been erected as a demonstrating plant in this section. It is stated that there are now more than 200 of these machines in use in the large dairies of New York State.

The territory of Massachusetts has been assigned to local parties who are soon to incorporate. Dalton, Mass., has the honor of being the demonstrating point of the first successful milking-machine ever used in New England.

I arrived at the farm when the milking-machine was about to be started. The power used is an International gasoline engine, three-horsepower (although this is in excess of power required). A pipe-line is put up above the stanchions over the cows. From this pipe a rubber tube is attached to a small instrument on the lid of the can, which causes the pulsations of suction similar to the action of a calf sucking. The milkers work very rapidly, and if proper sized teat-cups are used to fit the different sized teats, it does the milking very thoroughly. I personally stripped two cows after they had been milked by the machine, and did not get any more milk than would be gotten after any milker by hand. With such a plant one man can milk from 30 to 40 cows an hour.

The washing arrangement is very simple; the same rubber tube used in connecting milkers with the suction-pipe is attached to a suction-pipe in the wash-room. The teat-cups are held first in cold water, and then in scalding water, and by the same action that does the milking the water is sucked through the tubes into the can, thoroughly cleansing and sterilizing every part.

If the machine can be placed on the market at a reasonable cost to the dairyman, it is bound to work a great revolution in the dairy business, as it is getting more difficult to get help with the patience and cleanliness necessary in dairying. The milk extracted by the machine is absolutely clean as there is no way in which dirt or even odors can contaminate it, as the milk from the time it leaves the udders is held in air-tight cans until it is carried to the milk-room to be aerated. I have every confidence that this machine is a success.—John B. Watson, Becket, Mass., in Jersey Bulletin.

The Book You Want.

Every owner of a milch cow should send to-day for a little book, "More Milk Book," issued by the Omega Separator Co. It answers hundreds of questions about the dairy which will be of interest and value to you, such as How to keep odors from milk. At what age the cow is most profitable.

How to make the best butter from separator cream.

How to care for separator cream.

How to wash butter for best results.

How to score butter.

What makes white specks in butter.

How to get the most profit from skim-milk.

What cream-separator will give you the best results.

In writing for this book, kindly tell how many cows you milk, and whether you have a cream-separator or not. Address, Omega Separator Co., 18 Concord St., Lansing, Mich.

Catching Pickpockets.

The Sharples Separator Co., of West Chester, Pa., has a man in almost every town who makes it his business to catch pickpockets. Strangely enough, these pickpockets are always caught robbing themselves—and are always farmers or dairymen. The Sharples Separator Company's men do not send these convicted self-pickpockets to jail, but show them how to make more money. They prove to them that, if they have not a famous Sharples Tubular Cream-Separator, they are picking out of their own pockets one-third to one-half the profits they should make from their milk—that they are, in fact, losing one-third to one-half their cream. These men can convict you of robbing yourself. They will do it, either by lending you a Tubular for a free trial, or by skimming for you, free, a batch of milk you have already skimmed with pans or cans, and taking out of that milk, which you think is skimmed clean, the cream you have left in it. This proof won't cost you one cent, but will help you increase your butter money from one and one-

third to double what you now make. All you need do, to find out how much cream your pans or cans lose, is to borrow a Tubular from the agent for a free trial, or take a batch of skimmed-milk to the nearest Tubular agent. The result will surprise you, cost you nothing, and put money in your pocket. We suggest that you write The Sharples Separator Co., of West Chester, Pa., about this, at the same time asking them for Catalogue No. N-165.

Dairy experts keep careful records of the performance of each cow. Many have realized the want of suitable blanks for this purpose. A Shawnee County dairyman has prepared and had printed a blank for a herd of 25 cows for one week. At the end of the week another blank is substituted. If one has only 5 cows the blank will answer for five weeks. THE KANSAS FARMER has a supply of these blanks on tough writing paper. They will be sent postage prepaid at the following prices: One copy, 5 cents; six copies, 25 cents; twelve copies, 40 cents; twenty-five copies, 75 cents; fifty copies, \$1.25; 100 copies, \$2.00.

Miscellany

On to California.

The great opportunity for permanent investment that has promise of good profit is assured by the possibilities of irrigation. The most prominent institution in the United States at the present time is the Fresno Irrigated Farms Co., who have done some forceful advertising in THE KANSAS FARMER during the past few weeks, presenting some of the most striking advertisements that ever appeared in a farm-journal in the line of realty advertising.

This week they offer some exceedingly attractive inducements to our readers who will inform themselves on the subjects mentioned in their page announcements. The prizes offered this week aggregate in value \$1,325.00. The first prize article will be published in this paper. THE KANSAS FARMER representative who is personally familiar with this prospect, says: "I am able to state to you that the parties interested in the Fresno Irrigated Farms Co. are of the very highest financial and personal standing in California and they will absolutely carry out the provisions of this competition."

Early Spring Work.

Conditions in a general way are very favorable for another bumper crop all over the semi-arid West, providing man does his part in utilizing these conditions.

Nature has been very kind to us for some time. She may conclude, however, that we do not appreciate her liberality and place us a little more on our resources, in which case it would stand us in hand to husband her bountiful gifts when possible. Our soils as a rule are now filled with moisture to a liberal depth; in short the greater part of the farm lands of Nebraska and much in adjoining States has now (March 6) sufficient moisture store below the surface to guarantee or assure a good yield of winter wheat and an average crop of corn in face of the repetition of any drouth we have ever had, if the farmer will but husband this moisture as he should and can do, together with the proper fitting of the soil and care of the crops while growing.

We are well aware that many a skeptic may read this and say "impossible." Nevertheless, we know we have not overdrawn in the statements. A quarter of a century of careful study and observation and experiments in many parts of this country have proved this over and over again.

The first step to accomplish this all-important result is to get over the surface of your fields with disk, Acme, or common harrow at the earliest possible time and thoroughly loosen it, forming a soil-mulch, for three reasons or purposes: to stop the evaporation of moisture, to prevent the forming of a crust, and admit the air into the soil below.

A few people are beginning to realize to some degree the importance of this work, not that they know just what the effect is or just why the yield is so materially increased, but they have seen the result through practical demonstrations. But we must leave the "why" out of this article, as space will not permit.

Your winter wheat-fields should be harrowed, for the above reason. Most fields of wheat are now too thick by 50 to 100 per cent and should be thinned to some degree. In such a case and where the sub-surface or root-bed has been fined and firmed in the fitting for the crop, the harrow should set fairly straight, that it may do good to the surface. In case the seeding has been late and the subsoil is more or less

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 by the use of
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loose and the plant less strongly rooted, then more care must be given as to the slant of the harrow-teeth and the severity or depth of loosening.

One statement may be sufficient to direct the farmer to quite a degree in this work, viz: Use every precaution possible to have the surface of your soil in your small-grain fields free from crust and with a loose mulch when the foliage or leaves of the small grain reach that stage of growth where they cover the surface.

DISKING.

Disk your ground early, especially that portion you expect to put to corn. To the average farmer who has not given thought and study to this question it may seem like a waste of time to double-disk a piece of ground six to ten weeks before planting time, but this is of vital importance, not only for the purpose of holding the moisture now in the soil, but to utilize the effect of the warm days in early spring. The soil beneath a loose surface becomes warm much quicker than if left crushed. The warming of this soil is very important in two ways. The first and most important advantage is the development of bacteria and nitrates, which require both moisture and heat. The second is the warming of the soil so that we may promote rapid, healthy germination of the seed when planted. One point we can not put too much stress upon, and that is to never let your soil dry out. We frequently hear people talk of the soils being very fertile. What is the advantage of owning fertile soil and then persist in so handling this soil that the fertility is never available? Pardon the assertion, but this is really what the average farmer does, and the most serious of all things is to let the soil dry out or become dried to that degree that the development of nitrates or bacteria ceases. The next most serious idea is to allow a crust to form on the surface and shut the air from below. Much has been said about breaking the crust or preventing it forming by cultivation to prevent the loss of moisture. This is truly important; but the conservation of moisture is but little more important than the free access of the air into the soil—not in volumes, but through the pores in the fine, firm, moist soil.

FLOWING.

Just a word on plowing. If you desire a good crop, and we have every reason to believe you do, then don't plow your fields dry or nearly dry, for you can not get a physical or mechanical condition of the seed- or root-bed that can possibly bring a good crop from a field plowed dry. The soil should be moist—not wet. Watch the furrow as it rolls over. If the particles readily separate all through, then

BARGAINS!
 China-ware Sets, 100 pieces... \$9
 Clothes Wringers, new... \$1
 25 Pieces Table Cutlery, good plate... \$2.50
 Sure-Cutter Shears and Scissors, 2 pairs... 50 cts
 Wade & Butcher Razor Strap and Bone... \$1.00
 \$1.00 box Medicated Toilet Soap... 35 cts
 Headquarter for Watches... 75 cts to \$18.00
 Black Gloss Euggy Paint, gallon... \$1.50
 Gasoline Stoves, 2 burners... \$2.75
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JUST ISSUED
Farm Grasses of the United States
 By **W. J. SPILLMAN**
 Agrostologist, U. S. Department of Agriculture

An intensely practical discussion of the farm grasses of the United States of America is presented in this volume. It is essentially a resume of the experience of American farmers with grasses, and it is safe to say that no other work has covered the ground so thoroughly. No attempt has been made to give a connected account of all the grasses known in this country, but the aim has been rather to give an actual standing on American farms. The whole subject is considered entirely from the standpoint of the farmer. One of the most valuable features of the book is the maps showing, at a glance, the distribution of every important grass in the United States; and the reasons for the peculiarities in this distribution are fully brought out. The principal chapters treat on the grass crop as a whole and the relation of grass culture to agricultural prosperity, meadows and pastures, the seed and its impurities; the bluegrasses; millets; southern grasses; reedtop and orchard grass; brome grasses; grasses for special conditions; hay-making machinery and implements; insects and fungi injurious to grasses, etc. The methods followed on some pre-eminently successful farms are described in detail, and their application to grass lands throughout the country is discussed. The discussion of each grass is proportional to its importance on American farms.

This book represents the judgment of a farmer of long experience and wide observations regarding the plan in agriculture of every grass of any importance in American farming. In its preparation its use as a text book in schools as well as a manual of reference for the actual farmer has constantly been kept in mind. The book is most conveniently arranged and splendidly indexed, so that the reader may find any subject at a glance. Illustrated, 5 1/2 inches, 248 pages, Cloth. Price, postpaid, \$1.00.

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you have the ideal condition. If too wet or too dry, it will not do this. Therefore, precede the plow by disking or harrowing, to keep the soil moist.

Plow about seven inches and follow as closely to the plow as possible with the sub-surface packer. At least, don't leave a field at noon without packing what was plowed before noon, and the same at night; and don't leave the field at night without harrowing all you have plowed during the day.

Not until the farmer realizes fully and clearly the vital importance of thorough fitting and really what thorough or proper fitting is, will he ever realize how much fertility he has in his soil or what an enormous crop his fertile soil can produce.—H. W. Campbell, in Nebraska Farmer.

At the end of Washington's administration there were sixteen States in the Union. There was also the "Northwest Territory," as it was called, not yet organized into States—the whole wide region between the Ohio and Mississippi rivers, from which slavery had been forever excluded by a law passed by Congress in 1787. The first census of the nation was taken in 1790; and the population was about four millions (3,929,214). The population March 1, 1906, according to the estimate of the Treasury Department, was 84,194,000.

Coffee was discovered in 1285 by a dervish named Hadji Omar, a native of the town of Mocha—hence the familiar name. Hadji Omar, lost in an Arabian desert, was dying of hunger, when he discovered some small, round berries. On trying to eat them he found, to his disgust, that they were extremely bitter. Then he tried roasting them, and finally steeped a few thus roasted in water. Naturally, this was coffee, and, though of the worst description, so agreeable did Hadji Omar find it that as soon as he could make his way back to his native town, he introduced this new drink to the wise men of the city. So well pleased were they with it that the dervish was made a saint.

Balboa crossed the Isthmus of Darien in 1513, and from the summit of the Andes beheld the wide expanse of the Pacific Ocean. Wading into its waters with his naked sword in one hand and the banner of Castile in the other, he solemnly declared that the ocean, and all the shores which it might touch, belonged to the crown of Spain forever.

Repeated experiment has proved that the practice of applying large quantities of manure to the acre on a limited space, making it necessary to leave much of the land unmanured, does not pay. Many farmers never apply less than twenty tons of stable manure to the acre, saying that they prefer to do well what they do and let the remainder of the land take its chances. Twenty tons of manure on one acre, plowed under for a spring crop, makes the soil richer for years—no doubt about that—but it will not improve the productive power of a farm nearly so much as the same amount of manure

used as a top dressing on three acres, provided clover is grown with this supply of plant-food. It is poor farming to keep up a few acres near the barn with the entire supply of stable fertilizer and let thin fields fall to make profitable crops. Manure crops are the chief dependence on a majority of farms and enough farm manure should be used to assist thin soils wherever found, so that all fields may increase their supply of vegetable matter and be permanently improved and then any additional supply can be safely used to enrich the pot field from which one wants a banner crop.—Eptomist.

The Use of Lemons.

A correspondent some time ago furnished the following recipe as a new cure for consumption: "Put a dozen whole lemons in cold water and boil until soft (not too soft), roll and squeeze until all the juice is extracted, sweeten the juice enough to be palatable, and drink. Use as many as a dozen a day. Should they cause pain or looseness of the bowels, lessen the quantity, and use five or six a day until better, then begin and use a dozen again. By the time you have used five or six dozen you will begin to gain strength and have an appetite. Of course, as you get better you need not use so many. Follow these directions, and we know you will never regret it if there is any help for you. Only keep it up faithfully. We know of two cases where both the patients were given up by the physicians, and were in the last stages of consumption, yet both were cured by using lemons according to directions we have stated. One lady in particular was bed-ridden, and very low, had tried everything that money could procure, but all in vain, when, to please a friend, she was persuaded to use them in February, and in April she weighed 140 pounds. She is a strong woman to-day, and likely to live as long as any of us. When people feel the need of an acid, if they would let vinegar alone, and use lemons or sour apples, they would feel just as well satisfied, and receive no injury." And a suggestion may not come amiss as to a good plan when lemons are cheap. A person should in those times purchase several dozen at once, and prepare them for use in the warm week days of spring and summer, when the acids of lemon and other ripe fruits are so grateful and useful. Press your hand on the lemon and roll it back and forth briskly on the table to make it squeeze more easily; then press the juice into a bowl or tumbler—never into tin; strain out all the seeds, as they give a bad taste. Remove all pulp from the peel and boil in water—a pint for a dozen pulps—to extract the acid. A few minutes' boiling is enough; then strain the water with the juice of the lemons; put a pound of white sugar to a pint of juice, boil ten minutes, bottle it, and your lemonade is ready. Another way to prepare lemonade is the annexed: Take the rind off four lemons, pared very thin, three-quarters of a pound of loaf sugar, pour on them one quart of boiling water. Take the juice of the lemons in another vessel, and pour on it one pint of boiling milk; let both remain until the next day. Then mix the whole together, adding half a pint of raisin wine; strain all through a jelly-bag until clear. The milk should be removed from the fire and used before the froth rises.—Health.

Passengers east from Chicago to Fort Wayne, Findlay, Postoria, Cleveland, Erie, Buffalo, New York City, Boston, and all points east, will consult their interests and find advantage in selecting the Nickel Plate road east from Chicago. Three through trains are run daily, with through day-coaches to New York City, and modern Pullman sleeping-cars to destination. Rates always the lowest, and no excess fares are charged on any train, for any part of the journey. Modern dining-car service, with individual club meals, ranging in price from 35 cents to One Dollar; also meals a la carte. Ask for tickets via the Nickel Plate Road. Chicago depot, La Salle and Van Buren Streets, the only station in Chicago on the Elevated Loop. Chicago City Ticket Office, 111 Adams Street. Detailed information may be secured by addressing John Y. Calahan, General Agent, No. 113 Adams St., Room 298, Chicago.

50 HEREFORDS 50

There will be about 50 CHOICE HEREFORD CATTLE SOLD AT PUBLIC AUCTION AT SUPERIOR, NEB., ON APRIL 18, 1906

SALE BEGINS AT 1 O'CLOCK P. M.

This offering will consist of several cows sired by the great sire, **Anxiety Monarch 63204**, whose get has been very prominent at the leading shows of the West the last six years. Some of these cows will have calves at foot and bred again. Also blood of the great **Ancient Britton and Vincent 24 42942**, both World's Fair winners in 1893. Some choice young bulls sired by **Beau Donald 28th**, the great sweepstakes winner and sire.

THE CATTLE WILL BE CONSIGNED BY THE WELL-KNOWN BREEDERS
P. M. MORSE, Beaver City, Neb. **HATFIELD & SON,** McCook, Neb.
W. R. WONDERLY, Inavale, Neb. **W. N. ROGERS,** McCook, Neb.
E. N. LEWIS, Bladea, Neb. **BRITAIN & SON,** McCook, Neb.
 and others

Auctioneers: **T. C. CALLAHAN** and others.. For Catalogue address, **W. N. Rogers, Manager**

WALNUT GROVE FARM

...FOR SALE...

Upon the advice of several specialists I am going to New Mexico for my health. On this account I must dispose of all my Kansas property, including the famous Walnut Grove farm, the most complete and profitable stock farm in Kansas. This includes 130 acres of the best land in Kansas, two miles from Emporia. Over 200 good O. I. C. hogs. All our Barred Plymouth Rocks, 36 Collies, 44 head of cows, 8 head of horses, the best farm house in the State. Also one small farm house, 2 large barns, 2 large cattle-sheds, one 300-foot hen house, one 250-foot broiler house, 20 brooder houses, capacity of plant, 4000. The best hog house in the West, double-deck cement floors; many small hog houses. This is not an experiment, but a successful stock farm. Price, \$20,000 cash.

H. D. NUTTING, Emporia, Kans.

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If you purchase a farm in the Southwest now, while the land is cheap, you will soon see grow up around you a community of prosperous, energetic men, who like yourself, have seen the possibilities of the Southwest, and have taken advantage of them. This very condition, which is rapidly forming all over the Southwest, is making the value of land increase rapidly, to the certain profit of those who own it. There are more and better opportunities for making money—for home building, in the Southwest—along the line of the Missouri, Kansas & Texas Railway to-day, than anywhere else. You have only to get on the ground to prove this. If you are in any way interested in the Southwest, write to-day for a copy of my new paper "The Coming Country."

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Take advantage of the homeseekers' rates, April 17th and May 1st and 15th, and go and see the country for yourself. On above dates most lines will sell both one-way and round trip tickets at exceptionally low rates. If your nearest railroad agent can not give you the rates, write me for particulars.

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The yearly subscription price of the following magazines is as follows:

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We have 1,000 subscriptions for the first three to dispose of and can therefore offer the four above-named magazines for \$3 received at this office. The four must go in one set, though they can be sent to different addresses. Address

KANSAS FARMER CO.,
TOPEKA, KANSAS.

Are You Ready for Harvest?

There is a dignity about the International Harvester Company advertising we are running which is befitting the subject "Mother Nature has done her part. The fields are ripe. Are you ready for the harvest?" That is the dignified way the great Harvester Company introduces to our readers its excellent machines. Champion, Deering, McCormick, Milwaukee, Osborne, and Plano, which aid in the harvesting of so large a part of the grain and hay raised in America.

Readiness for the harvest is all important. As the grain and grass are ripe, so are the machines ready and equal to the duty. Nobody questions the superiority of the International mowers and reapers. They have all been tried in the field, all of them for many years. They represent individually the best skill and material and adoption to duty that the country has produced. Many other machines have disappeared. These have survived—a case of "the survival of the fittest." It remains for the farmer who has plowed and sown and raised his crop to provide himself from the machines at hand the particular ones which he needs to enable him to harvest his crop quickly and surely and economically.

No word of ours could add to the reputation of the International Harvester machines. No word is needed. It is enough to say that no mistake can possibly be made by purchasing any one of the six machines named. But the warning to get ready for the harvest is timely. International agencies are established at every considerable trading point to facilitate distribution and furnish supplies and repairs. These agencies have catalogues and descriptive matter on the long line of harvesting machines the company builds in addition to the mowers and binders. Farmers should call, procure the catalogues, make a study of them and determine in due time on the machines they will buy. Profitable farming demands improved machinery. Buy things that are standard and do it in time to have all things ready for the harvest.

There is a Big Difference.

Laundry soap is intended for coarse work, such as washing clothes. Toilet soap is suited to taking the dirt from the skin. Shaving Soap is different—or ought to be. It should thoroughly moisten the hairs, hold them firmly against the razor, and then leave the skin smooth, cool, and velvety. Williams' Shaving Soap will do just this. The J. B. Williams Co., Gladstonbury, Conn., have made a specialty of shaving soap for nearly three-quarters of a century, and it is the "only soap fit for the face." In another column they offer to send a free trial sample on receipt of a 2-cent stamp. Be fair to your face and send for it.

Every household in Kansas should have Smith's 24th annual catalogue which is a veritable manual on the culture of small fruit-trees and shrubs. It will be sent free to any reader of the KANSAS FARMER by addressing a card to F. F. Smith, Lawrence, Kans., Drawer C.

The many years which the Reliable Incubator and Brooder Co. have been before the public have established their reputation for producing a most excellent line of poultry appliances. The machines they offer the present season are fully up to their previous standard of excellence, besides embodying further improvements. A complete description of their incubators and brooders will be found in their catalogue, which they will be pleased to mail free of cost to any one who will address The Reliable Incubator and Brooder Co., Quincy, Ill., requesting a copy of same. When writing, kindly mention this paper.

Grain in Kansas City.

Receipts of wheat in Kansas City yesterday were 74 cars; Saturday's inspections were 32 cars. Offerings were liberal. Owing to stronger future markets, there was some improvement in the demand. Prices were unchanged. The sales were: No. 2 hard, 2 cars 81c, 2 cars 80c, 2 cars 77c, 2 cars 76 1/2c, 10 cars 76c; No. 3 hard, 1 car 76c, 2 cars 74 1/2c, 8 cars 74c, 10 cars 73 1/2c, 7 cars 73c; No. 4 hard, 1 car 70c, 7 cars 69c, 1 car 68 1/2c, 1 car 68c, 1 car 67c; rejected, 1 car 61c, 1 car 60c, 1 car choice 66 1/2c; No. 2 mixed, 1 car 83c; No. 3 mixed, 1 car 78c, 1 car 70c; No. 4 mixed, 1 car 68c; No. 2 macaroni, 1 car 68c; No. 2 red, 1 car 94c, 2 cars to arrive 94c; No. 3 red, 1 car 91c; No. 2 white spring, 1 car 82c.

Receipts of corn were 69 cars; Saturday's inspections were 33 cars. The demand was good and prices were unchanged to 1/2c higher, as follows: No. 2 mixed, 4 cars 41c, 3 cars 40 1/2c, 8 cars 40 1/2c; No. 3 mixed, 1 car 41c, 10 cars 39c; No. 3 yellow, 2 cars 41 1/2c, 2 cars 41c; No. 2 yellow, 1 car 41c; No. 2 white, 1 car 42 1/2c, 1 car 42 1/4c; No. 3 white, nominally 42 1/4c.

Receipts of oats were 26 cars; Saturday's inspections were 11 cars. Offerings were fairly large. The demand was good and prices averaged unchanged, as follows: No. 2 white, 1 car 31 1/2c, 1 car 31 1/4c; No. 3 white, 2 cars 31 1/2c, 1 car 31 1/4c, 4 cars 30 1/2c, 5 cars 30 1/2c; No. 2 mixed, nominally 30 1/2c; No. 3 mixed, 2 cars 30c, nominally 29 1/2c @ 30c.

Barley was quoted 37 @ 39c; rye, 56 @ 58c; kafir-corn, 68 @ 70c per cwt.; bran, 36 @ 88c per cwt.; shorts, 90 @ 95c per cwt.; corn chop, 80 @ 82c per cwt.

Kansas City Live Stock Market.

Stock Yards, Kansas City, Mo., Monday, April 2, 1906. The cattle run held up last week, 40,000 head coming in, about the same as the previous week, and 10,000 more than same week last year. Not quite as large a proportion were beef steers as the week before, but all through March the percentage of beef steers was larger than ever before for the same month, and probably larger than any month in the records of the yards. The very

KANSAS FARMER.

Established in 1888.

Published every Thursday by the Kansas Farmer Co., Topeka, Kansas

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Display advertising, 20 cents per line, agate (fourteen lines to the inch). Continuous orders, run 7 the paper, \$1.82 per inch per week. Special reading notices, 30 cents per line. Special rates for breeders of pure-bred stock. Special Want Column advertisements, 10 cents per line of seven words per week. Cash with the order. Electrotype must be made base.

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

Change of copy for regular advertisement should reach this office not later than Saturday previous to publication.

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.

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.

FOR SALE—Some good young Shorthorn bulls just a year old by the 2800 pound Marshall Abbott-burn 3rd 183305. Cheap, breeding and individual merit considered. D. Ballantyne & Son, Herington, Kans.

HOLSTEIN—Bull calves 6 and 10 months old—good ones. H. B. Cowles, Topeka, Kans.

REGISTERED Aberdeen-Angus cattle for sale. Fifteen bulls from 10 to 20 months old; 15 heifers from 1 to 2 years old; 15 heifers from 2 to 3 years old; 25 cows some with calves at side. I am making farmers prices on all or part of the above cattle as I do not have room for them this summer. Heather Eolpeen 28761 in service. A. L. Wynkoop Bendena, Kans.

FOR Red Polled bulls or heifers write to Otto Young, Utica, Kans.

FOR SALE—Holstein-Friesian bull calves. Address Hughes & Jones, Route 2, Topeka, Kans.

RED SHORTHORN BULL for sale. A. C. Rait, E. R. 4, Junction City, Kans.

FOR SALE—One registered double-standard Polled Durham bull, 2 years old in March, 1906, color dark red. Will consider trade for females of the same class of stock. Address Jacob J. Yoder, Haven, Kans. R. R. 2.

GALLOWAY BULLS—4 head, 16 to 18 months old, suitable for service. Address registered. Address C. A. Kline, R. F. D., Tecumseh, Kans.

large number of cattle on feed in this territory, together with the ability of the packers to handle larger numbers here than ever before accounts for this. The market was strong last week, all killing cattle, except medium to common heifers and veal calves making a gain of 10 @ 15c. Conditions in the country are still unfavorable to the purchase of stock cattle or feeding cattle, and this class declined 10 @ 15c last week.

The cattle run is unexpectedly large to-day, 12,000 head here, but the supply last half of last week was small, and packers and outside buyers were ready to make liberal purchases this morning. Market on killing stuff is steady, stockers and feeders strong. Top last week on beef steers was \$5.85, top today \$5.90, highest for about six weeks, a good many cattle at \$5.50 @ 5.80, and bulk of steers \$4.70 @ 5.35, very few steers below \$4.50. Heifers and yearlings sell at \$4.25 @ 5.25, fair to good cows \$3.75 @ 4.50, bulls \$3 @ 4.25, veals 50c lower than a week ago, at \$5 @ 6.50, stockers and feeders \$3 @ 4.80, most sales in this class \$3.50 @ 4.50. Total cattle receipts for March increased 20 per cent over March a year ago, and 12 per cent over March two years ago, which was the largest previous March in cattle receipts at this market.

Hogs sold higher all last week till Friday, but closed the week 5c lower than high time. A feature was the increasing value placed on light weights, hogs below 200 pounds selling only 5c below the top now. Market opened strong to-day, but broke 5c before the close, top \$6.40, bulk of sales \$6.25 @ 6.37 1/2. Run to-day 9,000 head. Dealers expect liberal supplies and lower prices this week.

The mutton market improved steadily after Monday last week, closing 5 @ 15c above close of previous week. Run is liberal to-day, at 11,000 head, market strong, lambs selling at \$6 @ 6.50, clipped lambs late last week at \$5.40, and spring lambs Friday at \$9. Wethers and yearlings have been scarce, but are quotable at \$5.50 @ 6, ewes bring \$4.75 @ 5.40, feeding lambs last week at \$5.25 @ 6. J. A. RICKART.

South St. Joseph Live Stock Market.

South St. Joseph, Mo., April 2, 1906. The opening of the trade at this point and at all central points as well, indicates some improvement in conditions of country roads, and a consequent enlargement in the movement of live stock. Receipts of cattle to-day at this point were about 2,000, and did not show so much increase over last Monday, but at five leading points there was

CATTLE.

FOR SALE—One roan and two red yearling registered Shorthorn Bates bulls. Splendid individuals. C. G. Cochran & Sons, Plainville, Kansas.

RED POLLED BULLS—Five bulls 9 to 12 months old, for sale cheap. Nice ones, registered. H. L. Pellett, Eudora, Kansas.

ABERDEEN-ANGUS CATTLE and Percheron horses. Stock for sale. Garret Hurst, breeder, Peck, Sedgwick County, Kans.

FOR SALE—Registered Galloways, Bulls, cows and heifers, singly or in car lots. Dean Bartlett, St. Marys, Kans.

PEDIGREED SHORTHORN BULL 3 years old; sire Magenta, who cost \$1,000 at 8 months. Cheap. S. J. Rents, Leavenworth, Kans.

CHOICE registered Shorthorn bulls and heifers, cheap. M. C. Hemenway, Hope, Kans.

FOR SALE—The pure Cruickshank bull, Violet Prince No. 145647. Has been at the head of our herd as long as we could use him. An extra animal. H. W. McAfee, Topeka, Kans. 2 miles west of Kansas Ave. on Sixth street road.

FOR SALE—Registered Jersey cattle. Two yearling bulls. Sires—A son of Bessie Lewis, 32 lbs. butter 7 days, and "Financial Count" (Imported); granddam held Island butter record 3 years. Sire's dam holds public milk record of 58 pounds daily, and his dam and Island winner in class for two years. Her four dams 22 to 28 quart cows, and all winners. Sayda Polo Jersey Farm, Parsons, Kansas.

REGISTERED GUERNSEY BULLS—Ready for service. Also pure-bred Scotch Collie puppies. Dr. J. W. Perkins, 422 Altman Bldg., Kansas City, Mo.

HORSES AND MULES.

FOR SALE OR TRADE—For other stock, 2 well-bred jacks, all ready for service. We have too many and must sell them. Hughes & Carey, Route 3, Hartford, Kans.

FOR SALE CHEAP—Fine young trotting-bred stallion, by Flood Wilkes. J. E. Brechbill, Detroit, Kansas.

FOR SALE CHEAP and must be sold—Two stallions, one black registered Percheron, sound and good, weight 1,700 pounds; one dark brown coacher, sound and good, weight 1,300 pounds. One clipping machine, can be run by engine, motor, or by tread power. Dr. Hugh S. Maxwell, Salina, Kansas.

FOR SALE—At reasonable prices, Black Imported Percheron stallions. E. N. Woodbury, Cawker City, Kans.

LEAVENWORTH COUNTY Jack Farm, 10 head of jacks and jennets for sale. Corson Brothers, Potter, Kans.

FOR SALE—Registered French draft and Percheron stallions, mares and colts; bays, browns and blacks. One gray stallion, 13 years old, sound and sure. Jake Howard, Hoyt, Kans.

LOST OR STRAYED—Brown mare, weight 1,100 pounds, white spot in forehead, barb wire cut on side, somewhat awaybacked. Suitable reward for return. J. W. Gillard, 836 Highland Ave., Topeka, Kans.

FARMS AND RANCHES.

320 ACRES, 4 miles from Emporia; 6 room house, barn 30 by 36, cattle-shed 20 by 40; good orchard and other fruit, 70 acres cultivated; 300 acres can be plowed or mowed; watered by wells and creeks; one mile to school. Price \$28 per acre. Can give immediate possession. Hurlay & Jennings, Emporia, Kans.

800 ACRES FENCED—Half wheat land, house, barn, well, windmill, orchard, 250 acres wheat and barley, 5 miles to railroad. Terms. E. H. Boyer, Meade, Kans.

SEEDS AND PLANTS.

PLANTS—Bulbs, shrubs, evergreens, roses, etc. Strawberry plants per 100, 35c; 1,000, \$2.25. Raspberry, 100, 70c; 1,000, \$5. Grape, 2 year, 100, 40c; 1,000, \$2.25. Rhubarb, 10, 30c; 100, \$2.25. Adonis bulbs per 10, 10c; 100, 75c. Dahlias, per dozen 75c. Hardy herbaceous plants, greenhouse plants, etc. Price list on application. Bonner Spring Nurseries, Bonner Springs, Kans.

ONE DOLLAR will buy enough of McCauley's white seed corn to plant seven acres if you send to A. J. Nicholson, Manhattan, Kans.

FOR SALE—Spring of 1906 seed sweet potatoes six kinds. Price on application; also a fine lot of eating sweet potatoes. I. P. Myers, Haysville, Kans.

FOR ONE DOLLAR I will send you 300 strawberry plants, 5 kinds, or 100 raspberry, 3 kinds, or 100 blackberry, or 25 grapes, 3 kinds, or 25 currants or 25 gooseberries or 200 asparagus; none better at any price. A. J. Nicholson, Manhattan, Kans.

an apparent increase of 11,000. Light steers on the local market sold about steady, the stocker and feeder demand helping this end of the trade, but for fat steers of all weights, trade had a slow, unsatisfactory pulse with prices ruling weak to a dime lower. She stock of all kinds was in very light supply, and held fully steady. The calf market broke about 25c with choice veals going at \$6.25. The stocker and feeder demand was fairly good, and local dealers picked up everything offered at steady prices. The coal strike is now a factor that will be watched very closely by packing interests, and a shut-down at the mines would be very apt to affect the live stock markets adversely. For this reason it would be just as well for owners to be a little conservative for a few days, although the situation to-day is not considered serious.

Local receipts of hogs were almost double the number arriving a week ago and all other points showed quite an enlargement. The demand was pretty fair but packers' movements clearly showed that they are watching for increased receipts with coming improvement of the roads and will make a strong fight to prevent prices from going any higher. The market opened strong to 5c higher but settled back to about steady. The quality of hogs was exceptionally good and for this reason the prices on paper looked a little higher than at the close last week. Top to-day sold at \$6.42 1/2, with the bulk at \$6.32 1/2 @ 6.40.

Receipts of sheep at this point were quite liberal, made up largely of Colorado lambs. The demand was quite good and prices were held fully steady for lambs and steady to strong for sheep. Top lambs sold at \$6.45 with bulk at \$6.30 @ 6.40 and best ewes at \$5.40. WARRICK.

SWINE.

FOR SALE—20 good strong spring and yearling Berkshire boars that are just what the farmers want. Prices right. Address E. W. Melville, Eudora, Kansas.

POULTRY.

WHITE PLYMOUTH ROCKS exclusively. Eggs \$2 per 15; \$3 per 30. All orders given prompt attention. R. C. Capson, Route 7, Winfield, Kans.

S. C. B. LEGHORN EGGS—From first cockerel at the State show. \$2.50 per 15. Other pens \$1 per 15. Mrs. Siler Seal, Meriden, Kans.

R. C. B. LEGHORN EGGS FOR SALE. Stock from best laying strains \$1 for 15; \$5 for 100, best selected and fresh eggs. Mrs. Bertha Evans, Route 4, Box 52, Lyons, Kans.

WHITE WYANDOTTES—the lay all winter kind. Bred to high score, large egg record cockerels. Dustin strain. Eggs 5 cents each. \$4 per 100. J. L. Moore, Eureka, Kans.

Buff Leghorns S. C. Eggs, 30 for \$1.25, 100 for \$3. John A. Reed, Route 3, Wakefield, Ks.

HIGH CLASS POULTRY Silver Wyandotte, and White Plymouth Rock Eggs for hatching, \$1 for 15. R. F. Meek, Hutchinson, Kans.

BUFF ROCK EGGS

Here they are. Good ones. Fifteen for \$1; 45 for \$2.50; 100 for \$5. Orders filled in rotation as received. Eggs ready now. H. M. Stephens, Mauden, Republic County, Kans.

HELP WANTED.

WANTED—Man to milk 25 cows and separate cream. Will pay \$25 per month, steady job to the right man. Miller Bros., The 101 ranch, Bliss, O. T.

FARM and ranch hands furnished free. Western Employ Agency, 704 Kansas Ave., Topeka, Kans.

MISCELLANEOUS.

DISCRIBE YOUR WANTS—We submit them to our customers free. Mutual Benefiten, Omega, Oklahoma.

DOGS AND BIRDS—For sale dogs, hogs, pigeons, ferrets, Belgium-hares, all kinds; 8c 40-page illustrated catalogue. C. G. Lloyd, Sayre, Pa.

FOR SALE OR TRADE—The best livery stable in Topeka, from 21 to 27 boarders, will invoice over \$2,000. \$1,800 cash takes it or will trade for country store. Ill health reason for selling. Address W. R. Falkner & Co., 109 West 7th St., Topeka, Kans.

THE MAGIC WONDER—A Fortune Ring. Just out. Send 5 cents for sample. Agents wanted. Original Novelty Co., 714-167 Dearborn St., Chicago, Ill.

EXTRA MONEY TO SPEND—Every woman, boy and girl on the farm wants some way to earn money, so they can buy the extra things they want. This can be done by a little business of your own. Send \$1 to M. M. Newby, Yukon, O. T. and learn how one boy made \$300 and never missed a days work.

PRIVATE DEMONSTRATORS—Men and women for every county in Kansas. Same route each year. Salary and bonus. Address J. C. Messinger Co., Bethlehem, Pa.

WANTED—A good second-hand grain separator. Dr. Barker, Chanute, Kansas.

SPECIAL ADVERTISING OFFER—Send your photo, any style, bust, or full figure, alone or in group, with 70 cents in stamps or money order and receive fifteen dainty miniature cabinet photos mounted on pretty, new style folder cards, size about 3 1/2 x 5 inches, copied separately in bust form from your picture. Original photo returned and copies guaranteed perfect reproductions. Don't miss this special offer. Hit of the season. If more than 15 wanted add 4 cents for each additional print. Cash must accompany order. Address E. R. Gregg, Gregg's Studio, Emporia, Kans.

STRAYED OR STOLEN from my farm 2 bay horses, weight about 14 or 15 hundred pounds, one with blaze face, glass eyes, best white; other, one hind foot white, patch of half off right jaw. Suitable reward for return. Allen Fleisch, Route 1, Garfield, Pawnee County, Kans.

ENSIPLAGE CUTTER—For sale a nearly new Smalley cutter, self feed, 10 ton capacity per hour. Will sell at a bargain. Address E. W. Adams Berryton, Kans. Topeka Independent phone 8502

WANTED—At once sound young men for firemen and brakemen on railroads; high wages; promotion; experience unnecessary; instructions by mail at your home; hundreds of good positions now open. Write National Railway Training Association, 620 Paxton Block, Omaha, Neb.

EARN FROM \$87.50 to as high as \$155.50 per month. Wanted—40 young men and sound men of good habits to become brakemen and firemen. Big demand in Wyoming, Nebraska, Kansas, Colorado, and Missouri. Instructions sent by mail; stamp for reply. Northern Railway Correspondence School, Room 202 Skyes Block, Minneapolis, Minn.

LADIES—To do piece work at their homes. We furnish all material and pay from \$7 to \$12 weekly. Experience unnecessary. Send stamped envelope to Royal Co., Desk 49, 34 Monroe St., Chicago Ill.

Stray List

Week Ending March 29.

Elk County—J. L. Logsdon, Clerk. STEER—Taken up by John Chamberlin, in Palmtreehood tp. (P. O. Longton), Nov. 10, 1905, one red muley steer, 2 years old, slit and crop off under part left ear; valued at \$23.

LEGAL.

Publication Notice.

In the District Court of Shawnee County, Kansas. A. M. Cowles, Plaintiff, vs. Flora S. Wright, et al., Defendants.

The State of Kansas to Flora S. Wright, E. Payton Wright, and W. W. King,

Greeting: You are each hereby notified that A. M. Cowles on Mar. 31, 1906, filed her petition in the court above, named against yourselves, as defendants, and that you must answer said petition by the 17th day of May, 1906, or the same will be taken as true, and judgment will be rendered in said action barring each of you from any interest in, and quieting the title of the plaintiff to, the real estate described in her petition, to-wit:

Lots 4, 5, and 6 on McVicar Avenue in Ensminger's Subdivision of Lots 2 and 5, of Block 8 in College Hill Addition to the City of Topeka, in Shawnee County, Kansas, according to the recorded plat of said Addition and Subdivision.

A. M. COWLES,