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KANSAS FARMER.

Established in 1863.

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KANSAS FARMER CO.,
116 West Sixth Ave., Topeka, Kans.**Table of Contents**

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The poor fellows who followed the lead of the "bulls" in the wheat pit and bought on margins expecting to make fortunes on the advance had a

rude awakening last Monday when the speculative price of wheat went tumbling down causing them to lose all they had invested. This money went into the hands of the managers of the game.

The Kansas Legislature has passed a new road law. It makes very considerable changes in the methods of caring for the public highways.

Great credit is due to Senator Young, of Mitchell County, for the ability and care with which he defended and promoted the enactment of a railroad law that is believed to be within constitutional limits and is a great improvement upon any law heretofore enacted in this State. It will be well for the people of Kansas to observe that in Senator Young they have a man of honesty, industry, and ability—a man whose unfailing good nature makes it impossible to either ruffle or bluff him, but who commands the confidence of those who are with him and the respect of those who oppose him—a man in whom there is excellent timber of gubernatorial or U. S. senatorial dimensions.

Readers of the KANSAS FARMER will be glad to know the names of the sixteen Senators who voted for the retention of the five important words in section 4 of the railroad bill. Here they are: Benedict, Baker, Carver, Dolley, Griffin, Hodges, Hughes, Lower, Nottzger, Peck, Quincy, Simons, Stewart, Tucker, Wilkerson, Young—16. If disappointed in your search for the name of your Senator in the above list, perhaps it will be found in the opposition: Benson, Betts, Brewer, Buschow, Chapman, Connor, Fitzpatrick, Fulton, Getty, Gilbert, Hayden, Harrison, Haskell, Huffman, Miller, Porter of Crawford, Porter of Montgomery, Smith of Edwards, Smith of Franklin, Stillings, Waggener—21.

RAILROAD LEGISLATION.

The Kansas House of Representatives passed a railroad commissioner bill without a dissenting vote. The Senate amended the bill and passed it as amended without a dissenting vote. The amended bill necessarily goes back to the House for consideration of the Senate amendments. It is made a special order in the House for Tuesday, February 28.

The necessity of going to press by Tuesday noon so that the large edition of the KANSAS FARMER may be printed early enough to reach all of its readers before the end of the week, makes it impossible to defer consideration of the situation until after final action shall have been had.

The Senators were far from unanimous in making the amendments. A test vote stood 21 for and 16 against the most important amendment.

The bill as passed by each house confers upon the Railroad Commission the authority to supervise classifications of freight, the operation of railroads, and to declare what rates shall be charged for transporting freights. It also provides that the rates ordered by the Commission

shall go into effect in thirty days after notice. Ample provision is also made for the enforcement of the findings of the Commission.

The views of both houses are thus seen to favor what has been called a "drastic" measure.

But, the Senate spent more than a day in discussion of amendments, and it succeeded in making some amendments with which the House is not likely to willingly concur. The reader may well inquire what differences could exist among law-makers so well agreed upon the points enumerated above. All powers for good hoped for by the people or for harm feared by the railroads are agreed to by both houses.

The differences relate solely to the methods by which the use of the powers of the Commission may be put in motion. Under the provisions as passed by the House the Commission may proceed in a comprehensive way to adjust freight rates, so that all wrongs may be adjusted within a reasonable time. Under the provisions as amended by the Senate, this adjustment must go by pieces and must necessarily be slow and tedious. The House measure authorizes the Commission to proceed on complaint of any citizen "or upon its own motion." The Senate amendment strikes out the words "or upon its own motion." The difference appears small, but its effect as to the time required to make operative the provisions of the law is very great.

It has been charged in the daily press that large use was made of free railroad passes to secure the elimination of these five words. Some Senators received many telegrams, letters, and petitions from their constituents urging them to stand for the retention of the five words. These words are contained in section 4 of the House bill and the requests were generally for the retention of section 4. This was in opposition to the attempt first made to leave out the whole of this important section.

Whether the continued influence from home will induce five Senators to yield to the probable House demand for the retention of the five important words remains to be seen. Undoubtedly the pressure from throughout the State had much to do with saving section 4 even in its amended form.

The KANSAS FARMER takes this occasion to congratulate its readers on what seems now to be the certainty of a law that will sooner or later bring to an end the discriminations in freight rates which have been so unfair to many portions of this State. The imposition of high freight charges places a burden the chief part of whose weight is ultimately borne by the farmers, the original producers of most of the State's wealth.

When the person who has given only casual attention to the problem of regulating railroads shall read the new law he will probably inquire:

1. Why it specifies no penalties for its violation.

2. Why the Commission is not authorized to punish wrongs.

1. The old law provides ample penalties to be imposed by the courts and

the new, in a few words, reenacts these.

2. This is a proposition upon which legislators stumbled for many years. Some of the earlier railroad laws made the Commission a court, authorized to inquire into wrongful charges and to advise against their continuance. Some good was doubtless done in this way. But when the Board's recommendations were disregarded demands for the enlargement of their powers were made. In Kansas this enlargement took form in the law creating the "Court of Visitation." The powers specified for this court were very broad, touching offenses against the railroad law, and they extended to the making of rates to be charged by the railroads. The matter went speedily into the State Supreme Court, where the law creating the Court of Visitation was found to be unconstitutional. It was pointed out that the constitution of Kansas, as also the constitutions of the other States and the constitution of the United States, provides for three departments of Government, the executive, the legislative, and the judicial. The executive power is vested in the Governor, etc., the legislative in the Senate and House of Representatives, the judicial in the courts. In all decisions relating to this division of powers, it has been held that one of these departments can not be allowed to exercise the functions of another.

Applying these principles to the matter of railroad rates, Justice Brewer of the United States Supreme Court, in considering the Interstate Commerce law, said:

"It is one thing to inquire whether the rates which have been charged and collected are reasonable—that is a judicial act; but an entirely different thing to prescribe rates which shall be charged in the future—that is a legislative act."

When the correctness of this position became understood, the claim was put forward that the only limitations that could be placed upon the rates to be charged by railroads must be by the enactment of maximum rate laws by the Legislature. It was soon discovered that the complications inherent in the rate systems are such as to make satisfactory maximum rate laws exceedingly difficult to devise—so difficult as to be practically out of the question—under existing conditions.

In the groping for a means of reducing the evils of extortion and discrimination by lodging the power to declare what rates should be charged, the expedient of conferring the power upon a Commission was evolved. The novice might suppose that the constitutional provision which lodges the legislative power in the Senate and House of Representatives would make it impossible for the Legislature to delegate it to a Commission. Fortunately, however, legislative powers had long been conferred by legislative enactment upon city and town councils and other subordinate bodies. The recognition given this bestowal of power was well expressed by Justice Smith of the Kansas Supreme Court in passing upon the Court of Visitation.

tion case. Justice Smith said [61 Kans. 816]:

"Legislative power to prescribe rates which railway corporations may charge for carrying freight or passengers exists beyond question, and its exercise has been uniformly upheld by the courts. And this power the law-makers may delegate to boards or commissioners, which has been frequently done. The extent of the power is curtailed only by limitations placed upon it by the courts in the application of certain constitutional guarantees prohibiting the destruction of property rights vested in the owners of railways."

It thus appears that while the State has the undoubted power to determine what reasonable rates shall be charged, and has the power to punish those who fail to comply with the law, it is necessary to avoid the mistake of attempting to confer these two powers upon the same agency.

Those in charge of the railroad bill in the present Legislature have found it necessary to guard against the tendency of both its friends and foes to load up the measure with complications which would make it unconstitutional.

Whatever the results of the conferences which must be had between the two houses of the Kansas Legislature on this bill, it will not fail to be an advance upon present laws. It should promote the prosperity of the people of Kansas by reducing the discrimination against them. If it results in equalizing rates charged in this State with those charged east of the Missouri River, there may be no reduction of the earnings of the railroads. Reasonable regulation is surely to be preferred to the socialistic proposition of State ownership, which many look upon as the alternative of State regulation.

THE TRUST PROBLEM.

When the trusts were first "promoted," not many years ago, the chief argument made to the managers of the separate concerns which the promoters desired to merge into the one monstrous combination was that production would be cheapened and profits thereby increased. The public was quieted with the statement that production would be cheapened and added profits divided between the producer and consumer.

The fact that, up to that time, the long-continued consolidations of railroads had been accompanied by constantly declining rates for both passenger and freight transportation was used as a ready argument for allaying the fears of the public. It was further urged that the market for trust products would regulate itself by making reductions in demand the reciprocal of advances in prices, so that even a monopoly would find its greater profit in reasonable prices.

Since the practical success of the trust movement in gathering the railroads, the principal mines, the great manufacturing enterprises, and the banking interests of the financial center of the country under ownerships controlled by about a dozen men, there has been a steady movement towards the practice of "charging all that the traffic will bear." It is found in some cases that the traffic will bear successive small increments in charges which would have been resented if made in a lump.

In discussing this aspect of the railroad question the Interstate Commerce Commission, in its annual report for 1903, said: "Perhaps, in most instances the freight rate is so small a part of the total cost of a commodity that the consumer is unconscious of the increase in rate." Taking advantage of this conceded fact the average of freight rates have been gradually increased since 1899. The amount of this increase, comparing 1899 with 1903, was found by the Interstate Commissioners to be \$155,475,502.

It thus appears that the result of the several small increments in rates amounts to a vast sum on the business of a single year. Further advances since 1903 have been such that at last some people have become "conscious of the increase in rate."

Another instance of trust increase in charges is noted in kerosene. Each family uses but a small amount of oil and can not afford to make a fight on the trust. But the aggregate of the increased price of oil rolls into many millions of dollars for the few in control.

The meat trust has not seemed to care to confine its arbitrary lowering of prices of animals on the hoof and its raising of prices of meats within the limits wherein "the consumer is unconscious of the increase." The operations of the meat trust have appeared to be so much of the "stand and deliver" nature that the National Government is measuring strength, or legal ability, with this trust.

According to the latest Government report the coffee consumed in the United States, during 1904, amounted to 13.64 pounds per capita. A hold-up of less than two cents a pound on this would amount to a poll tax of 25 cents on every man, woman, and child and would amount to over \$20,000,000.

The inquiry might be extended to almost every article of the long list of commodities that contribute to the welfare of the people. It would be found that almost every one of them has been subjected to increased toll by the agencies controlled or under the influence of J. Pierpont Morgan, John D. and Wm. Rockefeller, W. K. and F. W. Vanderbilt, George J. Gould, A. J. Cassatt, James J. Hill, Edwin Hawley, H. H. Rogers, August Belmont, Thomas F. Ryan, and W. H. and J. H. Moore.

The provider for the average family may not have made an analysis of the sources of increase in his living expenses, but he knows in a general way that there has been a great increase.

Intelligent people in this country have wondered at the submission of the Russians to the exactions and the dominance of the nobles. Have we much reason to wonder when, in less than a generation, we have allowed so great power to be usurped by the fourteen men above named, the power to absorb a portion of every income to the extent of piling up fortunes larger than the world ever saw?

Partial realization of the gravity of the situation has led to a general rejoicing throughout the country at the stand taken by Kansas in the contest with the Standard Oil Company. It must not be expected, however, that the aggressions of the trusts—rapidly becoming one trust—will cease until curbed by a power capable of coping with it. To find and apply a remedy for the suppression of competition, or a substitute for the beneficent effects which formerly resulted from competition—now almost a thing of the past—is a problem which may well call for both wisdom and heroism.

The trust problem is one for solution, one which a growing number of people expect to see solved only by revolution.

Miscellany

A Carrier's Views.

EDITOR KANSAS FARMER:—In the KANSAS FARMER of January 12 was an editorial in approval of Mr. Bristow's recommendation of a postal change giving a "three-cent-a-pound" rate up to five pounds on packages starting from any rural free delivery postoffice to patrons on the route or routes therefrom. Sitting here all this week in the clutches of the grippe with my substitute not able as yet to make a complete trip on account of the snow blockade, it seems to me that a word of protest from one who is entitled to speak from the book may not be out of time.

On just such a time as this, when the roads are heavy with mud, would be when the effect would be painfully evident were such an order to go into effect. With the order list from the stores, drawn on all the way from A to Z, with team jaded and worn in their struggle through the snow or mud, the effect would be highly edifying and impressive. And I venture to say that any official who should make and issue such order and had to carry out

its details for a few months would very soon revoke it and be thankful to get off that easy. This is written in no disrespectful attitude toward the Postoffice Department, but with a firm conviction as to the results that would follow the workings of such an order.

L. C. WATERS.

Shawnee County.

Who Knows This Family of Snells?

Unless the descendants of John H. Snell, who left Herkimer County and located in some part of Kansas, are found, a sum of money which would comfortably support a family for many years, will remain tied up in court. This money was left to the family of John H. Snell by Mary Ann Snell, late of this city, he being her brother. When Attorney M. G. Bronner, of Little Falls, N. Y., endeavored to find the descendants of John H. Snell he was unsuccessful. It was ascertained that John H. Snell died somewhere in Kansas several years ago, leaving two daughters, whose married names are Margaret Hendrix and Ann Flynn, and also two sons, whose given names are unknown. By the laws of New York State Mr. Bronner was obliged to deposit this money subject to the order of the court, where it will remain until the missing Snells are located. If some one knows the whereabouts of these Snells in Kansas or anywhere, a small fortune will come into the hands of their descendants by communicating with Mr. Bronner.

From the Evening Times, Little Falls, N. Y.

Kansas and Missouri papers please copy.

Wants Horticultural Proceedings.

EDITOR KANSAS FARMER:—Find enclosed money order for \$3, for which please give me credit on subscription. "The Old Reliable" is one of my favorite papers. I am interested in all of the different departments, but more especially the horticultural department, and would be glad to see the balance of the papers that were read at the State horticultural meeting; also the discussions on the different horticultural subjects, as we had a blizzard that prevented me from attending.

W. B. EAMES.

Ottawa County.

The one regret of the KANSAS FARMER management is the impossibility of presenting the valuable contributions to farm literature as rapidly as they are created. We hope to reach the remainder of the proceedings of the State Horticultural Society in time to be of service this season.

School Law Question.

EDITOR KANSAS FARMER:—Please publish a paragraph of the law allowing district school teachers to collect \$1.00 for every teacher's meeting they attend. If there is no such law, will the district treasurer be liable to prosecution if he pays the claim from district funds, a majority of the school board having signed a contract with the above clause in it. SUBSCRIBER.

Lyon County.

The dollar allowed teachers for attending teachers' meeting is a matter of contract, and not a matter of the statute. The board has the entire right to make a contract of this sort. If a teacher holds a contract of this sort, and has not complied with the provisions thereof, the payment of the order is not an option of the treasurer.

I. L. DAYHOFF,

State Supt. of Pub. Instruction.

Small Fruit Growers to Organize.

There will be a meeting held at Lincoln Post Hall in Topeka on March 4, 1905, for the purpose of organizing a small fruit-growers' association. In addition to the work of organization there will be a number of important matters presented for discussion. This is a move in the right direction and it is hoped that a large attendance will result from this call.

The Colorado Chautauqua.

The management of the Colorado Chautauqua is giving especial attention to the summer school department and will offer courses of study which ought to be attractive to all school

teachers, desiring to better equip themselves for their work and at the same time recuperate under the best scenic and social surroundings. This department will open July 5 and continue for five weeks.

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 receive the paper at half price. While the subscription price will remain at one dollar per 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, Kansas Farmer Company, Topeka, Kans.

Special to Our Old Subscribers Only.

Any of our old subscribers who will send us two NEW SUBSCRIPTIONS at the introductory rate of fifty cents each, will receive any one of the following publication as the old subscriber may choose, viz., "Woman's Magazine," "Western Swine Breeder," "Vick's Family Magazine," "Blooded Stock," "Poultry Gazette," "Dairy and Creamery," or "Wool Markets and Sheep."

Our Special Club List.

By special arrangement with publishers of leading magazines, dailies and other publications, we are able to offer KANSAS FARMER subscribers the most attractive club offers ever made by any publisher or subscription agency.

All combination offers include one year's subscription to the KANSAS FARMER. If more than one other publication is wanted subtract \$1 from the combination offer and the remainder will show the amount necessary to add for each additional paper wanted. If your subscription is already paid in advance you can send the KANSAS FARMER to some other address. In taking advantage of our Special Club List it is not necessary that all papers should go to one address; they may be sent to any address you name.

If other periodicals are wanted that are not named here, write for what you want, as we have the lowest clubbing rates with all publications. Address all orders to Kansas Farmer Company, Topeka, Kans.

DAILIES.

	Price.	With Farmer 1 year.
Kansas City Star and		
Kansas City Times, 1 year.....		\$5.20
Kansas City Journal, 1 year.....	\$3.00	3.00
Topeka Capital, 1 year.....	4.00	4.00
Topeka Journal, 1 year.....	3.80	3.75
Topeka Herald, 1 year.....	3.80	3.75

WEEKLIES.

Western Horseman, 1 year.....	2.00	2.50
Breeders' Gazette, 1 year.....	2.00	2.00
Inter Ocean, 1 year.....	1.00	1.25
Globe-Democrat s. w., 1 year.....	1.00	1.00
Kansas City Journal, 1 year.....	.25	1.15
Mail & Breeze, 1 year.....	1.00	1.50
Capital s. w., 1 year.....	1.00	1.50

MONTHLY MAGAZINES.

Cosmopolitan, 1 year.....	1.00	1.05
McClure's, 1 year.....	1.00	1.00
Leslie's Magazine, 1 year.....	1.00	1.70
St. Nicholas, 1 year.....	3.00	3.50
American Boy, 1 year.....	1.00	1.00
Good Housekeeping, 1 year.....	1.00	1.40
Lippincott's, 1 year.....	2.50	2.50
Success, 1 year.....	1.00	1.75
Twentieth Century Home, 1 year.....	1.00	1.65
Metropolitan Magazine, 1 year.....	1.80	2.00
New England Magazine, 1 year.....	3.00	3.50
Kimball's Dairy Farmer, 1 year.....	1.00	1.25
Hoard's Dairyman, 1 year.....	1.00	1.70
Irrigation Age, 1 year.....	1.00	1.00
Western Fruit Grower, 1 year.....	.50	1.20
American Swineherd, 1 year.....	.50	1.00
Western Swine Breeder, 1 year.....	.50	1.25
Good Housekeeping, 1 year.....	1.00	1.75
The Outlook, 1 year.....	3.00	3.75

A Seed-Grower and Seed-Seller.

If you want to be dealt with liberally, and at the same time buy your seeds from the man who grows them, R. H. Shumway, seed-grower, Rockford, Ill., is a good man to get into correspondence with. You will be assured of fresh seeds and the variety you select. That assurance is worth paying an extra price for, but Mr. Shumway is remarkably low in his prices, far lower than most seed-sellers, many of whom buy their stocks to sell again. Of course, they must all have a profit. Mr. Shumway grows and sells many seeds at a penny a packet. That's better than a nickel a packet when you know them to be of right varieties and fresh. Onions, for example, are something of a specialty with him. Some varieties of onion seed he is now selling at only 50 cents a pound. He publishes a catalogue of his home-grown seeds, and mails free to all applicants. It is a good seed book to send for.

Agriculture

Influence of Farm Yard Manure Upon the Amount of Immediately Available Nitrogen in Soil for Crops.

PROF. F. H. KING, MADISON, WIS.
NO. 4.

It was shown in the last article that the application of stable manure to soils increases the amount of potash quickly dissolved by water and, therefore, presumably, available to crops, in very measurable amounts. In one series, where 5, 10, and 15 tons of manure per acre were applied, the potash which could be quickly recovered with water, was increased 9.5, 15.3 and 23.7 per cent respectively, and that with these gains the yields were increased 22.4, 38.6, and 46.5 per cent. In another series of trials, where the manure was applied at the rate of 25, 50, 100, and 200 tons per acre, the immediately available potash was increased, as a mean for eight soils, to 1.42, 1.99, 3.24, and 7.24 times what was found in the soils before treatment. It is the purpose of this article to state how the same applications of manure influenced the amounts of nitrogen, in immediately available form, for crops in these soils.

It must be said, at the outset, that manure itself contains very little or no immediately available nitrogen, at least in the form of nitric acid. That which is present must be acted upon by the various soil organisms which, working together, convert the nitrogen of manure into nitric acid, the immediately available form for crops. This being true, it can not be expected that the amounts of nitric acid found in soils after the application of different amounts of manure will hold any definite numerical relation to the amounts of manure applied. The amounts found will depend upon how much has been produced and whether any of that produced has been destroyed by the processes of denitrification which may be set up in the soil. In the series of trials where the eight soil types were given 5, 10, or 15 tons of manure per acre it was found, as a mean of six determinations of the nitric acid in the surface foot of field soils on as many dates, that the mean amounts of nitric acid recovered by washing the soil three minutes in water, were as given in the next table, where the mean amounts from the four poorer soils and from the four stronger soils are placed in respective groups.

Amounts of nitric acid found in the surface foot of eight soil types, expressed in pounds per million pounds of dry soil.

	Four poorer soils.	Four stronger soils.
Nothing added.....	15.7	45.2
5 tons manure.....	17.6	46.5
10 tons manure.....	20.3	41.7
15 tons manure.....	24.3	42.8

It is noteworthy that while 5, 10, and 15 tons of manure per acre have had the effect of increasing the nitric acid, and therefore, the immediately available nitrogen for the crop, 11.6, 29, and 54.2 per cent respectively on the four poorer soils, similar additions to the four stronger soils had little or no effect upon the amount of nitric acid present, the manure tending if, anything, to decrease it. In the case of the series of observations where 25, 50, 100, and 200 tons of manure were applied per acre the amounts of nitric acid increased during 65 days, on the unmanured soils, from 14.8 at the beginning to 89.2 pounds per million pounds of dry soil in the four poorer ones and from 44.5 pounds, at the start to 165.4 pounds per million of dry soil in the four stronger ones, the two groups of soils being placed under entirely similar conditions. In the soils to which the different amounts of manure were applied the nitric acid which the soils contained at the end of 65 days, instead of having increased, as in the case where no manure was

applied, contained only the amounts indicated in the table below.

Amounts of nitric acid in soils after 65 days, under entirely similar conditions, expressed in pounds per million pounds of dry soil.

	Four poorer soils.	Four stronger soils.
Nothing added.....	89.2	165.4
25 tons manure.....	13.0	72.6
50 tons manure.....	2.9	36.0
100 tons manure.....	10.6	53.8
200 tons manure.....	4.3	36.9
Nitric acid at start.....	14.8	44.5

It is here seen that, in no case, where manure was applied, has there been as much nitric acid developed, or at least accumulated in the soil, as there was in that to which no manure was added, indeed in only 5 of 32 cases in this series, where the soils were manured, was there as much nitric acid, or immediately available nitrogen, found in the soils after 65 days as was present in them when the manure was applied; and since the unmanured soils, in every one of eight soil types showed a larger increase of nitrates at the close of the period when placed under every way similar conditions, it appears clear that in some manner, the manure added was responsible for the failure of the increase and, in many cases, of resulting in a positive loss of immediately available nitrogen already present.

The facts appear to be, in the cases cited, that either there was applied too much manure in proportion to the soil for the conversion of the organic nitrogen into nitric acid under those conditions or else there were present conditions which favored the destruction of nitrates as fast or more rapidly than they were formed. Whatever the full explanation may be, we have here a very important fact which should be kept in mind in the application of manures to soil. It has long been known that when dry soil is used as a deodorizer in the dry earth closet a nearly complete destruction, not only of organic nitrogen occurs, but of all other organic matter as well and it may be true that when large amounts of stable manure are incorporated with the soil a tendency to a similar destruction may result. It has been stated to what extent the foregoing quantities of manure increased the readily water soluble potash in these soils. It is also true that the easily soluble phosphates were likewise notably increased, making the amounts, recovered from the poorer soils, 2, 6, 12, and 36-fold where 25, 50, 100, and 200 tons of manure respectively had been applied per acre. But notwithstanding the notable increase of potash and phosphoric acid in immediately available form in the soil there was either only a small gain of available nitrogen or a positive loss of it; and when it is understood that the nitrogen must also be present in sufficient amount before the potash, phosphates and other plant-food materials can be effective we are able to understand what has already been pointed out, namely, that highly manured soils may even show a diminished yield as compared with that from the same soils not manured, as was the case with the two strongest soils in the series under consideration which had the year before received manure. Indeed we are led to suspect that the decrease in efficiency of manure with increasing amounts applied may be, at times, and perhaps often, due to the effect of too large amounts of manure reducing the quantity of nitric acid, or immediately available nitrogen in the soil.

The results which have been here presented go to emphasize what was said in the last article relative to a higher efficiency of stable manures when applied in moderate amounts, evenly distributed, and at short intervals. Emphasis should be placed upon the need of greater care in the application of manure to fields to see that it is evenly spread upon the surface. It is a very easy matter and I may say a common result to apply manure to portions of the field at rates of 25, 50, and 100 and even 200 tons per acre through uneven spreading when it had been the intention to apply only perhaps 10, 15, or 20 tons. After the greater cost of procuring manure and

of getting it to the field has been incurred, it is clearly poor economy to save time by careless spreading.

Alsike, Clover and Redtop—What to Sow.

I see by the KANSAS FARMER that you recommend Alsike clover and redtop for wet ground. Please answer through the KANSAS FARMER the following questions and oblige:

1. What is the best time of the year to sow it?
2. How much seed per acre?
3. Will both mature at the same time for hay?

NEWTON SELLERS.

McPherson County.

Redtop and Alsike clover should be sown as early in the spring as a suitable seed-bed can be prepared, or early in the fall, say from the first to the fifteenth of September. The chances of securing a stand are probably a little better from spring-seeding, but a stand secured from fall-seeding is generally freer from weeds and will produce a crop of hay somewhat sooner than will the spring-seeding. For spring-seeding it is well to plow in the fall, or if on clean corn-ground the disk-harrow may be used to make a good seed-bed. If necessary to plow in the spring, I would suggest the use of the subsurface packer to firm the soil again before seeding. The seed-bed should be especially well pulverized at the surface. Redtop is generally sown at the rate of about 18 pounds per acre and Alsike clover at the rate of about 8 pound per acre when sown alone. If you mix the two you may sow half the amount of each or in any other proportion you see fit. The Alsike clover will ordinarily be ready to cut for hay about two weeks before the redtop, but by harvesting between the proper dates for the two, a fairly good grade of hay may be secured.

V. M. SHOESMITH.

Value of Varieties of Seed-Corn.

I understand extensive experiments have been made to determine the value of good seed-corn, compared with ordinary seed-corn with results greatly in favor of the former.

Can you tell me what you consider the best varieties to use for commercial purposes, and where the best seed can be obtained. On our place we use all the corn we raise for feeding-purposes.

J. J. HAGERMAN.

Lincoln County, N. M.

It has been proven beyond a doubt that there is great variation in all plants, and that some strains of plants are much better in the yield or quality than other plants of the same species. The same is true of corn, there being an inherent quality in certain strains or breeds of corn which make them better than other kinds. Adaptation to conditions under which a plant must grow has much to do with its value in any particular locality. For this reason I would suggest that you do not secure seed of any variety of corn for planting in a large way in your locality from any other State where the conditions are quite dissimilar to your own. However, it is well to secure seed of some of the best kinds of corn and plant in small areas for a few years until it has been thoroughly tested and adapted to your local conditions. After this, if you find that you have a valuable corn, you may plant it on a large acreage. Until you have thoroughly proven the value of such a corn, you should use local varieties for field-planting.

Several corn-breeders have undertaken to improve the quality as well as the yield of their corn. Corn which is used for the manufacture of starch should contain a relatively large amount of the white starchy portion of the kernel, while corn which is the most valuable for feeding-purposes is that which contains a relatively large germ and horny layer, as these parts contain a relatively large per cent of protein and oil. The Illinois Experiment Station and Funk Bros., Bloomington, Illinois, have undertaken to improve certain breeds of corn in their feeding-value, that is, increase the protein and oil-content. The Funk Bros. advertise three kinds of corn, namely, the Funks' Yellow Dent, Boone County

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Special, and the Gold Standard Leaming, which they have been breeding in this way and of which they give analyses to show a larger per cent of protein and oil than is commonly found in corn. I cannot say what may be the value of such varieties. Doubtless such a selection may be carried to a certain point, but there is a limit to this, as it is probable that if such a selection be carried beyond this point, the yield will be decreased. If the yield is sufficiently decreased so that the total amount of protein and oil per acre is decreased, the object of such a selection is defeated. I believe that where the legumes may be profitably produced they afford a cheaper method of producing protein than the corn which is not able to use the free nitrogen of the air. It is questionable whether a corn which will reduce the supply of nitrogen in the soil very rapidly would be the most desirable corn.

In the selection of your corn you should pay attention to both the yield and the quality. Some methods of comparing the yields by the actual weight of different plots should be used, for instance, if different ears are planted in separate rows and these are studied throughout the season and the yield of each row is determined, it will be noticed that some of these rows very much excel the others, and by selecting the vigorous, healthy rows which produce the most corn of the best quality for the selection of seed for the next year, very rapid improvement will be secured. In comparing the corn from the different rows you will be able to judge approximately as to the relative value for feeding purposes by a mechanical examination of the kernels; notice the size of the germ from the outside of the kernel, also cut the kernel through lengthwise and note its thickness. By choosing corn from such rows as show the largest germs in the kernels and the largest horny layer, you will be able to improve your corn in feeding-value as well as in yield. As you ask where some of the best seed can be secured I would suggest that you send for catalogues of some of the best seed companies, and I presume that you will be able to find corn of the type which you desire. If you are so situated that you can grow several small patches in isolated places, I would suggest that you try several of them. As the conditions in New Mexico are so different from those in this State and in the States of the North and East, I would hardly feel like giving any of our varieties special recommendation for your locality, but will give below some of the seed firms which have been paying special attention to corn. The Funk Bros. probably head the list as far as the breeding for better feeding corn is concerned. Other seed companies are Ratekin Seed House, Shenandoah, Iowa; J. B. Armstrong, Shenandoah, Iowa; and the Griswold Seed Co., Lincoln Nebraska.

V. M. SHOESMITH.

Rape Questions.

I am a beginner in raising hogs and would like to submit you a few questions in regard to the raising of rape for pasturing.

1. What time of the year should rape be sown in order to obtain the best results?
2. How much seed is required per acre?
3. How many acres would it require to pasture seventy-five head of mature hogs, three months?
4. What is the best way to prepare the ground for sowing?
5. Which ground is best adapted, upland or lowland?

JOHN C. CAMPBELL.

Doniphan County.

Rape may be sown any time from early spring to early summer. To insure a good start and rapid growth perhaps middle spring sowing, the last of April or first of May, may be best, provided proper seed-bed and conditions are secured.

2. Sown broadcast 3 to 5 pounds of rape-seed will be required per acre, planted in drill-rows, 1 to 2 pounds is sufficient.

3. That will depend upon the stand, fertility of the soil, season, etc. Probably 6 to 8 acres of good rape will be

sufficient. The field should be divided into two equal parts so that the rape in one part may be allowed to grow while the hogs are feeding off of the other part, and vice versa.

4. Since rape-seeds are very small, the seed-bed should be moist and pulverized very finely at the surface and well pulverized and firm below the surface so as to insure good capillary connections of the soil with the subsoil in order that the surface soil may not dry out and that the seed and young plants may not lack for moisture.

5. For its best development rape requires a fertile soil well supplied with moisture. It would perhaps not pay to plant the crop on poor upland, unless the soil should be well manured. On light soils or uplands, it is advisable to plant it in rows, and cultivate the crop, and it is not inadvisable to follow this method of culture on all land. The cultivation of the crop conserves the moisture, kills the weeds and gives a large increase of growth above what will usually be secured by broadcasting such growing without cultivation. A. M. TENEYCK.

Crop Rotation Plans.

I have four or five acres on a farm that will not grow good corn, but will grow alfalfa as adjoining land grows it. I do not want to sow it to alfalfa as I am renting out the farm, and I can get as much or more rent out of corn than alfalfa, and besides I lose a year's rent in sowing to alfalfa and the expense of seed, labor, etc. Now what I want is some prolific, hardy, quick-growing leguminous plant that I can sow reasonably early in the spring that will grow large enough to plow under by July 1 or earlier, with a smaller seed than beans and peas and less expensive than the ordinary field-beans or peas. By plowing such crop under during the early summer and sowing millet I could perhaps raise enough hay to at least pay the expenses, besides putting nitrogen and humus in the soil for future corn-crops. Does the KANSAS FARMER know, or do any of its readers know of a plant that would fill the bill? I do not care if it is considered a weed in some localities, so it enfolds its seed in a pod and will make a heavy growth.

Jewell County.

SUBSCRIBER.

I do not think your plan of crop rotation for restoring the fertility of the soil is a practicable one. There are no common legume crops which may be sown early enough in the spring to make much growth before the land would have to be plowed for millet. Legumes which might be used in this way are field-peas and the annual or sand vetch, as these may be sown earlier in the spring than cow-peas or soy-beans. However, to get the full benefit of these crops they should not be plowed under probably before the first of July, which would be too late as a rule to prepare a suitable seed-bed and insure a crop of millet. A more practicable plan would be to sow the perennial vetch with the wheat in the fall and plow the green crop under the following summer in preparing for corn. Clover may be used in the same way.

It would be more practicable to grow an early grain crop and sow cow-peas soon after harvest, plowing under the green growth in the fall, or the crop may be left as a cover-crop during the winter. Since you object to the high price of the cow-peas or soy-beans for this purpose, perhaps the sand vetch may be used, although I have not had any experience in using the vetch in this way.

It is not necessary that you lose a year's crop in seeding down to alfalfa. By growing some early grain crop and plowing soon after harvest, giving frequent cultivation thereafter until about the first of September, a suitable seed-bed may be prepared for alfalfa, and alfalfa that makes a good start in the fall ought to produce three good crops the following season, averaging not less than one ton of good hay per cutting. Alfalfa once established will yield a better income than that secured from corn at the present time. After a few years, if the alfalfa land be plowed and returned again to corn, it will produce much larger and

more profitable crops of corn than can be grown by continuous cropping with corn, or even by the rotation with annual legume crops as described above.

A. M. TENEYCK.

An Air-Tight Barn for Alfalfa.

I have a field of alfalfa and wish to build a hay barn to take care of it. I intend to build the walls of concrete and it will be practically air-tight. I have been told that alfalfa can be cut and put into a barn of this kind green, fresh from the mower, without any curing, and in any kind of weather, and that it will heat and go through the sweat and come out dry and green and make a perfect hay. I would like your opinion on this and also the most approved method of curing alfalfa. Have you or the department any literature on this that you can refer me to?

A. BASS.

McPherson County.

If you put green alfalfa into an air-tight barn such as you describe, it will be practically siloing the crop and the product will come out silage and not hay. We have experimented with putting alfalfa into the silo. It makes fairly good silage but there has been considerable loss due to spoiling around the outside of the silo. The alfalfa does not seem to pack tight enough and does not perfectly exclude the air on the outside next to the wall, hence the loss. There is no doubt but that alfalfa may be put into a tight barn in a less cured condition than it could safely be put into a more open barn, yet it does not stand to reason that if the alfalfa is put in in large quantities green, it will come out dry, bright hay, since we have shown that if it is put into a silo, which is an air-tight bin, it comes out silage.

A method of putting up alfalfa green has been reported by Hon. J. W. Berry, of Jewell County, one of the members of our board of regents. He put the alfalfa into a shed which had a raised bottom so that the air could circulate, spreading the green hay loosely over the floor of the shed to a depth of about three feet. The second cutting was spread over the first cutting in the same way, the third over the second and the fourth over the third. When he baled this hay out about the first of December, it was all of excellent quality and brought the highest market price.

Although green or partly-cured hay may be stored in a barn such as you propose to build, in large mows without much danger of burning, because the air is largely excluded, yet it is my judgment that this hay will not often come out bright and green in color but will be blackened or more or less discolored by the heating it must undergo. The air-tight barns will keep the hay in good condition, but it would be my advice that you cure the hay just as well when stored in the air-tight barn as when put into an open barn or into a stack. In my experience the only way to put up alfalfa green is to silo it, although it may be practicable to handle it in the way described by Mr. Berry. In that case, however, the hay was allowed to dry out and to become fully cured before the next cutting was piled over the thin layer of loosely spread hay from the former cutting. In 1903 we tried baling alfalfa right from the field, green and cured, and the hay spoiled in every instance except when it was fully cured before baling.

In my judgment the best method now in general practice for curing alfalfa hay is to rake the hay as soon as it is well wilted leaving it lay in the windrow for a few hours and then putting it into small cocks and allowing it to remain in the field for several days, or until the hay is well cured, before stacking. This method of handling the hay is a little more costly than stacking it directly from the windrow, but the leaves will be saved better by the first method and a better quality of hay will result. If the hay is not put into the cock it ought at least to be raked rather green, when the leaves are thoroughly wilted, at least before they become very dry. When alfalfa hay is allowed to lay in the swath until it is partly cured and the leaves have become dry and brit-

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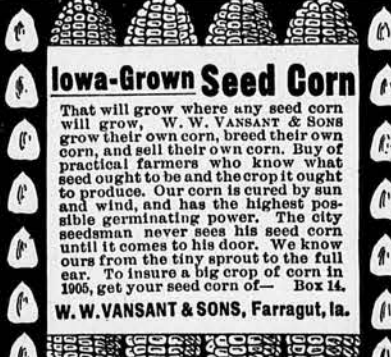
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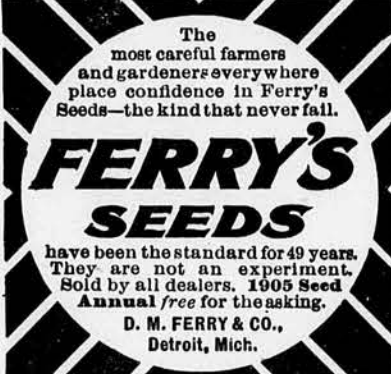
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tle, a large part of the leaves will probably be lost in handling and it is almost impossible to cure hay well when handled in this manner.

The leaves serve a very important function in curing the hay. If they are kept from getting too dry, they tend to draw the water out of the stems, and thus hasten the curing of the stems. Thus if alfalfa is raked before the leaves dry and the stems are turned up to the sun with the leaves underneath, more or less shaded, the leaves will continue to draw water from the stems for a much longer interval than would be the case if the hay were left in the swath; and when alfalfa is placed in the cock this action can go on for a still longer period and the stems are slowly but fully cured. Whereas, if the alfalfa is dried in the swath and stacked at once from the windrow, not only will there be a large proportion of the leaves lost but the stems are not likely to be fully cured and such hay is apt to heat in the stack. I have asked Professor Willard to mail you a copy of Bulletin No. 114, giving information on alfalfa culture.

A. M. TENEYOK.

Best Yellow Corn.

Will you kindly inform me what varieties of medium late yellow corn are proving the best at the Kansas Experiment Station? Also have you a corn-crop report for 1903? If so, I would be glad to get it.

Have you any seed-corn to sell? If so, what is your price? J. L. STONE. Chase County.

In our 1903 trial the yellow dent varieties of corn which stood highest in yield were as follows:

Hildreth, Klondyke*, Bicker's Choice, Sedgwick, Hogue's Yellow Dent*, World's Fair*, Kansas Sunflower, Golden Cap*, Profit*, Blaine, Grove's Yellow Dent*, Yellow Elephant, Pride of the North*, American Pride*, Funk's Ninety Day*, Leaming*, King of the Earliest*, and Rumold. These were the varieties which yielded over 60 bushels to the acre. The highest yield was given by the Hildreth, 89 bushels per acre, and the varieties are named above in the order of their yields.

In 1904 the corn in our variety trial made a poor stand, and we may not be able to report yields which will be fair to the several varieties, in fact, I have about decided not to publish the results of the 1904 trial.

From the field weights at husking time, the varieties which yielded well are as follows:

Kansas Sunflower, Reid's Yellow Dent*, Iowa Gold Mine*, Golden Eclipse*, Hildreth, Leaming*, Bicker's Choice; Rumold, Hogue's Yellow Dent*, Funk's Ninety Day*, Farmers' Reliance*, Early Rose*, Golden Cap*, Early Mastodon*, Mammoth Golden Yellow, Blacklar, Blaine, Ramsey.

Of the above-named varieties those marked with the asterisk (*) are early or medium early in maturing, while the other varieties are late or medium late maturing sorts.

King of the Earliest and the Pride of the North are two of the earliest maturing varieties, while the Hildreth is the latest maturing variety named. All the others may be classed as medium late or medium early.

I have requested Professor Willard, director of the station, to forward you a copy of Bulletin No. 123, a report of the crop experiments for 1903.

We still have for sale a small supply of three varieties of seed-corn; Kansas Sunflower, Reid's Yellow Dent, and a white dent corn called McAuley's. Our price for first-grade seed is \$2.50 per bushel of 70 pounds of ears; second grade, \$1.50 per bushel for 56 pounds of shelled corn.

A. M. TENEYOK.

Buckwheat in Western Kansas.

I wish to ask if buckwheat will make a profitable crop in this country. Will it make a crop if it is sown after a wheat crop is taken off? Is Japanese buckwheat as good, or any better than the native variety? Has it ever been raised by irrigation?

WM. M. SYLVESTER.

Finney County.

In the KANSAS FARMER, issue of January 19, I published all the data on buckwheat I am able to give at this time, from this station.

I do not think you will find the crop a profitable one to grow in Finney County, and it would certainly be useless, as a rule, to attempt to grow buckwheat after taking off a wheat crop. You should be well satisfied to get one good crop in a year from land in Finney County,—unless, of course, you mean to grow crops by irrigation. In that case it would be possible to sow buckwheat after taking off a wheatwheat crop, and expect to mature the buckwheat. Buckwheat may be matured sown as late as the first part of July, at this station. I never knew of the crop being raised by irrigation.

I do not know that the Japanese buckwheat is a better variety than the native variety which you mention. At this station the Japanese buckwheat proved to be a better producer than the Silver Hull variety.

I hope other readers of the KANSAS FARMER will give some information on growing buckwheat in this State.

A. M. TENEYOK.

Rape or Cow-Peas on New Land.

I was thinking of breaking sod, disking it and sowing peas or beans to pasture in the spring. What do you think of this plan? Would rape be better, or will it grow on new land? It is dark, sandy land.

J. P. INSELMAN.

Day County, Oklahoma. It is my judgment that soy-beans or cow-peas will be better adapted for growing on the new breaking than will rape. Rape-seed is very small and requires a finely pulverized seed-bed in order to make a good start and a thrifty growth. Rape also requires fertile land to produce the best crop and it will not grow so well on new land as on older land in a good state of fertility. On the other hand, cow-peas and soy-beans grow well in a warm, mellow seed-bed and these crops are often used to plant on sod.

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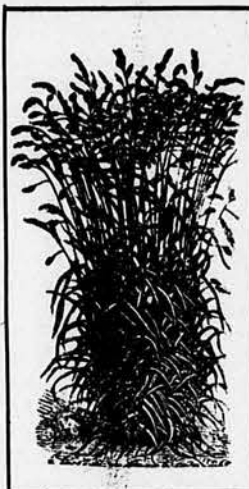
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land. Of the two crops named I should prefer to grow the cow-peas in your latitude. A. M. TENEYCK.

Cow-Peas and Soy-Beans for Southern Kansas.

I want to put in some cow-peas and soy-beans. I would like to know how they will do in this "semi-arid" country. G. H. WEHRMAN.

Sumner County.

Relative to the culture of cow-peas and soy-beans in Western Kansas, I quote from Supt. J. G. Haney, of the Hays Branch Experiment Station: "Soy-beans have been planted at the station for three consecutive years and we have not been able to get back our seed on upland and in large fields. Cow-peas were planted two years and did not produce much seed either year and very little hay. Apparently the cow-peas do not stand the wind, and while soy-beans seem to stand the hot weather very well they do not grow to much size. Then, the jack rabbits are very fond of them and do a great deal of damage."

The cow-peas are apt to do relatively better in your part of the State than soy-beans, and I believe that you will find the cow-peas a profitable crop to grow for forage and also as a fertilizer for the land. The variety commonly grown in this State is the Whip-poorwill, and you can secure good seed from any of the Kansas seedsmen. At this station the New Era variety has proven to be the earliest to mature and has produced the largest crop of peas during the last two seasons.

A. M. TENEYCK.

Sixty-Day Oats.

I would like to know where I can obtain the Sixty-Day oats, which were experimented with at the Agricultural College in 1903. Would like to know if your experiments were as successful in 1904, and if you think these varieties would do in this (Elk) County? All of the oats I have ever seen grown here were the Texas Red. They always rust so badly that they hardly ever make a crop, and this is the reason I would like to try something else.

Elk County.

WM. HOWLAND.

We have been selling the Sixty-Day oats in two-bushel lots to Kansas farmers, but our supply of home-grown seed has been exhausted. These oats are not grown by farmers yet, to any extent, since the original seed was introduced from Russia only a few years ago. I know of no farmers who have seed of this variety for sale.

I learned that the Nebraska Station had a small supply of this variety of oats, and because of the great demand made by the Kansas farmers I have purchased from the Nebraska Station 50 bushels of the Sixty-Day oats. These oats will be sold to Kansas farmers who desire to try the variety, in two-bushel lots, at the same price as was formerly charged for our home-grown seed, namely, \$1.50 per bushel, f. o. b. Manhattan, including sacks.

In 1904 we sowed our oats a little too early and they were injured by late freezing, resulting in a thin stand. Among twenty different varieties tested, the Kherson oats gave slightly the largest yield, 27.2 bushels per acre; while the Sixty-Day oats stood second, yielding 26 bushels per acre. The Texas Red oats also yielded 26 bushels, and the only other variety which yielded over twenty bushels in last season's trial was the Early Champion (22.5 bushels), the seed of which was secured from Iowa.

Although in our variety trial the Sixty-Day oats yielded slightly less than the Kherson, in our seed field the yield of the Kherson was considerably less than that of the Sixty-Day, and in the variety trial the Sixty-Day oats were evidently placed at a disadvantage by being planted on the outside of the field.

As an average for the trials of the two seasons the yields were as follows:

Sixty-Day, 39.4 bushels per acre; Kherson, 37; Texas Red, 34.7; Early Champion, 25.5.

Probably neither the Sixty-Day nor the Kherson oats will produce so well in Elk County as at this station, and

it would seem to me that the Texas Red oats are likely to produce better than they do at this station. You ought, however, to secure a good quality of Texas Red seed, and not continue to plant the old home-grown seed, which has become poor in quality. It will be advisable also for you to try the Sixty-Day oats, and possibly the Kherson variety in a small way. A. M. TENEYCK.

Varieties of Oats and Barley.

What variety of oats is the best to sow in my locality, California Township, Coffey County, Kansas? Also what is the best variety of barley to sow, and when should it be sown? If you have any of the best varieties to sell, please state price. If you have none, where might I find some? I would like to get a few bushels for seed. D. HODGES.

Lyon County.

The Texas Red oats are grown more extensively than any other variety in your part of the State, and doubtless, for general crop it would be as well for you to sow Southern-grown seed or seed of a good quality of this variety.

At this station the Sixty-Day oats and the Kherson oats have yielded better than the Texas Red, the Sixty-Day oats giving the highest average yield among twenty varieties tested for the past two seasons. The Sixty-Day oats are not grown much of any as yet by farmers and our supply of home-grown seed has been exhausted. I have, however, received a small supply of the seed of this variety from the Nebraska Station, which I will continue to distribute among the farmers of Kansas in two-bushel lots, as long as the supply lasts, at the original price of \$1.50 per bushel.

You can secure seed of the Kherson oats from the Nebraska Station, also from reliable seedsmen generally. This variety is similar in character to the Sixty-Day, and the seed of both of these oats was originally brought from Russia. It would be well for you to try at least one of these varieties, in a small way.

The varieties of barley which have given the largest yields during the past two seasons at this station, are the common Six-rowed, the Mansury, the Mandscheuri, the Bonanza, and the Success Beardless. The varieties named are all six-rowed and bearded in type, except the Success Beardless; the latter variety has yielded fairly well, but the quality of the grain has not been so good as that produced by the bearded type.

You can secure seed of some or of all of these varieties of barley from Kansas seedsmen. We have a limited supply of the common Six-rowed barley, which we are selling at \$1 per bushel, or \$5 for six bushels, f. o. b. Manhattan.

If you receive our bulletins you probably have read Bulletin No. 123, giving results of crop experiments for 1903. A. M. TENEYCK.

Do Corn Leaves Absorb Moisture from the Air?

In a book on American history which I have—Channing's—the statement is made under the head of "Land and Its Resources" that corn absorbs moisture from the air and will grow in seasons of drouth, when other plants invariably perish. To this statement I took exception, claiming that this was doubtful and that corn was surpassed in drouth-resistant qualities by wheat, Kafir-corn and cane as well as alfalfa. I am referred to you for an opinion on the matter, limiting the comparison to cereals. My opinion is that very few plants absorb moisture directly from the air and that wheat succeeds in Western Kansas when corn can not be relied upon. ALBERT ROGGER.

Corn does not absorb moisture from the air, rather the foliage of all green plants is continually throwing off water by the process called transpiration, and even on a moist day when there is no evaporation, the drops of water which has been exuded from the stomata will gather on the leaves. A wilted corn-leaf may be revived by dashing water upon it, and it is possi-

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ble that under these conditions the leaf may absorb a little water into its tissues, but the water thus absorbed, which may come from dew or slight growth of the plants, or on keeping them from being injured by drouth. If corn is able to withstand drouth, it is due to the fact that by good cultivation the moisture has been conserved in the soil so that the roots can get a sufficient supply to keep the plant from wilting and drying up.

Kafir-corn and cane are classed as "drouth-resistant" crops, and are doubtless more drouth-resistant than corn. Alfalfa, due to its deep rooting system, is also able to withstand long periods of drouth without being destroyed, although it will usually not make much growth during the dry period. Wheat may not be more drouth-resistant than corn, but it seems to be a crop well adapted for growing in the semi-arid regions, possibly due to the season in which it grows and matures, rather than to any drouth-resistant character in itself. This probably also explains the fact that other early-maturing grains, such as barley and emmer, may be grown on our Western lands. It appears that the drouth-resistant character of certain crops, such as Kafir-corn and cane, is due to the fact that these crops are able to cease growth when the ground becomes dry, and remain in a dormant state until the rain comes, when they make quick use of the favorable conditions, growing rapidly and simply reaching maturity a little later than would have been the case if they had been subject to no unfavorable conditions during the period of growth. From the experiments at this station and the experience of farmers, it appears that these crops exhaust the moisture of the soil to even a greater degree than crops not classed as "drouth-resistant," and it appears to be only because of their peculiar hardy character mentioned above that such crops are able to resist drouth.

For further information and a more complete discussion of "drouth-resistant" crops, I refer you to a paper of mine which was published in the KANSAS FARMER, November 3, 1904.

A. M. TENEYCK.

Manure and Manure-Spreaders.

Will you kindly give us what facts you have possession of relative to the use of manure, as to its value, results, etc.; also information relative to the use of manure-spreaders?

THE PERU VANZANDT IMPLEMENT CO.
By F. G. Delano, Vice-President.
Reno County.

No extensive experiments in the use of barnyard manure have been carried on at this station. The benefits derived from applying manure to corn land are so well understood that it has never been considered necessary to prove it by experiment. Incidentally, however, along with our trial of varieties of corn in 1903, we grew the same varieties in different fields, one field having been heavily manured during the previous winter while the other, similar in character of soil received no manure. The manured land yielded on the average over eighteen bushels more corn per acre than the unmanured land.

I find from referring to former bulletins of this station that some experiments have been carried on in manuring land for wheat. In 1889-90 the land which had received twenty tons of manure per acre, produced on an average five bushels more wheat per acre than the unmanured land. In 1891 the results were less favorable to the manuring. In a trial with fertilizer for wheat carried on at this station in 1889, twenty-five tons of well-rotted manure per acre gave slightly better results than were secured from any kind of chemical fertilizer. In this trial, however, the unmanured ground yielded on an average just about as large a crop as the manured and fertilized land.

The general conclusions from these experiments were that manure as a rule could not be applied very profitably to land which was being continually farmed with wheat. However, there is no question that for other

crops, such as corn, Kafir-corn, cane and grasses the application of manure causes a very profitable increase in the crops and at the same time helps to maintain the fertility of the soil. There is no land which can be manured so economically as grass land, and there are no crops which respond so quickly and fully to the application of manure, as grasses, either meadow or pasture. It has been found also that alfalfa responds well to surface dressing of barnyard manure, and manure can be hauled on grass land any time during the fall or winter, the season of the year when the farmer has the most spare time.

The advantage of spreading manure with the manure-spreader is that it can be more evenly and thinly distributed. It is better to spread manure rather thinly over a large area of land than to spread it thickly over a small area. By a heavy application there will be not only a waste of manure, but when a heavy coat of manure is plowed under it is apt to injure the crop by "burning out" in a dry season.

A. M. TENEYCK.

Crop Rotation in Kansas.

I am greatly interested in the possible rotations on farms in Kansas. Can you please publish in the KANSAS FARMER some opinions regarding the best crops to follow alfalfa in Kansas (bottom and upland)? Also, regarding cow-peas after small grain, in Kansas. I would suppose that the Experiment Station has some results in this line and also that some of the agronomy people know of what people are doing over the State.

I regard these topics as of prime interest to the farmers of Kansas and hope I am not presuming too much in writing this to you.

A. H. L.

Washington, D. C.

We have not carried on any systematic experiments at this station in growing crops after alfalfa. Last year we planted the following crops on alfalfa ground, viz., corn, barley, oats, emmer, and flax, but not especially for the purpose of a comparative experiment.

The corn was planted rather thickly and was cut for silage, and made an immense crop, yielding some fifteen tons of green fodder per acre.

The barley yielded 34.3 bushels per acre on alfalfa ground, while on a piece of ground adjacent, the yield was 47.85 bushels per acre; and on a field which had previously grown Bromegrass, and was broken the fall before, the yield was 59.38 bushels per acre. The barley lodged badly on the alfalfa ground and did not fill well. Both the oats and the emmer on the alfalfa ground lodged so badly that the crop was cut for hay; while flax, although the straw was weak and lodged badly, made a yield of about nine bushels per acre, which was practically equal to the yield on native prairie sod adjacent.

In 1903, barley, corn, Kafir-corn, and cane were grown on alfalfa ground, all making fairly good crops, but this ground was naturally less fertile than the field in which the trial was made in 1904.

From these trials and my general experience I conclude that the cereals are not safe crops to grow after alfalfa, and that probably corn may be grown with as great surety of getting a large crop and of taking advantage of the stored fertility in the soil as any other crop. Also immense crops of Kafir-corn and cane may be grown after alfalfa.

We have been sowing cow-peas after grain for the last two seasons, at this station, but have no definite results yet as to the effect on the yields of succeeding wheat or corn-crops.

In 1903 cow-peas were drilled in wheat-stubble soon after harvest, and by the first part of September the ground was covered with a nice growth of vines about one foot in height, which we plowed under in preparation for sowing wheat. Last season, which was a very wet one, no appreciable increase in the crop of wheat was observed.

In 1904 cow-peas were sown in wheat, barley, and oats stubble, soon after harvest. For some reason the peas did not start well, and the weeds

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started, getting ahead of the peas so that the peas remained thin and did not make a very strong growth, except in spots which were relatively free from weeds.

From our experience last year it is my judgment that unless the stubble land is clean and free from weeds, and in fairly moist condition, so as to germinate the peas, it will be safer to plow immediately after harvest, and by the use of the harrow and perhaps a subsurface packer prepare a good seed-bed. In any case the stubble land should receive a thorough disking in order to insure the germination of the peas and a vigorous growth of the young plants.

Although our plan thus far has been to follow the cow-peas with grain, yet it is my judgment that a more favorable rotation will be to follow the grain with cow-peas, and the cow-peas with corn. This will allow a longer growth of the peas before it is necessary to plow them under—or they might be used for pasture, or even cut for hay, if the plan be to follow with corn the next season. This plan of using cow-peas in a rotation of grain with corn is more practicable than to sow the cow-peas in the corn and follow again with corn. For the past two seasons we have carried on such an experiment, sowing the cow-peas about the time of the last cultivation of the corn, or a little later, when a special cultivation was given to cover the

(Continued on page 248.)

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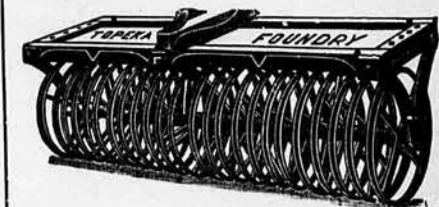
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RUPTURE CURED WHILE YOU WORK. YOU PAY AS YOU GO. NO CURE, NO PAY. 100c. PER WEEK. 25c. PER WEEK. 50c. PER WEEK. 1.00 PER WEEK. 2.00 PER WEEK. 3.00 PER WEEK. 4.00 PER WEEK. 5.00 PER WEEK. 6.00 PER WEEK. 7.00 PER WEEK. 8.00 PER WEEK. 9.00 PER WEEK. 10.00 PER WEEK. 11.00 PER WEEK. 12.00 PER WEEK. 13.00 PER WEEK. 14.00 PER WEEK. 15.00 PER WEEK. 16.00 PER WEEK. 17.00 PER WEEK. 18.00 PER WEEK. 19.00 PER WEEK. 20.00 PER WEEK. 21.00 PER WEEK. 22.00 PER WEEK. 23.00 PER WEEK. 24.00 PER WEEK. 25.00 PER WEEK. 26.00 PER WEEK. 27.00 PER WEEK. 28.00 PER WEEK. 29.00 PER WEEK. 30.00 PER WEEK. 31.00 PER WEEK. 32.00 PER WEEK. 33.00 PER WEEK. 34.00 PER WEEK. 35.00 PER WEEK. 36.00 PER WEEK. 37.00 PER WEEK. 38.00 PER WEEK. 39.00 PER WEEK. 40.00 PER WEEK. 41.00 PER WEEK. 42.00 PER WEEK. 43.00 PER WEEK. 44.00 PER WEEK. 45.00 PER WEEK. 46.00 PER WEEK. 47.00 PER WEEK. 48.00 PER WEEK. 49.00 PER WEEK. 50.00 PER WEEK. 51.00 PER WEEK. 52.00 PER WEEK. 53.00 PER WEEK. 54.00 PER WEEK. 55.00 PER WEEK. 56.00 PER WEEK. 57.00 PER WEEK. 58.00 PER WEEK. 59.00 PER WEEK. 60.00 PER WEEK. 61.00 PER WEEK. 62.00 PER WEEK. 63.00 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The Stock Interest

THOROUGH-BRED STOCK SALES.

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

March 2 and 3, 1905—C. A. Stannard, Giddell & Simpson, and others, Herefords, at Kansas City.
 March 2 and 3, 1905—J. E. Kemp, Nardin, Okla., Poland-China and Duroc-Jersey swine.
 March 7, 1905—Jacks, Jennets, and stallions, at Limestone Valley Farm, Smithton, Mo., L. M. Monsees & Sons proprietors.
 March 14, 1905—F. M. Gifford, Milford, Kans. Shorthorns at Manhattan, Kans.
 March 14, 1905—Poland-China bred sow sale Herbert Haub, Whiting, Kans.
 March 15, 1905—Shorthorn cattle, John McCoy & E. D. Ludwig, Sabetha, Kans., at Falls City, Neb.
 April 18-21, 1905—Blue Ribbon Cattle Sale at South Omaha. D. R. Mills, Des Moines, Ia., Manager.
 April 19, 1905—J. D. Stanley, Horton, Kans. Shorthorns.
 April 19, 1905—Closing out sale of Shorthorns J. D. Stanley, Horton, Kans.
 May 3, 1905—Heath Stock Ranch, Republican City, Neb. Shorthorns.
 May 2-4, 1905—Blue Ribbon Cattle Sale at Sioux City, Iowa. D. R. Mills, Des Moines, Ia., Manager.
 June 8-9, 1905—Blue Ribbon Cattle Sale at Kansas City, Mo. D. R. Mills, Des Moines, Ia., Manager.

Ring-bone and Spavin.

DR. C. L. BARNES.

Since olden times the term "ring-bone" has been used to indicate an enlargement around the coronary joint. This enlargement is hard, being a growth of bone, and in many cases forms a complete ring, hence the name. A ring-bone has a tendency to continue growing, and in rare cases attains the size of a man's head.

Causes.—Any conditions which favor sprains, such as fast driving over hard or uneven roads, unequal paring of the hoof, thus causing the weight to be unequally distributed in the joints, and severe labor in early life. In addition to these may be mentioned blows, bruises, or any injuries to tendons, ligaments or joints. There is no doubt that colts inherit a predisposition to ring-bones.

Symptoms.—Just as soon as the covering of the bone is bruised a liquid is poured out in the region of the injury. This inflammatory liquid hardens and forms the uneven growth known as a ring-bone. If the covering of the bone continues to be inflamed more growth is formed. Before the ring-bone has become chronic the disease passes unnoticed. If the abnormal growth of the bone is between the bones of a joint or if it tends to injure ligaments or tendons when they are moved, a ring-bone is very painful. On the other hand, a ring-bone may be very large and not cause very much annoyance, from the fact that it may not interfere with the free movement of ligaments or tendons or encroach on the gliding surface of a joint. In addition to the growth that can be readily seen, a horse affected with ring-bone is very lame when first taken out of the barn, but after moving for a few hundred yards gradually "works out of the lameness," as horsemen call it, but when allowed to stand and become cool and is then moved again, the lameness reappears.

Treatment.—Preventive treatment consists in keeping horses' feet trimmed properly, not overworking colts while young, careful driving on hard and uneven roads, and avoiding all injuries that are liable to strain tendons, ligaments and joints of the limbs.

Even after a ring-bone has developed it may be cured by proper treatment of the feet, and applying a fly blister. The fly blister is prepared by mixing one ounce of pulverized cantharides, one ounce of biniodide of mercury and eight ounces of lard. The hair is clipped over the ring-bone and the blister applied with considerable rubbing. The horse's head should be tied so as to avoid his biting the part blistered. A second application of the blister is to be used about a month after the first. If blistering fails to cure the ring-bone, point-firing may be resorted to. It is necessary to "fire" rather deeply to secure good results, care being taken not to fire into a joint. After firing, a fly blister should be rubbed into the holes where the hot iron has been used.

When all these methods have failed and the animal is not worth keeping for a long and uncertain treatment, a skilled veterinarian should be employed to perform an operation for the removal of the nerves supplying the

limb in the region of the ring-bone. After a horse has been operated on, great care should be taken of his feet, from the fact that there is no feeling in the foot operated on and serious results may come from stepping on nails, etc., and carrying them for many days before the driver would notice the foreign bodies.

SPAVIN.

This disease, known in common language as bone-spavin, is an enlargement of the hock joint similar to a ring-bone about the coronary joint. It may affect the hock joint in such a way as to cement the small joints together, not causing lameness and apparently no blemish but the free movement of the limb is impaired.

Causes.—In addition to the causes given for ring-bone may be mentioned sprains caused by jumping, galloping or trotting animals faster than they are accustomed to; also straining by starting a heavy load, slipping on an icy surface or sliding on a bad pavement.

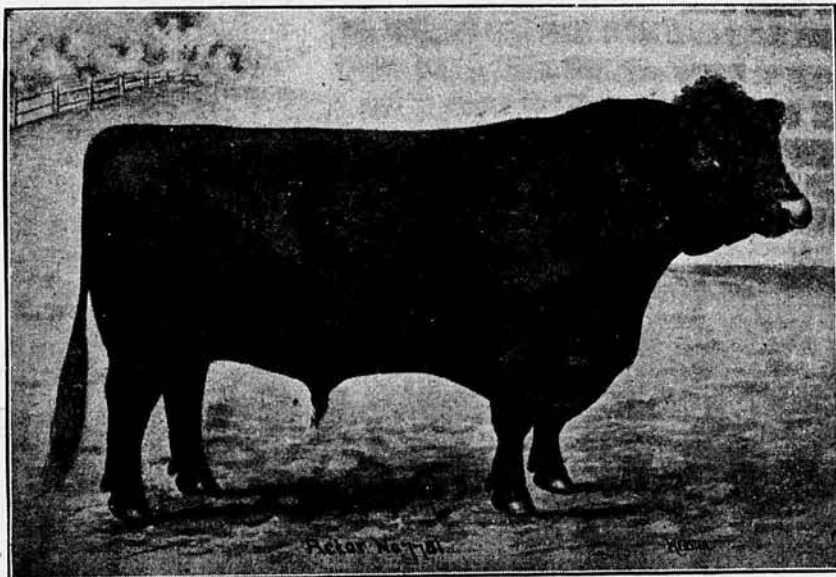
Symptoms.—If the patient is examined before any bony growth has developed, inflammation will be detected on the inside of the hock joint at the junction of the cannon bone and the

the contrary—mainly because most farmers do not put their brains into their business.

In many cases, all that is needed is to encourage the young man or woman—from 15 years of age upward—to attend meetings where improved methods of farming are discussed by those who know what they are talking about. Let a young man see the causes of some of the failures on his father's farm; how they can be avoided; how even good crops can be made better; how expense can be decreased and income increased; and how better prices can be secured, and he will be more inclined—much more inclined—to stick to the farm.

I submit that, by this time, the attendance at these State meetings ought to be large enough to fill the auditorium. Can not something be done to double or treble the attendance next year—especially of young people? Systematic organization accomplishes great things.

But I sat down to make a suggestion on another line. The paper by Professor Barber of the State University on "Is Bovine Tuberculosis Transmissible to Man?" and the discussion that followed its reading, deepened the



Red Polled bull, Actor 7781 at the head of Mr. Chas. Morrison's herd, Phillipsburg, Kans.

joint. While in the stable the horse prefers to rest the diseased leg by setting the heel on the toe of the opposite foot with the hock joint flexed. In traveling the patient is very lame when first taken out of the barn, but after traveling for a short distance goes sound. The diseased leg is not lifted clear from the ground, but nicks the toe in the middle of the stride, which is very noticeable on a pavement. Like a ring-bone, a spavined horse becomes very lame after being allowed to stand for even a very short time, then moved again.

Treatment.—The treatment for a spavin is the same as for a ring-bone. Manhattan, Kan., February 21, 1905.

A Quarantine Farm.

EDITOR KANSAS FARMER:—For the first time, I this year attended the sessions of the State Board of Agriculture; and, although I am not an agriculturist, I became intensely interested. As the real character and importance of these gatherings dawned upon me, I was surprised at the smallness of the attendance—and even more that there were so few young people present. I am unwilling to believe that the younger generation of Kansas farmers are less wide awake than their sires, and time and again the question was in my mind, Why are not the sons and daughters of these elder men and women in evidence?

The complaint is general among farmers that their children wish to leave the farm for the town, and the question is often asked, How can this tendency be counteracted? It seems to me that the surest way is to convince them that they can secure more happiness, make more money, and be more lastingly independent on the farm than anywhere else. As it is, all the evidence before their eyes is to

general conviction that bovine tuberculosis ought to be extirpated as soon as possible. As yet, no cure has been found for it; and the only certain ways to prevent its spread is to kill all diseased animals, or to keep them securely quarantined.

The farmer with only a few cattle can not afford to keep the diseased ones so separated from the others as to make infection impossible—and the most of them are unwilling to kill valuable cows that are apparently only slightly affected, and often refuses to have them tested. Moreover, the number of high-bred cows is still so small that it is important to increase their number instead of decreasing it. It is now generally admitted that there is no such thing as "inherited" disease, and it is therefore not necessary to kill cows, if their calves be taken from them at birth.

My suggestion is that some farmers should exchange their sound cows for tuberculous ones, and arrange with others to take their infected cows, on such terms as might be agreed upon, and keep all together where they could not mix with healthy animals. Their calves should, of course, be separated from their mothers before they have sucked, and brought up on pasteurized milk with other food, on a separate part of the farm—or even turned over to the owner of the cows.

Assuming that it is unnecessary to go into details, I will add only that the importance of increasing the number of well-bred cows as rapidly and largely as possible, and at the same time extirpating this dread disease, is so great that it seems to me local stock-breeders and agricultural societies should give it very serious attention. Fortunately, it is possible for nearly every neighborhood, where the people are broad-minded enough to act unitedly, to disinfect their own lo-



Warranted to give satisfaction.

GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeney, 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.

A TIMELY TIP ABOUT A DIP



DIPOLENE

When you buy a dip you expect to get results. But you don't expect to dip a dozen times. You want a dip that will quickly kill disease germs and parasites but not the stock nor damage the wool. You want a dip that's non-poisonous, pure, harmless; a dip that's good for sheep, hogs, horses, cattle. You want a dip that's as good a preventive as it is a cure, at a cost that is low. Dipolene is the dip you want. If you'd like to try it before you buy Free Sample. It sends for a free sample and test it at our expense. Send for "Dipping for Dollars"—a book every owner of stock will appreciate reading. It is free. MARSHALL OIL CO., Box 14, MARSHALLTOWN, IA.

Ring-Bone

So common nearly every body knows it when he sees it. Lameness, and a bony enlargement just above the hoof, higher and on the upper pastern bone, sometimes extending nearly around the part, sometimes in front only, or upon one or both sides. Cases like the latter are called Sidebone. No matter how old the case, how big the lump, how lame the horse, or what other treatment has failed, use

Fleming's Spavin and Ringbone Paste Use it under our guarantee—money refunded if it fails to make the horse go sound. Often takes off the bump, but we can't promise that. One to three 45-minute applications required and anyone can use it. Get all the particulars before ordering—write for Free Horse Book that tells you what to use for every kind of blemish that horses have. FLEMING BROS., Chemists, 212 Union Stock Yards, Chicago, Ill.



BEING A LADY

you have wondered what to do about some trouble you are having. I am almost certain of it. DR. MEYER'S big forty page book will tell you. It will be sent FREE for the asking. I have cured thousands with my VITA SYSTEM and I can cure you. You will see by my agreement (page 40 my book) that if I was not sure I could effect a cure I could not afford to take your case. Better write for my book to-day while the matter is fresh on your mind. DR. I. L. MEYER CO., 115 S. 6th St. Hiawatha, Kans.



Dana's White Ear Labels stamped with any name or address with consecutive numbers. I supply forty recording associations and thousands of practical farmers, breeders and veterinarians. Sample free. Agents Wanted. C. H. DANA, 62 Main St., West Lebanon, N. H.

IMMUNE HOGS

Immune your pigs by feeding virus to the sow costs 1 cent a pig and have their barn cholera-proof. ONE MILLION successful tests. Indorsed by thousands of able veterinarians and scientists; satisfaction guaranteed in writing, backed by \$10,000 security. Agents wanted. ROBERT RIDGEWAY, Box K Amboy, Ind.

cality; and it ought not to be difficult for them to find some one that would be willing to make this sort of work his business—that is, to manage a quarantine farm.
Is not this matter worth serious consideration? ALBERT GRIFFIN.
Shawnee County.

Stock-Judging Contest at Manhattan.

On March 20 the agricultural students of the Kansas State Agricultural College will hold their third annual stock-judging contest. The contest will be open to all agricultural students, and each contestant will be required to pass judgment on ten classes of stock.

Last year the businessmen of Manhattan gave gold medals to the winning students, and this year the swine-breeders of the State have been asked to lend a hand in this work. Up to the present time the following breeders have offered fine specimens from their respective herds:

C. A. Stannard, Emporia, Kans., Berkshire sow; Mrs. Henry Shrader, Wauneta, Kans., Duroc-Jersey boar; C. W. Frelove, Clyde, Kans., Tamworth sow; A. Munger, Manhattan, Kans., Poland-China sow; D. M. Grove, Almena, Kans., Berkshire sow.

A mass meeting of the agricultural students is being planned for on the evening of the 20th, and speakers from abroad will be present.

Central Kansas Duroc-Jersey Sales.

J. F. CHANDLER SALE.

The first sale of the Central Kansas Duroc-Jersey sale circuit was held by J. F. Chandler, Frankfort, Kans., on February 20, 1905. L. F. Burger, of Wellington, Kans., was the chief auctioneer for the entire circuit of four sales, assisted by local auctioneers, and as our reports show it was a successful series of sales. Thirty-nine sows and gilts sold for \$919.50, an average of \$23.58. The sale was topped at \$50 by the well-known breeder, H. W. Steinmeyer, Volland, Kans., for the fancy fall gilt by Royal Victor 16291 out of Hunt's Model 34052, a sister to Bessie H., that won first and sweepstakes at Nebraska 1903.

The list of purchasers was as follows: J. L. Davis, Ray Smith, Joseph Kennedy, Sam Renst, R. Maddox, W. H. Foster, Geo. Auld, Chas. Hill, D. Curry, Arthur Going, C. E. Pratt, James Sullivan, Leonard Tudor, Ollie Lutz, Arthur Young, C. Hill, A. J. Pickrell, all of Frankfort; J. W. Lewis, Washington; M. Stanlund, Axtell; Robert Thompson, Garrison; F. C. Carpenter, Alma, Neb.

JONES' ROYAL PURPLE SALE.

The second sale of the Central Kansas series was held at Concordia, on Tuesday, February 21, by John W. Jones & Co., Meredith, Kans., who made a very attractive offering from his famous fancy herd. There was a splendid attendance of breeders in person, and a number of leading breeders were represented by mail order bids. It was perhaps one of the most notable sales of Duroc-Jerseys during the year, and the offering was in splendid fix and the breeding met the expectation of all present.

The well-known breeder, Mr. H. W. Steinmeyer paid the top price of this sale for gilt No. 18, a spring gilt weighing 369 pounds, sired by Fancy Jumbo 17163 and out of Fancy Duchess 2d 62264. She was bred to Fancy Kantbeatme 24921 and brought an even \$100.

Thirty-two sows and gilts sold for \$1,275.50, an average of \$40. Not quite all of the animals catalogued were sold as the buyers present were supplied, but after the sale was over a number left were sold at from \$40 to \$50 each and are not included in the offering.

The complete list of purchasers is as follows: Frank Wagner, Concordia; H. W. Steinmeyer, Volland; G. W. Kinsey, Concordia; C. W. Taylor, Pearl; Harding Brothers, Richland; F. L. McClelland, Berryton; W. B. Doak, Concordia; Guy Williamson, Glasco; S. A. Doyne, Concordia; N. J. Watson, Vining; James Haley, Concordia; D. W. Kitzey, Minneapolis; C. Ireland, Chester, Neb.; T. J. Bagwell, Concordia; James Hey, Hope; A. G. Dorr, Osage City; A. E. Johnson, Aurora; A. J. Largent, Concordia.

The Steinmeyer Duroc-Jersey Sale.

At Alma, Kans., on February 23, was held a bred-sow sale of Duroc-Jerseys drawn from the Egypt Valley Herd of H. W. Steinmeyer, Volland, Kans. The animals consigned were good ones, well bred and in good, useful condition. They were bred to some one of the great herd boars, Union Chief 18841, Royal Lad 21671, Sir Buncheon 22311 or Egypt Lad. The crowd in attendance was fairly good in spite of the threatening weather.

Alma is the center of a rich agricultural region which is largely owned by prosperous and conservative German farmers. It is also the center of a region heretofore occupied by admirers of the black breeds, and where the Durocs are not well known nor fully appreciated. Added to this was the shortage and consequent high price of corn, and we have a statement of the conditions which confronted Col. L. F. Burger when he took the stand to open the sale.

We have seen Colonel Burger conduct many sales but we never saw him do harder or more acceptable work than on this occasion. The local farmers would not bid and the auction closed after the sale of 15 head at an average price of \$35.00.

After the sale Colonel Burger announced that the remaining hogs could be purchased at private treaty and we are glad to say that they were practically all

disposed of at satisfactory prices in this manner.

The top of the sale was brought by Best Susan by Golden King 15461, by Big Joe 7367, who went to J. C. Starr, Madison, Kans., for \$102.50. Other buyers were John W. Jones & Co., Delphos; J. W. Kretzer, Volland; Wm. Kleintzman, Volland; R. B. Marshall, Willard; F. S. Heldrick, Madison; J. F. Chandler, Frankfort; A. J. Moseley, Alma; L. L. Vrooman, Hope; Oscar Zecker, Alma.

W. A. Prewett's Hog Sale.

Another good Poland-China hog sale was held at Asherville, Kans., February 21. The weather was fine and a large crowd was present. Mr. Prewett is a royal entertainer. Everybody was well fed and during lunch time entertained by music furnished by the Asherville string band. The auctioneers were John Brennan, Eabon; R. E. Martin, Beloit; and J. V. Thompson, Simpson. The offering was a grand good one and every individual was in good condition.

F. L. Selgrist, Simpson, Kans., topped the sale at \$79, getting Maid of Prairie-dale (73948), a 2-year-old sow bred by C. M. Garver & Son, Abilene, Kans. The forty head sold averaged \$30, which was a very satisfactory average for the first sale. Mr. Prewett is making an enviable reputation as a breeder and his sales will no doubt grow better in the future.

1. G. R. Steere, Beloit.....	\$35.00
2. Wm. Frumer, Simpson.....	39.25
3. Wm. Breem, Smith Center.....	37.00
4. L. W. Faley, Beloit.....	31.50
5. F. D. Davidson, Simpson.....	50.00
6. W. A. Davidson, Simpson.....	33.00
7. F. L. Siegrist.....	20.00
8. Joy Bishop, Asherville.....	27.50
9. Leon Carter, Asherville.....	25.50
10. W. H. Sales, Simpson.....	20.50
11. Leon Carter.....	42.00
12. H. P. Wilson, Beloit.....	27.50
13. Wm. Rehmer, Asherville.....	22.50
14. B. F. Simpson, Simpson.....	20.00
15. B. F. Simpson.....	20.00
16. W. A. Davidson.....	28.00
17. J. G. Mace, Beloit.....	37.50
18. H. P. Wilson.....	26.50
19. J. H. Peden, Asherville.....	32.00
20. B. F. Simpson.....	34.00
21. G. M. Funk, Beloit.....	24.00
22. V. L. Smith, Beloit.....	26.00
23. V. L. Smith.....	31.00
24. B. F. Simpson.....	22.50
25. B. F. Simpson.....	27.50
26. J. W. Overman, Asherville.....	35.00
27. J. A. Gifford, Beloit.....	31.00
28. C. C. Slack, Asherville.....	32.50
29. B. F. Simpson.....	36.00
30. J. H. Peden.....	29.00
31. J. W. Overman.....	45.00

C. N. White's Poland-China Sale.

A fine day, a large crowd and an excellent offering combined to make C. N. White, of Bennington, Kans., a number one sale of Poland-China bred sows and gilts. It was a dispersion sale of a good herd. Mr. White had sold his farm and intended to quit the business, but since advertising his stock has decided upon another change and will immediately start a new herd. This will be good news to Poland-China breeders as they were loth to lose such a good man as Mr. White. John Brennan, of Eabon, Kans., and G. W. Barker, of Minneapolis did the selling. The twenty bred sows made an average of \$40 and the open gilts and small boars averaged about \$12. Taken all together it was an extra good sale and Mr. White may feel proud of his success. Miss Hard To Beat (85076) was the high-priced sow, going to O. W. Corsant, Niles, Kans., at \$71. She was sired by Hard To Beat and out of a Kansas Chief dam and was bred by C. M. Garver, Abilene, Kans. The principal sales were as follows:

Herd boar, Hard To Beat Jr. 35840.....	\$45.00
Geo. Kelfer, Beverly.....	338.00
2. Geo. Kelfer, Beverly.....	21.00
3. E. Doom, Bennington.....	35.00
4. Geo. Kelfer.....	34.00
5. Harry Tate, Bennington.....	34.50
6. Ira Sewell, Minneapolis.....	22.50
7. D. Wolfersperger, Lindsay.....	35.00
8. Jason Crow.....	47.50
9. G. W. Barker, Minneapolis.....	50.00
10. E. A. Greenough, Bennington.....	31.50
11. D. Wolfersperger.....	36.00
12. O. W. Corsant, Niles.....	71.00
13. Bert Hankinson, Culver.....	48.00
14. Wm. Korstadt, Bennington.....	32.50
15. Ed. Rice, Vine.....	50.00
16. E. A. Greenough.....	37.50
17. G. W. Barker.....	60.00
18. Ed. Rice.....	32.00


The Newton Sales.

The second annual sales of pure-bred cattle and swine at Newton, Kans., was held on Tuesday and Wednesday, February 21-22, 1905. As these sales had been very poorly advertised the breeders were conspicuous by their absence, though the crowd in attendance was fair. Under these conditions prices ruled low and the breeders were obliged to give away many animals though others brought fair prices. Many of the cattle were in quite thin flesh and some were very young.

Only one Galloway was sold. This was a bull who went for \$210 to J. C. Ashcraft, Sedgwick, Kans. Three Hereford bulls were sold at an average of \$38.33. Their buyers were Grant Cook, White Water; Chas. Molzen, Newton; and J. D. Dashner, Truesdale.

The Shorthorns in the sale numbered 48 and sold for a general average of \$46.86. The 19 females brought \$380, an average of \$46.31. Twenty-nine bulls sold for \$1,470, an average of \$50.61. The buyers of Shorthorns were J. D. Randall, Halstead; D. G. Shirk, Sedgwick; J. E. Smith, Halstead; W. G. Guthrie, Walton; H. S. Lincoln, Lawrence; W. G. Miller, Walton; S. R. McArthur, Newton; Frank Morrison, Newton; A. E. Whittaker, McLain; J. E. Newton; W. E. Johnson, Newton; Frank Huff, Newton; J. M. Steel, Newton; D. O. Keef, Newton; H. L. Ashcraft, Sedgwick; Jacob White, Newton; Cecil McArthur, Walton; M. Dreese, Halstead; U. S. Royer, Newton; Christ, Wright, Newton; Dan Harvey & Son, Halstead; D. M. Shirks, Truesdale; J. Drier, Hess; J. E. McKee, Newton; J. M. Hill, Halstead; W. B. Fulton, Newton; John M. Prouty, Newton; W. R. Peacock, Sedgwick; Fred Tangeman, Newton; S. P. Hargett, Peabody; Alex. Golden, White-water; Geo. Hollister, Sedgwick.

The second day was devoted to sell-



IOWA Stock Food

TRADE MARK

"EVIDENCE"


Mr. E. A. James, of Ewart, Iowa, writes as follows:
Iowa Stock Food Co., Jefferson, Iowa.
Gentlemen: I have been feeding Iowa Stock Food for four years to the amount of about 2,000 pounds yearly. I have tried my cattle with and without Stock Food and am confident I get a larger profit out of the Stock Food I feed than out of any other part of the rations.
I find Iowa Stock Food the equal in every respect of any Stock Food I have fed, and cheaper on account of its superior strength.

WHAT IOWA WORM POWDER WILL DO.
Perry Henderson, of Iltterberry, Ill., writes as follows.
Gentlemen: The Iowa Worm Powder you shipped me by express December 24, 1904, I received on December 26th. I went to feeding right away and there was no end to the worms that came from my hogs. Since feeding the Iowa Worm Powder I have been doing now.
I had 80 head of shoats and they were in bad shape. Since feeding the Iowa Worm Powder I have been doing now.
I had some of my neighbors use some of the Iowa Worm Powder and they got the best of results from it. I got a man to use it who was using another worm remedy, and says he will not use the other any more. I wish you could have seen the worms that rased from his hogs. It was a sight. I advised him to feed Iowa Stock Food to keep his hogs gaining better.

* Write us, care of Dept. E, and get our Special Offer.

IOWA Stock Food Co.

Jefferson, Iowa.



DIP AND BOOK FREE

Our book "The Dipping Proposition" telling how to dip, when to dip, why to dip, what to dip, and a sample of the dip to dip with, will be sent free, charges prepaid, to any stockman or farmer who will write for them. We want to demonstrate to you by your own actual experience with

CARBOLEUM DIP

that it is far superior to anything known for scab, mange, lice, ticks, and other parasites. We want you to know it by actual test at our expense. We also send free complete set of plans for home-made dipping vats. Trial gallon Carbolem Dip \$1.50, express prepaid. Enough to make 100 gallons ready to use. Dipping tanks at cost.

Prescott Chemical Co., 1694 Pearl St., Cleveland, O.

PREVENTS BLACKLEG

Vaccination with BLACKLEGIDS is the best preventive of Blackleg—simplest, safest, surest. Each BLACKLEGID (or pill) is a dose, and you can vaccinate in one minute with our Blacklegid Injector.

Every lot tested on animals, before being marketed, to insure its purity and activity.

For sale by druggists. Literature free—write for it.

PARKE, DAVIS & CO.

HOME OFFICES AND LABORATORIES: DETROIT, MICH.
BRANCHES: NEW YORK, CHICAGO, ST. LOUIS, BOSTON, BALTIMORE, NEW ORLEANS, KANSAS CITY, INDIANAPOLIS, MINNEAPOLIS, MEMPHIS.

Farmers and Breeders!

We Will Insure Your Hogs Against Death by Cholera

And other malignant blood diseases. Don't waste time and money experimenting with cheap stock food. Use a medicine prepared especially for the hog. Twenty years' test without a failure. We run all risk and in case THE GERMAN SWINE POWDERS fail to eradicate the disease from your herd, we refund your money. The greatest conditioner and growth-promoter ever discovered, and the biggest money-maker for hog-risers known. Prices: 100 lbs., \$25; 25 lbs., \$7; 10 lbs., \$3; 5 lbs., \$1.75; 2 1/2 lbs., \$1. Send for our Treatise on Swine—its free. Make all checks and drafts payable to

LON ELLER, Manager and Proprietor of
The German Swine and Poultry Merchandise Co., Topeka, Kans.

Blacklegine

BEST AND MOST CONVENIENT VACCINE FOR BLACK LEG.

PASTEUR VACCINE CO

CHICAGO
SAN FRANCISCO

KARSOLENE DIP

For CATTLE, SHEEP Swine, Poultry

Karsolene Disinfecting Dip is a scientific preparation made from a Creosote base, combined with other chemicals. Is sure death to lice, and small vermin of all kinds; will not burn or irritate the most tender skin. Cures all skin diseases and promotes health. Sold on a positive guarantee.

We will send a free sample of Karsolene Dip—you can give it a trial before you buy. Write today for the sample and catalogue giving directions and prices.

STOCKMAN'S MERCANTILE COMPANY, 1504 W. 12th St., Kansas City, Mo.

PILES

NO MONEY TILL CURED. 27 YEARS ESTABLISHED.

We send FREE and postpaid a 232-page treatise on Piles, Fistula and Diseases of the Rectum; also 108-page illus. treatise on Diseases of Women. Of the thousands cured by our mild method, none paid a cent till cured—we furnish their names on application.

8969 Olive Street, St. Louis, Mo.
DRS. THORNTON & MINOR, and 1007 Oak St., Kansas City, Mo.

ing of hogs. One O. I. C. boar brought \$34. Five Duroc-Jersey boars averaged \$7.80. Three Berkshire boars averaged \$9, and two gilts averaged \$37. Twelve Poland-China boars averaged \$14.50, and 37 females averaged \$17.50, or a general average for 49 Poland-Chinas of \$16.77. The buyers of Duroc-Jerseys were Geo. Huff, Newton; J. M. Rebstock, Newton; Wm. Dieble, Hesston; H. Miller, Newton. The Berkshire buyers were H. E. Griffin, Sedgwick; J. S. Zook, Newton; S. F. Baumgartner, Newton; E. M. Shirks, Truesdale. Those who bought Poland-Chinas were C. Winstolt, Newton; L. Egly, Newton; Daniel Jones, Moundridge; S. A. Stonkard, Whitewater; F. Shiffer, Newton; D. G. Miller, Newton; E. H. Byder, Newton; M. M. Weaver, Newton; Jacob Spies, Sedgwick; A. A. Vesper, Newton; L. J. Patton, Newton; Ben Miller, Truesdale; Lee Stewart, Sedgwick; Frank Morrison, Newton; D. Jones, Moundridge; G. C. Cook, Whitewater; J. E. McKee, Newton; Cecil McArthur, Walton; Jacob White, Newton; Andrew Hendricks, Halstead; Chas. Bellows, Hesston; I. B. Good, Peabody; J. F. Bell, Newton; C. A. Seaman, Sedgwick; D. Stratton, Walton; E. H. Biler, Newton; U. S. Shirks, Truesdale; U. S. Royer, Newton; Jacob Stapp, Newton; A. M. Chambers, Newton; R. M. Weaver, Newton; Jas. Stewart, Newton; G. F. Wagner, Peabody; Roy Haub, Newton.

Duroc-Jersey Sale Postponed.

Geo. Briggs & Son, Clay Center, Neb., writes: "On account of snow blockades, we were obliged to postpone our sale from February 6 to March 11. On that date we will put up the same offering. These sows are just in prime breeding condition, and are growing nicely and getting plenty of exercise. They are sired by Improver 2d 13365, Higgins' Model 3251, and Red Chief 1 Am 7693; each of these males have records that will stand with any sires of the breed."

"In the Bowman and Fitch sale February 22, a half-interest in Improver 2d sold for \$300, which we believe is the highest price ever paid for a Duroc-Jersey boar; both Higgins' Model and Red Chief 1 Am produced sweepstakes winners at State fairs last fall. These sows are bred to the above-mentioned males, 10 to Improver. To assist these we have Boone 27409, a son of Cole's Duroc that sold for \$405; Belle's Prince, a son of Morton Prince; Duroc Chief, a son of Red Chief 1 Am. We have aimed to mate these right, and the cross of Improver on Higgins' Model and Red Chief 1 Am sows will certainly be a winner. Although late in the season, these sows will be less expensive to the buyer, and he can tell more about what he is getting. We hope to see you all at the sale, and we will try and entertain you right at our expense. If you can not come, send a mail bid to Colonel Callahan, in our care, and it will be fairly treated."

Ohio Poland-China Record.

Annual meeting of the Ohio Poland-China Record Company held in Dayton, Ohio, January 25, 1905. Following board of directors were elected: L. C. Nixon, Lebanon, Ohio; W. C. Hankinson, Middletown, Ohio; J. H. Lackey, Jamestown, Ohio; J. W. Williams, Briant, Ind.; J. M. Klever, Bloomingsburg, Ohio; F. G. Shuey, Camden, Ohio; J. L. Aspey, Geneva, Ind.; which board elected the following officers:

L. C. Nixon, president, Lebanon, Ohio; W. C. Hankinson, vice-president, Middletown, Ohio; A. M. Brown, secretary, Dayton, Ohio; J. H. Lackey, treasurer, Jamestown, Ohio.

The executive committee is composed of J. M. Klever, W. C. Hankinson, and J. L. Aspey. The report of the executive committee showed that volumes 25 and 26 had both been completed in the past year and that the financial condition of the company was better than it had been for some years.

That pedigrees for volume 27 are being rapidly received and that the same will be closed before long. Directors declared a dividend of volume to the stockholders, as has been the custom heretofore.

Clay, Robinson & Co.

Among the live stock commission firms at the various markets, there are none which have done more for the feeders and shippers than Clay, Robinson & Co. That they are the leaders in their line goes without saying. They are well equipped for handling live-stock business, and their business has increased to such an extent that in 1896 they employed five people, and occupied 212 square feet of floor space, while to-day they employ 152 people, and occupy 10,599 square feet of floor space. The cause for this great increase of business is due to their careful attention to business and efficient service and quick returns. The salesmen employed by this firm are experts in their line, therefore when stock is shipped to them you can rest assured that the best prices will be your result. The man with one car-load receives the same consideration as the man with 100 car-loads. Those of our readers who are thinking of shipping stock should not fail to call on Clay, Robinson & Co. Those who want some feeders, write them and they will be able to supply your wants. Read their advertisement on back cover this week. We can cheerfully recommend them to any of our readers.

Gifford's Elmwood Shorthorns.

If you have not already sent for a catalogue of the twenty-first annual sale of Elmwood Shorthorns, to be held at Manhattan, Kans., March 14, write at once to F. M. Gifford, Wakefield, Kans. As stated in last week's paper, the offering of sixteen bulls is unquestionably the lot ever offered by a single breeder at a public sale anywhere in the West during recent years. Almost every one is good enough to go at head of a pure-bred herd. The female offering, consisting of young cows and heifers, is a particularly attractive lot, eight of which are bred to the present herd bull, Missie's Hero 2d 188919. The other cows and heifers are bred to King's Guard and the young bull, Collector No. 1 in the catalogue. This young bull is sired by Red Gauntlet, one of the most famous sires of bulls in the West and is out of a Red Knight cow, and is a herd-header and show bull anywhere. The entire offering of females is

Scotch or Scotch-topped on best American families, a number of the best Bates foundation. Further particulars about special attractions will be given next week.

The Haub Poland-China Sale.

Mr. Herbert Haub, Whiting, Kans., is a former student of the Kansas Agricultural College who went from the college direct to the farm to invest the capital acquired in the way of an education where it would bring the largest returns. In order to accomplish this he at once engaged in the breeding of pure-bred stock. His choice of breeds fell upon that old and time-tried combination—Poland-China swine and Shorthorn cattle. These he has bred with success for a number of years past and has held a number of successful sales. He has also been a liberal buyer of the best and is now able to announce another of his annual Poland-China sales, the animals contributed to which are the best he has ever offered. From personal knowledge the writer knows that the breeding lines in this herd are of the best and Mr. Haub assures us that his hogs will go into the sale ring in good condition. His advertisement is on page 255 and his catalogues are free.

Dispersion of Maple Grove Duroc-Jerseys.

On account of having sold the Maple Grove Stock Farm, Dulaney & De Brot, Route 1, Wichita, Kans., are advertising a closing-out sale of their entire herd of Duroc-Jersey hogs, to be held at their farm north of Wichita, on Tuesday, March 14, 1905. This is a notable herd, strong in the blood of Royal Topnotcher, I Am Perfection, and Hard To Beat, and it will be an unusual opportunity for breeders and farmers to secure desirable foundation stock and young stock at their own figures, as about 150 head in all will be sold without reserve to the highest bidder. Mr. Dulaney of this firm is manager of the Wichita Stock Yards and has taken great pride in building up a creditable herd. And under the circumstances this should be the bargain sale of Duroc-Jerseys of the season. For further particulars, address as above.

American Berkshire Record.

Volume 23, American Berkshire Record, contains pedigrees from 75,001 to 80,000. It also contains a list of transfers of animals sold, whose pedigrees are recorded in previous volumes; indexes to breeders, owners and animals, rules of entry, etc. This volume also contains a list of the awards in the Berkshire classes, at the late Universal Exposition, St. Louis, Mo. The book is sent free to members, or to non-members for \$1. Address, Frank S. Springer, Secretary, American Berkshire Association, Springfield, Ill.

Gossip About Stock.

Hon. Edwin Taylor, of Edwardsville, visited the Buchanan Stock Farm at Sedalia, Mo., last Saturday, and brought home two of their best Duroc-Jersey gilts.

W. B. Van Horn, the big Poland-China breeder at Lone Star, Kans., has removed to Overbrook and desires that all communications be addressed to him at that point hereafter.

We call special attention to the advertisement of L. C. Wymer in this issue, of Jacks and Standard-bred horses. In need of anything of this kind, you should not fail to write Mr. Wymer.

The Kansas Farmer acknowledges the receipt of the American Galloway Herd Book Vol. XIV. It contains records of cattle numbers 23001-25000. Also a list of State and National premium awards, dating back to 1886.

Vol. XXXVI of the American Poland-China Record, is out. It is a book of 1039 pages, elaborately indexed and contains record of pedigrees of noted boars numbering 85751-88557. The sows are numbered 217546-223804. It also contains a record of individual and of herd transfers.

G. D. Willems, Inman, Kans., has just added a sow to his herd of Berkshires that ought to bring him something nice. She is Lady Biltmore by Elma King 66056, out of Imp. Britania of Biltmore 2d 59487, and is safe in pig to Lee's Highclere 80567. Her litter sister sold for \$141 at the Hope sale and Mr. Willems thinks he has the better sow.

Attention of O. I. C. hog men is called to the advertisement in this issue of A. G. McQuiddy of Newton, Kans. Mr. McQuiddy has some of the best O. I. C.'s to be found in the West, being descendants from the famous "Silver" herd of Cleveland, Ohio. If you are in need of the white hog, don't forget to write Mr. McQuiddy for descriptions and prices.

We call our readers' attention to the advertisement of Dave Stratton, of Wilton, Kans., in this issue of the Kansas Farmer. If you are in need of some fine Poland-China stock you should investigate Mr. Stratton's offering. Mr. Stratton was a contributor to the Harvey County Breeders' Association sale at Newton last week and received some very flattering prices. Among his contributions was a very fine gilt which farrowed eight nice pigs while at the sale and sold for \$25.

The Wichita Red Polled cattle sale will be held on Thursday, March 9, at 1 o'clock p. m., at the Riverside sale barn, one block west of the Missouri Pacific depot. This sale will be made up of animals contributed by L. K. Haseltine, Springfield, Mo., and other breeders. So far as the writer is informed this will be the first Red Polled sale in Kansas, and farmers and breeders who are admirers of this popular dual-purpose breed should arrange to be present. The advertisement is on page 255.

Again the doddies score. In the three days' dispersion sale of E. Reynolds & Son, Prophetstown, Ill., at Dexter Park, Chicago, 131 head of Aberdeen-Angus cattle were sold for a total of \$19,810, average, \$150.15. The top of the sale was brought by the cow, Heather Bloom Eclipse, who sold for \$630. The highest priced bull was Matilda's Pride, who sold

for \$450. In view of the fact that this was a dispersion sale the prices realized may be considered very satisfactory.

Mr. O. P. Updegraff, proprietor of the Riverside Stock Farm, Topeka, having leased Riverside Farm, will make a closing-out sale on Thursday, March 9, 1905, commencing at 10 o'clock sharp. The offering consists of two aged standard-bred stallions, one 4-year-old stallion, brood mares, work teams, driving horses, Standard-bred mares, fillies and colts. Also, registered Berkshire boar, six sows with pigs, and twenty-five fall gilts, all purebred. In addition to the stock there will be a lot of farm implements, buggies, break carts and other vehicles.

Breeders of Berkshires should not fail to read the advertisement of J. P. Sands & Sons, Walton, Kans. Our representative had the pleasure of meeting Mr. Sands at the sale of the Harvey County Breeders' Association sale at Newton, February 21 and 22. Mr. Sands was one of the contributors at this sale. He topped the hog sale with his gilts, Mable and Mamie, sired by Elma's Lee 2d 78784, dam Mina 80565. These gilts were sold to H. E. Griffin, Sedgwick, Kans., for \$37 each. Parties wanting good Berkshires should not fail to write Mr. Sands for prices.

Leon Carter, of Asherville, Kans., begins a small card in this number. Mr. Carter is starting a Duroc-Jersey herd of swine, and while he has nothing to sell at present he believes in getting his sign out early and will be prepared to supply gilt-edged stock a little later in the year. Nothing but the best goes into this herd. A recent purchase was Bright Lillie 2d, the top sow of W. F. Garrett's sale. She was by Echo King and he by Sensation, both noted prize-winners. The later boar's dam was the champion Duroc sow of the United States. Another sow is Lady Long, brought from Nebraska. Two boars from her last litter sold for \$200.

Chas. Dorr, of Osage City, Kans., of the Gold Standard Herd of Duroc-Jersey swine, makes a change in his ad. this week. He is sold out of gilts bred, and has nothing to sell but twelve good boars, large and big-boned fellows. Last week five of his sows farrowed fifty-five pigs, which speaks well of his herd as a prolific one. He will also book orders for pigs at weaning time very cheap. He has this winter shipped hogs to Mississippi, Arkansas, Tennessee, Louisiana, Oklahoma, Indian Territory, Missouri, Colorado, Illinois, Indiana, Texas, Iowa, Alabama, Mexico, and all over Kansas, and if it were not for the high express rates could, without doubt, have shipped to six other States.

After the record-breaking sale of Percherons made by the Whitewater Falls Stock Farm at Wichita, Kans., on February 1, Messrs. J. W. & J. C. Robison, Towanda, Kans., went right on doing business. After selling two fine young stallions to other parties they sold an extra good one to the Kansas State Agricultural College for their use both in breeding and as an object lesson for the students in stock-judging. The choice young stallion, Hyatt 41024, who had been selected to head the Robison's show-herd of 1905, was sold to Mr. S. C. Hanna, of Howard, Kans., to head his fine herd. This is one of the best young Percheron stallions ever owned by the Robisons and, as he traces close to the noted Besique, he ought to make an exceptional cross on Mr. Hanna's fine herd of brood mares. There are still a number of extra good black mares and stallions for sale at Whitewater Falls Stock Farm. Write Messrs. Robison.

A Fire Department in Your Own Home at Low Cost. Protection Assured and Guaranteed. Endorsed by Fire Insurance Writers and Chiefs of Fire Departments Everywhere.

For one dollar, I will send postpaid to any address, my full and complete formula for making and using my celebrated dry powder fire extinguisher, the materials for which can be purchased from any druggist for a few cents per pound. So simple a child can operate them. Protect your homes, farm and ranch buildings, oil derricks and other structures. Don't pay extravagant prices for extinguishers not a whit better than mine. Its effects are instantaneous and certain. Entirely safe and as harmless as sugar to anything except fire which it destroys in the twinkling of an eye. Made in a few minutes at your home. Always ready. Never deteriorates. Keeps indefinitely in any climate. Supply your neighbors and others at a handsome profit. Splendid opportunity for farm boys to make some extra spending money. Don't delay. This offer may not appear again. Order to-day. You can not afford to be without this protection. Address, J. R. Lusk, Topeka, Kans.

Hog Cholera.

You can read the little book, "No Hog Cholera Any More," by Albert Theyson, English or German, price 25 cents, and try the remedy which is a preventive and sure cure for the disease, by ordering a copy.

If you find any misrepresentation in the book and are therefore dissatisfied, return it with your name on the wrapper, and call for your money. It will be refunded right away.

Enclose the amount in money order, or stamps, and address Kansas Farmer Company, Topeka, Kans.

Enclosed find \$..... in money order, stamps for "No Hog Cholera Any More."

Name
Address

For Your Face's Sake

use nothing but the famous, old reliable, soothing and healing

WILLIAMS' SHAVING SOAP

Sold everywhere. Free trial sample for 2-cent stamp. Write for "The Shavers Guide and how to Dress Correctly."

The J. B. Williams Co., Glastonbury, Conn.

NOT A FAILURE

In Twenty-Five Years.

There may be some better criterion of the value of an article than the "test of time," but if there is we do not know of it.

Kendall's Spavin Cure

has stood this "test of time" and is more popular to-day than ever before. Unequalled for Spavin, Ring Bone, Curb, Splint and all forms of Lameness. Read the unsought endorsement of others and then act for yourself.

Tippecanoe, Ind., February 14, 1903.

Dr. B. J. Kendall Co., Enosburg Falls, Vt.

Gentlemen—I have been using your remedies for about twenty-five years with success. I keep your Spavin Cure all the time. I have never known of a single failure where it was used according to directions. I think it is the greatest remedy on earth for what you recommend it. I can tell of a number of cases where it was used that got well in a few days that seemed almost hopeless. Please mail me your "Treatise."

Very truly yours,

A. B. WALDEN.

Price, \$1; six for \$5. As a liniment for family use it has no equal. Ask your druggist for Kendall's Spavin Cure, also "A Treatise on the Horse," the book free, or address,

DR. B. J. KENDALL COMPANY,
Enosburg Falls, Vt.



Little Things That Count

It's lice, mites, scurvy, mange and skin diseases that knock out the profits on hogs, cattle and other live stock. Keep your animals healthy by using

CAR-SUL DIP

The Great Disinfectant Dip THAT IS GUARANTEED.

Prevents disease, promotes health and growth. Positively does not injure the eyes, burn the skin or gum the hair. Endorsed by leading hog and cattle men. Send for free book.

Moore Chemical & Mfg. Co.,
1507 Genesee St., KANSAS CITY, MO.

WHY GET SOAKED
WHEN 143
TOWER'S
FISH BRAND
OILED CLOTHING
BLACK OR YELLOW
WILL KEEP YOU DRY
IN THE
HARDEST STORM!
ON SALE EVERYWHERE.
LOOK FOR ABOVE TRADE MARK. BEWARE OF IMITATIONS.
SHOWING FULL LINE OF GARMENTS AND HATS.
A. J. TOWER CO., BOSTON, MASS., U.S.A.
TOWER CANADIAN CO., LTD., TORONTO, CANADA.

PINK EYE CURE FOR HORSES AND CATTLE.

Sure relief for Pink Eye, foreign irritating substances, clears the eyes of Horses and Cattle when quite milky. Sent prepaid for the price, \$1.00.

Address orders to W. O. THURSTON,
Elmdale, Kansas.

LUMP JAW No Cure No Pay.

W. S. Sneed, Sedalia, Mo., cured four steers of lump jaw with one application to each steer; and J. A. Keeseman, Osborn, Mo., cured three cases with one application to each. Hundreds of similar testimonials on hand. Full particulars by mail. Write to CHARLES E. HARTLEY, Columbus, Kansas.

STOLL'S STAY-THERE EAR MARK.

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

DEATH TO HEAVES
Guaranteed
NEWTON'S Heave, Cough, Distemper and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strongly recommended. \$1.00 per cat. Dealers. Mailing Ex. paid. The Newton Remedy Co., Toledo, Ohio.

The Young Folks

CONDUCTED BY RUTH COWGILL.

Graduatn'.

Sis is goin' to graduate;
Mother works till off at late;
Got a lot of wimmen, too;
Guess they never will get through.
Gemmune! when they all come
How that old machine does hum!
Every woman sits and sews,
Makin' graduatin' cloze.

Sis is goin' to graduate;
Things is in an off state;
Cloze is piled up six feet deep;
Ain't no place to eat or sleep.
Things is lyin' on the chairs,
Tables, bed, an' everywhere;
Every place a feller goes
Has to keep away from cloze.

Sis is goin' to graduate;
She's shopping at a fearful rate,
Buyin' hats an' gloves an' shoes,
Lace an' handkerchiefs—jest sloughs
Never gets to school no more,
Graduatn' such a bore;
Keeps her busy makin' bows
For her graduatin' cloze.

Sis is goin' to graduate;
Geel! It must be sometin' great!
Relatives'll all be here,
Stringin' in fr'm far an' near;
Rushin' in an' runnin' out,
Can't find what it's all about,
But from what I see I s'pose
Graduatn' just means cloze.

—Council Bluffs Nonpareil.

Miss Dean's Last Talk.

Dear Dorothy:—In this, my last letter before you come to me so that I can speak to you without the labor of writing, I want to talk about a very great and important thing. Indeed, it is the whole, of which my other letters have been mere parts. Culture is a word much overworked nowadays, and, consequently, as all good words may, it has lost caste. The people who are most familiar with it, use the word the least. In this one particular the lowest and the highest classes come together. The lowest do not speak of it because they do not know of it. The highest forget it because it is a part of them, and therefore taken for granted.

The result of real culture is the turning of the thought quite away from self. The self-centered person is never cultured. The ability to think of things and people as quite apart from their relation to ourselves is the result of culture. To think impersonally is the peculiar privilege of the cultivated mind. I have spoken to you before of old Johnson Gardiner. He really is a remarkable man, my dear. He has—I know you will not believe me—but he has culture. Yes, I know he uses peculiar grammar, that he has never traveled, that he never reads except his Bible. If you were to talk to him of art and music and literature, he would look at you blankly as if you were speaking in Greek. But, my dear, if you were to speak of the birds and their songs, the sound of the distant train or the harmony of all the sounds which come to him in the fields, softened by distance, you would realize that he is a musician; or if he but saw you looking in real pleasure at the sunset sky, or at the wind-bent grain field, he would begin to talk of it as one poet talks to another. I know, for I have experienced it.

Did I not say the word culture has almost fallen into disrepute? The reason is just this, that people are beginning to use it for the shell, rather than the heart, of the real thing. The appearance of possessing it is desired more earnestly than the reality. Even you, my dear, are more eager for "accomplishments" than for character. Accomplishments amount to nothing unless they are merely the outward sign of an inward development. You write to me now and again, asking, Do cultured people do this, or that? It makes no difference what they do. Culture is much more a matter of character than of manner. A cultured person is courteous, because that courtesy is an expression of his real kindness, not because such and such manners are considered the thing for a person of his kind; he reads certain books because in them he finds what helps and pleases him, not because everybody is reading them.

You see, you, like a great many other young people who are just beginning to observe and discriminate, mistake the real meaning of this thing we

call culture. There are a great many people in the world who have polish, a certain veneering of education, which passes among certain people for culture, but it is no more valuable than plated jewelry or paste diamonds.

I want you, my sweet little niece, to avoid this cheap imitation. I want you to be the real thing, lovely within as without.

Does my little lecture sound rather formidable? Well, my dear, it need not. You have only to live the sweet, clean, simple life that can so easily be yours, and keep your mind and heart pure and free from sham and full of the thought of the great world, away from yourself and abroad with nature and humanity, and you will at once begin to grow into the beautiful ideal I have for you.

You remind me of my promise to talk again of books. There is one class of books which I have hesitated to recommend to you, because I remember that I used to dread the very name "history." I thought of it as dry and uninteresting matter, dealing with a past in which I had no part nor interest. It is not so, my dear, at all. Nowadays the histories are written in so noble a style that there is pleasure in reading them. Besides, we have learned to realize that history concerns us very nearly. For it tells us of the events and the struggles and the growth that have made us what we are. I should like you to read not only the history of your country, but, a little at a time, the history of all the nations of the world. If you begin, you will soon learn to love such reading. And in such ways as this, you will be able to acquire that education which your father is not able to send you to college to get.

But do not think that I want you to take your reading too seriously. The books I mentioned in the last letter were all very serious books. It is only against what is inferior and worthless that I wished to warn you. There are gay books, light books, humorous books, which are delicious, and which I should be sorry to see you missing. One does not always feel equal to George Elliott, or Browning, or Motley. There are a good many among our own American writers who will please you at such times—Ruth McEnery Stuart, Thomas Bailey Aldrich, Louisa M. Alcott, F. Marion Crawford, Thomas Nelson Page, James Lane Allen, and a great many others. I can not begin to tell you what to read and what not to read. I can only suggest now and then, and you must choose what seems to you best. Really, all my advice amounts to, is simply this, Be thoughtful and choose the best.

It is with pleasure that I close this long series of letters, knowing that I shall soon see you and we can have long talks together. Till then, farewell.

DOROTHY DEAN.

John Brown.

John Brown was a famous Kansan. While not a native of Kansas he was dear to the hearts of all Kansans. He was born in Torrington, Conn., May 9, 1800. At the time he migrated to Kansas he was 55 years of age. He walked beside his wagon and shot game for food. He reached Pottawatomie Creek on October 6, 1855. He was generally known as "Osawatimie Brown." His first public appearance was at Lawrence in December, 1855. His views were strongly in favor of anti-slavery. On the night of May 24, 1856, five pro-slavery settlers were killed. This massacre is known as the "Pottawatomie Massacre." When asked by his son, Jason B., "Father, did you have anything to do with that bloody affair on Pottawatomie Creek?" he said, "I approved it."

He did not aspire to civic or military leadership, but with a small, chosen force kept the prairie, attacking and attacked.

In February of the next year he appeared before a committee of the Massachusetts Legislature and told of the sufferings of the people of Kansas. After this Eastern visit he appeared again in Kansas and made a raid into Missouri and brought out fourteen slaves. Large rewards were

offered for his capture. An attempt was made at Holton, Kans., but it was a failure.

From Missouri, he reached Canada with twelve fugitive slaves. The remainder of his history belongs to that of the country and of the world. On the night of October 16, 1859, there was a raid known as the "John Brown raid." He, with a band of 21 followers, crossed into Virginia at Harper's Ferry. Their purpose was to incite insurrection of the slaves. The warning was soon given throughout the entire country. General Robert E. Lee ordered a part of the militia to go to Harper's Ferry. John Brown and his followers meanwhile had taken refuge in a stone engine house. Perceiving the situation, Lee sent one of his lieutenants to order him to surrender. Brown refused to do so but asked for an opportunity to fight in the open. Finding that nothing but force would do, Lee ordered the assault.

The men rushed upon the house. They threw down the doors of the engine-house and captured the inmates. His party had lost several men killed and wounded, and he was severely wounded. They were given over to the United States Court to be tried in Washington. Virginia begged to have him as he had gone contrary to the laws of that State, and the request was granted. John Brown with six of his men were condemned to be hanged. The sentence was carried out on December 2, 1859.

In Kansas the name of John Brown is held in reverence in many ways, both by the old who have seen his face and by the young who have but heard his name.

Because of the way he was put to death he has been looked upon as a martyr by those who sympathize with his aspirations and purposes. His death served only to increase the resentment between the Northern and Southern States and "To kindle the sparks of hatred into flames of anger." Argonia, Kans. MADGE SCHREIER. Age 11 years.

Among the contributors to the group of articles on "Market, Farm and Home," which the Youth's Companion is printing, is Prof. W. T. Sedgwick, of the Massachusetts Institute of Technology. In the Companion for February 16 he offers some most important suggestions with regard to the "Sanitation of the Farm." The first article in this series, "New Fields for Young Farmers," by Prof. B. T. Gallo-way, has aroused so much interest and inquiry that it is to be republished in pamphlet form.

For the Little Ones

Smarty!

O, Sarah Jane, you think you're smart
'Cause you learn pomes and things by heart,
An' multiply by mor'n two,
An' read a sentence right straight through,

An' stan' up there so big an' proud
A-speakin' pieces, awful loud!
That's showin' off! Don't you suppose
That you know half my aunty knows!

You never 'magine half the tales
She tells! an' 'en she never fails
To answer questions—all you please—
'Bout birds or animals or trees,
'Er what's inside of you—er what
Is in the earth. She'll know it—but
She wouldn't think of makin' shows!
No one can tell how much she knows!

So when you're talkin' loud again
Jes you remember, Sarah Jane,
That though you're higher up 'an me,
You've got a heap to learn an' see!
I don't care if you are ahead,
'Cause aunty knows so much! She said
That real smart people don't make shows;
She don't! an' my! what aunty knows!

—Minnie Maud Hanft, in Harper's.

The Fagot-Gatherer.

FLORELLA ESTES, IN CONGREGATIONALIST AND CHRISTIAN WORLD.

Once upon a time there lived an Old Woman in a hut on the edge of a pine forest. The hut was small and old, with a thatched roof, a broken window and a rickety door. The Old Woman was alone and forgotten by the world, and very poor. Her only means of support were the pine fagots which she gathered in the forest. These she carried to town and sold for the little

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Oliver Typewriter Co. whereby we can furnish their regular up-to-date \$100 machines to Farmers and Breeders at a greatly reduced price.

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Topeka, Kans.

money which bought her coarse bread. She eked out her food with the herbs of the field and gathered her firewood in the forest. But she was very, very old, and weak; her back was bent, and the town was far away; so it often befell that her bread was scanty and the hearthstone of her miserable little hut was cold. Weighed to earth by the burden of her lonely and loveless lot, by the feebleness of age, and by hunger and cold, no wonder she thought night and day only of her own wretchedness.

One day, at nightfall, when the Old Woman returned from the forest with a load of fagots on her back, she found by the door of her hut a half-starved cat, mewing piteously. She carried the cat into the hut, fed it and gave it a comfortable bed of straw. All the while she was thinking:

"I will feed and shelter this cat because it will be useful to me. It will rid the hut of the rats that overrun it, and besides, it will be company for me."

But when she awoke the next morning, lo! the cat had gone away through the broken window, and it never came back.

"Ungrateful cat!" cried the Old Woman, "I relieved its distress, and it has done nothing for me."

A month after that time, again at nightfall, the Old Woman heard a pitiful whining, and opening the door she beheld a dog, which begged after the manner of its kind, for food and shelter. The dog was a huge mastiff, gaunt and footsore. The Old Woman bade the dog come in, fed him and made him a comfortable bed of straw. All the while she was saying within herself:

"This dog will be useful to me. He will carry the heavy fagots on his back to town, and besides he will be to me a protector and a companion. Therefore will I feed and shelter him."

But when morning came the dog was gone, having pulled open the rickety door with his huge paw. The Old Woman was angry, and said, "I have wasted my scanty food on a thankless beast."

A few weeks later, as she was returning from town, at twilight, she found in the path to her hut a little child. The child had wandered far, and was sobbing bitterly from fright, and weariness, and hunger and cold.

The Old Woman said to herself, "I will take this child to my hut, and feed and shelter him. If his people come for him they will give me a goodly reward. If they do not come, then he will be useful to me. He looks to be a strong and healthy child, and his young and nimble feet will save my old and halting ones many steps. He will gather fagots, and fetch and carry for me, and besides, he will keep me company in this lonesome place."

So she led the child into the hut, warmed and fed him, bathed his bruised feet, and shared with him her own poor bed. But in the early morning the child's father came for him, having traced his footprints in the light snow, and took him away. And, being a very poor man, he could give naught but hearty thanks for the child's care and keeping.

Then the Old Woman wept and said: "It is God's will that I should be alone and unassisted always. Hereafter I will ask nothing for myself but that I may bear my lot patiently until my release shall come."

(To be continued.)

No one can do anything to-morrow.
—Maltbie D. Babcock.

YEAST FOAM

**Raised
The First
Grand Prize
at the
St. Louis
Exposition**

Yeast Foam is sold by all grocers at 5c. a package—enough for 40 loaves. Send a postal for new illustrated book "Good Bread: How to Make It."

NORTHWESTERN YEAST CO.
Chicago, Ill.

MIXED FARMING

Wheat Raising Ranching

Three great pursuits have again shown wonderful results on the

**FREE
HOMESTEAD LANDS**

WESTERN CANADA

Magnificent Climate—Farmers plowing in their shirt sleeves in the middle of November. "All are bound to be more than pleased with the final results of the past season's harvests."—Extract. Coal, wood, water, hay in abundance—schools, churches markets convenient.

This is the era of \$1.00 wheat.

Apply for information to Superintendent of Immigration, Ottawa, Can., or to Authorized Can. Gov. Agent:

J. S. CRAWFORD, 125 W. Ninth Street, Kansas City, Mo.
Mention this paper.

The Kansas State Agricultural College

A ten weeks' summer course in Domestic Science and Art for teachers will begin May 23, 1905. The regular spring term of the college begins March 28th. All of the common school branches are taught each term, and classes are formed in all of the first-year and nearly all of the second-year studies each term. Write for catalogue.

PRES. E. R. NICHOLS,
Box 50. Manhattan, Kans.



TELEPHONES

FOR FARMERS' LINES
Buy from the manufacturer. Build your own lines. Book of instruction free. Write nearest office.

THE NORTH ELECTRIC CO
197 St. Clair Street, Cleveland, Ohio
442 Main Street, Dallas, Texas.

ENDSLEY SAYS Send self addressed envelope and a dime and he will start you towards easy street. If you dislike the plan he will cheerfully return the 10 cents. Nurserymen, plant and seed growers, creamerymen, poultrymen, millers, teachers, everybody. Either sex, any age; no capital, experience, no time or time from your regular occupation. Nothing to buy, nothing to sell. Write him immediately, and—well! well!
HENRY ENDSLEY, Ellensburg, Wash.

FREE LAND IN OREGON
in the richest grain, fruit and stock section in the world. Thousands of acres of land at actual cost of irrigation. Deed direct from State of Oregon. **WRITE TO-DAY. BOOKLET AND MAP 4 cents in stamps.** Deschutes Irrigation and Power Company, McKay Building, Portland, Oregon.

The Home Circle

CONDUCTED BY RUTH COWGILL.

Earth Angels.

Some suppose there are no angels,
Save around the heavenly throne;
That such pure and simple spirits
From this wicked world have flown.

That they find a peaceful dwelling
In a bright and happy clime,
Never deigning earth to visit
Since its sod was stained with crime.

But there are some earthly angels,
Not arrayed in robes of white,
Nor are they ethereal beings
Decked with snowy pinions bright.

In the sable garb of mourning
Often are they found arrayed,
With the signs of deepest sorrow
Sadly on each face portrayed.

Seldom do these angels visit
Homes of gayety and mirth,
But where there is comfort needed
There they show their priceless worth.

They will ne'er refuse to listen
To the orphan's sad appeal,
And are ever willing helpers
Where are breaking hearts to heal.

Oft with inmates of dark prisons,
They in fervent prayer do kneel,
Asking God to but forgive them
Ere Death sets the fatal seal.

When the heart is sad and lonely,
Not a ray of hope to cheer;
And there's no one left to love us,
Of all those we once held dear;

When the briny tears are flowing,
Down the pale and furrowed cheek;
When no friend is left to cheer us,
Or a soothing word to speak;

When the hypocrite beguiles us
With soft words but to destroy,
And temptation seeks to lead us
From the God-appointed way;

When mankind seem all united
But to lead us from the track;
Then remember, earth has angels
That can gently lead us back.

—Sarepta Kady, Jamestown, Kans.

Fruition.

FLORENCE SHAW KELLOGG.

For the law of God will hold us ever to the true,
And the grandeur that enfolds us yields to service, too.
Leave to Him the problem old, do thy present duty,
Knowing he will safely hold every dream of beauty.

To-day I am thinking of the multitude of people whose lives are cramped and poor, whose souls are filled with vague aspirations and longings for "something better than they have known," and starving because of the poverty of intellect and soul that shuts them out from conscious participation in the deep things of God. Many, because of grinding poverty, must give up all their time and strength and thought to material things, and then have but the dregs in life's cup. Many are they who hunger for the good and beautiful in every department of life, and yet comparatively few have it. I never see one living a poor, pinched life, longing for better things, without knowing how to get them, restless, dissatisfied, or what is infinitely worse, with sensibilities so dulled that they scarce know or think of anything better than their present situation. I can never see such without thinking of the "by and by" when each soul shall "awake in His likeness" and be satisfied. Oh, what will it be like to have all life's differing phases beautiful and true! To live, each of us, in perfect harmony with the highest and best everywhere! But how much we each have to do ere it is possible for us to take our share of the glorious inheritance awaiting us!

Fruition! Think what it means! One might write volumes and yet, indeed, "the half would not be told." Think of every soul coming to its blossoming time, and then the ripening of the fruits of the Spirit—love, joy, peace, gentleness—everything that is good and sweet and true! No starved souls, no unsatisfied ambitions, no unloved or unloving lives, no cramped or aimless lives—each soul expressing itself in beauty and holiness with room and time and chance for all!

No life is so low but it holds some longing for beauty. No life is so poor but love could find a germ of something better, that, given the right condition, could yield its little blossom and add to the beauty of the whole. Life to many seems but a barren

waste wherein they each act their little part without the inspiration of life or the blessing of love. They are restless, longing for something they scarce know what. Some day it shall all be changed, not "in the twinkling of an eye"—not in any sudden or miraculous way, but by the slow evolution of the God-germ within each soul urged on by the great compelling power of love.

Even the lowest, poorest life is rich with promise of better things; and as surely as the dreariest night, however slowly the hours may drag by, comes at last to morning light, with all the glory of the sunrise, all the promise of the day before it, so surely must each life come to its share of beauty and blessedness! Not one shall be left out, not one shall be missing in that day when the Father counts up his jewels. Each one shall be there to answer the roll-call and receive the blessing. Each one shall bring his little blossom of love, his own little sheaf of ripened wheat to make the fair harvest complete and good. Each going on from glory to glory, from love to love, from fruition to fruition—all needed, all welcomed, all loved! Each one a bright link in the great golden chain of love that binds the whole in grand completeness! Though it be not given us to know the heights to which the soul may attain, we may rest in the assurance of fullest development, fullest good for every one; for He whose all-seeing eye takes note of the sparrow's fall keeps watch and ward above His own forever.

Life is an upward climb, steep and rugged for most of us, for

"By the thorn path and no other
Is the mount of vision won."

We can but dimly see what awaits us at the summit; it is enough for us to know we "shall be satisfied." Think of the joy of awaking to the knowledge of new possibilities, new tastes and ambitions, new capabilities in one's own nature; the gaining of knowledge of one's self and all that it implies. We know so little in any way here, but there, in truth's clear light, what may not be revealed to our eager search?

I am just learning what color means through the gift of a prism. Such radiance and such depth of color and tints! All these in every ray of light and yet how little we know of it ordinarily. The prism holds and translates it for us. I think it may be some such revelation as this with even the common things of life that awaits us "over there," and that there, seen with spiritual eyes, interpreted spiritually, everything may be as much more to us as the ray of light is when passed through the prism. Death is but the prism through which we shall come to know ourselves and our possibilities and delights every day; it may be that we shall discover some new talent, some new delight and beauty in ourselves, and best of all, some new and deeper way of saying "I love you" to all the world; some new joy in service, and newer, greater depths of character and expression. Love will then be the prism that will interpret all, and all shall be seen in glorified beauty and blessedness—when we awake in life's glorious fruition.

The Madison Square Garden Show, at New York, was the largest in its history of sixteen years, there being 6,342 entries. One of the sensational features of the show was the sale of a White Plymouth cock for \$500, and one cockerel, seven hens, and six pullets for \$1,000, or fifteen birds for \$1,500, cash in hand. The purchaser was W. W. Barry Owen, of Vineyard Haven, Mass., and the seller W. H. W. Graves, of Higganum, Conn. It was a notable sale, and will give White Rocks a new impetus.

Science now transforms radishes into potatoes. Showing a process of Pasteur, M. Moillard cultivates a young radish in a glass retort, in concentrated glucose, when the radish develops much starch and swells out, losing its pepperness, and acquiring the taste, consistency and nutritive properties of the potato.

A HEALTHY OLD AGE OFTENTHE BEST PART OF LIFE

Help for Women Passing Through
Change of Life

Providence has allotted us each at least seventy years in which to fulfill our mission in life, and it is generally our own fault if we die prematurely.



Nervous exhaustion invites disease. This statement is the positive truth.

When everything becomes a burden and you cannot walk a few blocks without excessive fatigue, and you break out into perspiration easily, and your face flushes, and you grow excited and shaky at the least provocation, and you cannot bear to be crossed in anything, you are in danger; your nerves have given out; you need building up at once! To build up woman's nervous system and during the period of change of life we know of no better medicine than Lydia E. Pinkham's Vegetable Compound. Here is an illustration. Mrs. Mary L. Koehne, 371 Garfield Avenue, Chicago, Ill., writes:

"I have used Lydia E. Pinkham's Vegetable Compound for years in my family and it never disappoints; so when I felt that I was nearing the change of life I commenced treatment with it. I took in all about six bottles and it did me a great deal of good. It stopped my dizzy spells, pains in my back and the headaches with which I had suffered for months before taking the Compound. I feel that if it had not been for this great medicine for women that I should not have been alive to-day. It is splendid for women, old or young, and will surely cure all female disorders."

Mrs. Pinkham, of Lynn, Mass., invites all sick and ailing women to write her for advice. Her great experience is at their service, free of cost.

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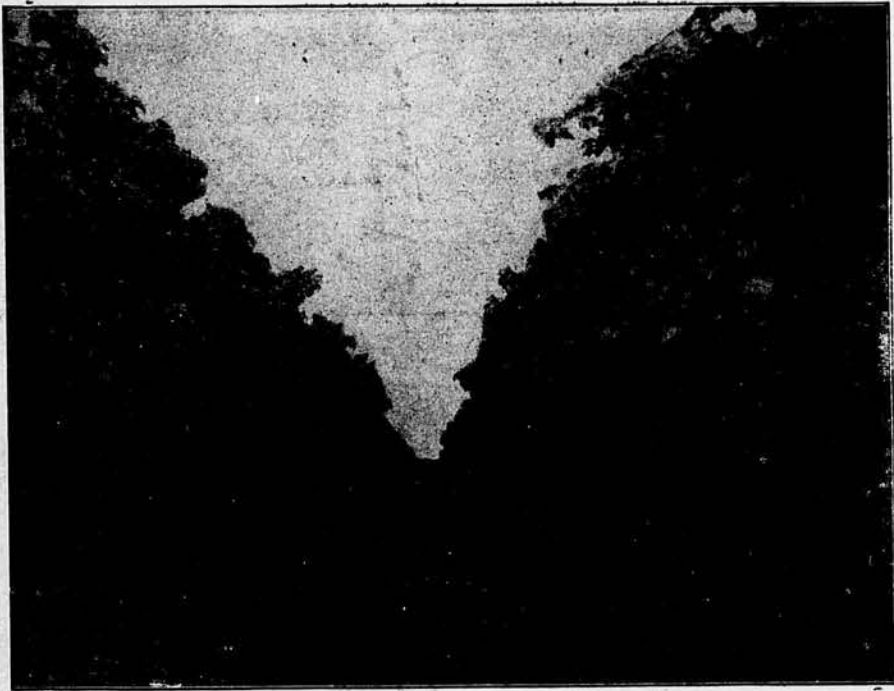
Horticulture

Best Timber for Posts.

Which do you recommend for posts, Osage orange, catalpa, or black locust? Our high prairie land is not very fertile and our bottom-land near Soldier Creek overflows, and has for the last two years. Which would you advise, bottom, middle-bottom or upland? How far apart would you set the trees in the row and how far apart would you plant the rows? Do wood-borers bother the black locust? In fact, I would like to know what pests bother all three of these varieties. Of course, I desire to get the greatest amount of posts from the smallest amount of ground but do not wish to over-crop. The financial outcome depends a great deal on how many posts you can get to the acre. Another thing I would like to know is how long it takes these three varieties to mature in fence posts? Do you cut back the plants at the end of two years and leave a shoot for the main body of the tree? About what do the plants cost in large quantities? Where would you recommend buying these plants to secure the right variety or species? The farmers in this locality like the Osage hedge above all oth-

badly at the point where the staple may be driven. It is a low, bushy tree, forming a short stem; but the wood is everlasting when in contact with the soil. We have no tree that has been neglected so much, and left to fight its own battles with the elements that can surpass this sturdy little tree that is best known as the hedge-tree of the Middle West. The locust is an ideal grower. The wood is durable for posts, fuel, etc., but in most sections of the State the tree has been attacked by the borer to such an extent that many people refuse to grow the tree on this one account.

The catalpa (Speciosa) has been advertised more perhaps than any other post-tree in Kansas. It is an ideal grower in some localities and rather a poor grower in many others, where it forms a short stem and must be pruned to produce post lengths. Personally, I prefer the catalpa over the Osage and locust. I can not take time to enumerate its good qualities here, but will refer to two bulletins of comparatively recent date. The first one was published in 1902 by the Kansas Experiment Station, entitled "The Hardy Catalpa (Speciosa)," by H. F. Roberts, Manhattan, Kans. The second one was published by the Bureau of Forestry, entitled "The Hardy Catalpa (Speciosa)," by Wm. L. Hall, Washington, D. C. These books are free, and can be secured by address-



A Forest Road in the Yaggy Catalpa Forest.

ers, although they have not tried catalpa or black locust. C. E. FRIEND, Jackson County.

The location of a timber plantation is an important one. Especially is this true when the plantation is established as a financial investment. It is advisable to be near a railroad station, also to be situated in a locality where the native growth of timber does not supply the demand. Most of the product of a young timber plantation is consumed for posts; but it should not be forgotten that in the near future the greatest profit from such an investment will be realized by growing the stock to a sufficient height for small telephone poles. In less than fifteen years' time every stockman and farmer of any importance will not be without the use of the telephone. He will not be content to use the top wire on the pasture fence, but will have a good pole line that will be received as one of the permanent improvements of the farm.

Jackson County and vicinity is an ideal place to grow timber. The same procedure used here could not be conducted on the same basis in Wallace County. In Jackson County the Osage orange, catalpa (Speciosa), and black or yellow locust can be relied on as trees that will give reasonable success.

SPECIES TO BE PLANTED.

Much has been written during the last twenty-five years extolling the value of the Osage orange, catalpa, and the locust. All three of them have many good points and they all have some objectionable ones. The Osage orange is a slow grower. It checks

ing Kansas Experiment Station, Manhattan, Kans., and the Bureau of Forestry, Washington, D. C. We have no recent publication on the Osage orange. The last important notice of this tree was written by the late Geo. C. Brockutt, and published in the Third Kansas Forestry Report, 1881, now out of print. This book contains much valuable information regarding the Osage orange. We need an up-to-date bulletin on the Osage orange as a timber-tree, and it seems to me the Kansas Experiment Station could produce such a bulletin during the coming year that would fill a present need.

The black locust is by far the best grower in producing the desired form for posts and poles of any of our forest-trees, but it is seriously injured by the borer to such a degree that it becomes almost worthless. For this reason only I hesitate to recommend it for commercial planting. Where the tree is free from the attack of the borer it is one of the best trees to plant.

SOIL.

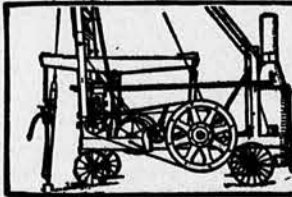
Many mistakes are made by not selecting proper soil for the tree plantation. The Osage orange will perhaps do better on a thin upland soil than any one of the above three trees. The catalpa prefers a sandy, moist soil. The low bottom land that overflows occasionally will be well adapted to this tree. It is found growing in its native State in the slashes of the Wabash Valley, where the overflow lasts a considerable length of time almost every season. Much of the overflow land of the Kansas and Neosho Valleys could be turned to good account

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by establishing catalpa forests on them. However, in the eastern half of the State the catalpa does well on the open prairies; farther west it should be confined to the valleys and large draws. The soil of the Arkansas Valley is especially adapted to all forest growth. Land costing \$30 to \$40 dollars per acre can be made to produce a good, steady, profit-growing timber. Cheaper land will produce the product, but it takes longer to do it. It is sometimes advisable to cover a poor piece of ground with trees, and wait the additional length of time for a productive crop. The ravines, stony hillsides and all unsightly places should be beautified with a crop of trees. The benefit to the land far exceeds the expense.

DISTANCE FOR PLANTING AND THINNING THE FOREST.

This subject is pretty well discussed in the two catalpa bulletins referred to above. For many reasons I prefer not to plant closer than 5 by 8 feet. Some of the reasons are these: The catalpa and Osage orange must be pruned in order to produce first-class, usable stock. Trees planted 4 by 4 feet must be thinned so early in life that it is a heavy expense with a very small income. The stumps are such persistent sprouters that it is necessary to trim off the sprouts four or five times, and still they will continue to sprout. It is a great convenience to have the rows far enough apart to admit a team and wagon between the rows. Close attention to a fewer number of trees will pay much better than the average attention that can be given to twice the number when fully one-half must be cut and used for wood. Thinning the young forest is, in my judgment, of the most importance in growing forest-trees. All the planters of fifteen and twenty years ago have found this out. Where planting as close as 4 by 4 feet is desired, good results can be obtained by planting the permanent trees 4 by 10 feet and planting a row of peach-pits between the rows of trees, placing the pits 3 or 4 feet apart in the row. This will soon give a good forest cover and at eight or ten years of age the peach-trees will begin to die of their own accord. Or what would be advisable would be to cut the peach-trees out about the seventh year. The stumps will sprout some, but they will cause no serious trouble. I feel as if too much stress can not be laid on the important subject of thinning the forest at the proper time. I can not take time to enumerate all the reasons here but it is the one vital point every timber-grower has had to meet, and I am no exception to the rule.

SELECTING TREES FOR A PLANTATION.

In securing trees for a 50-acre plantation it is best to buy them from some reliable nurseryman near your own locality. One of the largest growers of catalpa seedlings in the United States is located at Topeka; in 1903 this firm sold considerably over one million trees. Owing to the seed-crop of catalpa speciosa being destroyed by the late freeze in April, 1903, the crop of seedlings raised in 1904 is quite small. I doubt if there is a nurseryman in the country, excepting one Ohio firm, that could fill an order for 50,000 trees.

LOOK OUT FOR IMPOSTERS.

The seed crop of 1904 was a good one, and the supply of trees can be made in the fall of 1905 and spring of 1906. Osage orange seedlings can be secured of many of the local nurserymen in various parts of the State. Black locust may be found at Southern Kansas and Oklahoma nurseries. The plants will cost from \$1.50 to \$4 per 1,000 at the nursery. Do not buy plants too small because they are cheap. Get good, strong plants and pay the difference in the price. It costs just as much to plant a poor tree as a good one, while the vigorous ones will resist much more drought.

It is taken for granted that a man who is interested enough to buy land and set the same to trees will see that the same is properly cultivated, for three or four seasons at least. If the trees are not too close, cultivation can

be continued for a longer period with favorable results. It is not necessary to cut all the trees back to the crown at the end of the first or second season. On a 30-acre field of catalpas, planted in the spring of 1900, I did not cut them back until the spring of 1904; the stump sent up a large cluster of sprouts. I removed all but the most vigorous on 200 of them, with the result that all were blown off by August 1 by the summer storms which came from every direction. On the remainder I did not remove any of the sprouts until the last of July when the wood growth at the crown was firm enough to hold the sprout in position. I only cut back all the crooked and ill-shaped trees. Those of better form were trimmed up to four or five feet in height. The cost did not exceed one dollar per acre for this trimming, while it greatly benefited the young plantation. The locust under most conditions is such a straight grower that it will not be much improved by the cutting-back process.

AGE FOR POSTS AND INSECT ENEMIES.

The catalpa can be grown to a sufficient size for posts in from nine to twelve years, owing to soil and general culture, together with favorable seasons. Some writers claim that 2,000 trees per acre can be grown to a post size in eight years. If a man plants a plantation expecting such favorable results, he will surely be disappointed. Better be on the safe side and grow 1,000 trees per acre to the required size in a longer period. The Osage orange will take about three years longer to produce posts.

I do not know of any insect enemies causing trouble with either the catalpa or Osage orange while growing. However, there is a wood-borer that sometimes attacks the wood of both species while seasoning, if not cut at the right season. This can be prevented by cutting the timber in late summer or early winter, which gives the wood time to partly season before the borer becomes active. All timber stock should become fairly well seasoned before it comes in contact with the soil. The black locust is subject to the borer, which is the greatest enemy to this tree. Whole plantations have been ruined, and where they once begin operations it is almost impossible to stop the injurious work of the persistent little wood-worker. I would be slow to plant the locust in large quantities for this one reason.

CONCLUSION.

The Bureau of Forestry at Washington, D. C., has issued a bulletin on "Forest Trees for Western Kansas," by Royal S. Kellogg. The book is free on application and ought to be in the hands of every man who expects to plant trees in Western Kansas. The most successful catalpa forest in the United States is the Yaggy forest, located five miles west of Hutchinson, Kans. The first planting was begun in the spring of 1890. Tens of thousands of posts have been cut from this forest during the last five years, while the plantation continues to increase in value with each succeeding year. It will pay any man to make a visit to this plantation and see what can be done in Central Kansas in fifteen years. Mr. Yaggy has said many times that the catalpa plantation is one of the safest investments he ever made in his life. What the Yaggys have accomplished others can do. I would advise the planting of millions of trees, but I will also advise to plant judiciously. If the present and future planters will profit by the mistakes made by the early planters of timber trees in this State and heed what they may say with consideration, there is no doubt in my mind but what a timber plantation will give excellent returns on the money invested.

Topeka, Kans. GEO. W. TINCER.

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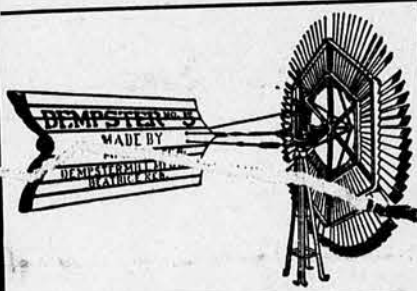
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The managers of Uncle Sam's company have for the last three months been carefully investigating the refinery business and have estimates on refiners from several different supply houses from Ohio and Pennsylvania, and while the refinery Number One will be increased in the next six months to close to one thousand barrels a day the company will start with a 250-barrel daily capacity and should have same ready to receive oil by the middle of next June. A barrel and can factory will also be installed and the necessary equipments to make some of the by-products that can be manufactured from the heavy oil will not be put in on the start, but the residue from the oil and gasoline will be used to build.

Good Roads in Kansas, Missouri, Oklahoma and Nebraska.

There is no doubt but what it is a question of only a few months until the residue of the heavy oil will be in general use in road building all over the Central West. The Uncle Sam Company will therefore secure representative men in every township in the four States mentioned, first as the managers of the company desire this company to be composed of the taxpayers of these States and to have the backing and good will of the general public, we want every share of the Uncle Sam stock taken by Western men and held by the men of these States, we want this company to consider the rights of the consumer as well as the producer and will work to that end. We would rather have one hundred men put in one hundred dollars each than to secure one stockholder with same amount

of money; we want men, we want stockholders who will be of influence at home and when banded together in a common cause will be a power in the legislative halls of either the State or the Nation. So if you read over this ad don't throw down this paper thinking you will have all summer to join the company, but get in now while you can join the company at a price that guarantees to you good returns and before some one else gets what you want. The stock will not remain long at 4 cents per share. This company will soon have the moral support of the Central West and the man who gets the ground floor stock is bound to make good money and stands a good show for future consideration in assisting the company to market the oil in your locality.

Fuel Oil for Western Kansas.

The passing of the maximum freight rate law and other legislation that was in favor of the people at Topeka last week makes it possible for the Uncle Sam Company to do a big business in fuel oil and arrangements will be completed in the near future to establish supply houses at several Central Kansas points, likely at each county seat town in the western part of the State, and ship the oil after the coal oil and gasoline are taken out. This, of course, will necessitate men, and the men who join hands with this company right now where they have good references will secure preference in this work. This company has some plans it will not make public just at this time, but put one thing down, the managers of this company have planned every step to be taken, they have the reputation of carrying through what they start and if you fail to pick up a block of this stock at 4 cents per share now and it goes to one dollar per share in the next year you will have no one to blame but yourself. The same old guard that will pilot this company to grand success have succeeded before along these lines and when they started out to make this company the greatest in the Central West they did not start into the enterprise blindly, and he man who will grasp opportunity when it knocks at his door will put all the way from \$100 to \$4,000 in this company's stock and do it right now. Company will not sell to one man stock amounting now to a purchase price of over \$4,000. We want men to put in from \$100 to \$400 each. We want a large body of taxpayers and representative men of Kansas and the adjoining States, so if the time ever comes the company will have influence as well as money to protect its rights from criminal competition.

Will Be Selling Oil in Parsons, Coffeyville, Cherryvale, Oswego, Independence, and Other Neighboring Cities in Less Than Four Months.

Another fact not to be overlooked is that the oil districts are increasing very fast in population and in a radius of a day's drive from the first refinery the Uncle Sam Company will have in operation we can by wagon reach several good-sized cities. These cities will buy oil from a home refinery in preference to any other concerns, and a large amount of the refined product will be sold right at the doors of the refinery at good prices. In answer to a letter to Mr. Ritchie, from the Warren City Boiler Works, regarding refinery equipments, a telegram was sent this morning asking how long after the order for the refinery was placed could we expect to be able to commence turning out the refined product. This afternoon the following telegram was received, which explains itself, so you need not be surprised to see Uncle Sam's Company selling oil in four months. Mr. Ritchie is vice-president of Uncle Sam Company. This is the message:

Form No. 1.

THE WESTERN UNION TELEGRAPH COMPANY.

INCORPORATED
23,000 OFFICES IN AMERICA. CABLE SERVICE TO ALL THE WORLD.

This Company TRANSMITS and DELIVERS messages only on conditions limiting its liability, which have been assented to by the sender of the message. Errors can be guarded against only by repeating a message back to the sending station for comparison, and the Company will not hold itself liable for errors or delays in transmission or delivery of Unrepeated Messages, beyond the amount of tolls paid thereon, nor in any case where the claim is not presented in writing within sixty days after the message is filed with the Company for transmission.

This is an UNREPEATED MESSAGE, and is delivered by request of the sender, under the conditions named above.

ROBERT C. CLOWRY, President and General Manager.

NUMBER 22hs SENT BY Hs REC'D BY m 9 Paid CHECK 2/20 1905
RECEIVED at Cherryvale, Kan. 5 18 P

Dated Warren Ohio 20

To J. H. Ritchie

Our work approximately three months writing you fully today
Warren City Boiler Works

The time for you to line up with the greatest and safest development and refining company of the world is right now. Remember things move fast down here. Uncle Sam's managers are doing things. Don't wait until the machinery gets on the ground and until this stock has advanced to double this price, but buy to-day. Will reserve stock for any who will wire and follow same with check or draft on the first mail. The company will be in telegraphic communication with close to 100 men by the time this paper appears in print. Every stockholder of the Publishers' Company will buy some of this stock and get his friends to buy, as they know the management of the company and know grand success will be achieved. The Publishers' Company has over 500 stockholders in Kansas, Missouri, Oklahoma, and Nebraska, and they alone will subscribe close to \$40,000 during the next four months for Uncle Sam's stock.

A Ground Floor Offer Backed by a Square Deal. Gives You Opportunity that Will Be Owned and Controlled Taxpayers.

The Uncle Sam Refinery and

Guarantees Justice to Producer and Consumer, and is now banding together four thousand men and refiners in Kansas, Oklahoma and Indian Territory. Company will offer, subject to raise with notice, for

Four Thousand Shares of Treasury Stock at the Ground Floor Price of \$40.00 Per Share. Assessable. Par Value \$100.00 Per Share.

\$40 will purchase 1,000 Shares, Par Value \$1,000
\$80 will purchase 2,000 Shares, Par Value \$2,000
\$100 will purchase 2,500 Shares, Par Value \$2,500

Or Company Will Sell to One Man 50,000 Shares, Par Value \$5,000.00.

One-Half the Profits Will Be Paid in Dividends, the Other Half Will Go to Securing Other Oil Lands and Building More Refineries—Company Should Be Paying Dividends in Six Months and Stock Should Go to \$1.00 Per Share in Less Than a Year.

When you stop to consider all the favorable conditions that surround the Uncle Sam Company it is only conservative to expect this company will be selling refined oil in less than four months and be paying dividends in less than six months. The company will build up and go forward, one-half the profits and one-half the money realized on oil lands the company will develop will be paid stockholders in dividends every 60 days. This is no dream. The men at the helm of this company have placed another company on a dividend paying basis in eleven months, when the chances were against it one hundred to one, while the Uncle Sam Company has everything in its favor. Don't delay if you want in on the ground floor, for there are scores of investors in Kansas and adjoining States that know the men back of this company will push its interest forward with a vim and determination known second to none, until the stock will be in demand at two times 4 cents per share.

The Uncle Sam Company is the First in the Field.

This company is the first independent refinery to get into the field, where the people in general have been invited to take hold. A company gotten up on the plan of this company will succeed and protect its interests where three or four capitalists would be frozen out by criminal discrimination; but, however, reflect for a moment what this company means, consider what four thousand men banded together for a common cause can really do. The money they will represent in this company could be lost by some concerns in one day on the board of trade and never be felt, but when it comes to doing up four thousand men who with their neighbors will control the legislatures and elect the governors of the four States mentioned, it becomes a picture with a different color. Public sentiment can be worked up in favor of an honest company to where a boycott and blow for blow will be given if it is necessary to protect the interest of the Uncle Sam Company, composed of small stockholders, who will represent the people. These are the kind of men the managers of this company desire to enroll among the stockholders.

About \$5.50 Per Barrel Profit in Refining Oil With Prices As They Now Are for Refined Oil and Its By-Products.

While it has been claimed by good authority that there is \$7.50 per barrel profit in the refining of oil at present and that the Standard Oil Company has been making that much, however we put it at \$5.50 per barrel, and know we are conservative. The by-products is where the big money is made. However, the Uncle Sam Company does not propose to try and make \$5.50 per barrel; a good, reasonable profit is all the managers of this company expect it to ever make after the stock goes to par value or \$1 per share. Even \$3 per barrel would certainly net great profits. On that basis the 250-barrel refinery which the Uncle Sam Company will start with at Cherryvale would net the stockholders \$750 per day. Remember, these figures are based on selling the refined product at about one-half the present price. Now, if you desire to bring about such conditions as these, put your shoulder to the wheel, invest a few hundred dollars in this company and get your friends to invest. We want this to be as near as possible a company of the people, for the people and by the people of Kansas, Missouri, Oklahoma and Nebraska. Why let a lot of rich guys back East, who think the West don't amount to much anyhow, get fat off the Western oil, when in Kansas alone there is on deposit over one hundred millions of practically idle money. Think this matter over, and then if you want to help yourself, your neighbor, and this company, buy some of this stock while you can get it. If you can not secure all the information you desire from

In Conclusion Will

pleted (47) forty-seven oilers, two 50-well pumping plants, a central sales office, and a central treasury under \$1.00 per share. Don't think of a mined management ever put up. The same old matter how small amount of stock he holds, will company will be able to pay back during this year, put \$300 in Publishers' stock at the advance price of \$1.00 per share. They have hundreds of acquaintances through the hands of the men who now ask you think we do not intend to do what is right, for the goal and get there in spite of every obstacle, but one success leads to another success. As we have indicated all through this paper, who will stand for a square deal to band them together, we are willing to be won we would like to have you in Kansas. We are here to stay and know nothing but the success of what will be done in Cherryvale and talk matters over.

Address H. H. T. C.

. TUCKER, Jr., Secretary, Cherryvale, Kans

THE INTERNATIONAL SUNDAY-SCHOOL LESSON.

(Copyright, Davis W. Clark.)

First Quarter. Lesson X. John 7:37-46. March 5, 1905.

Jesus at the Feast of Tabernacles.

A glance at the opening of the chapter shows the circumstances under which Jesus came to this feast. He was practically an exile from the political and ecclesiastical center of the nation. It was imprudent for Him to "walk in Jewry." The larger part of His public ministry was spent in Galilee, a place so obscure ecclesiastically as compared with Judea that it was next to doing His miracles in secret to perform them there. But He was not inactive because He could not "sit in Moses' seat." He "walked" in Galilee and did works, teaching, preaching, and healing. Incidentally the course pursued by Jesus is an admirable object-lesson. Because the highest sphere is not open to one is no reason why the sphere which is open should not be filled to its rim with one's best deeds.

The advice of Jesus' brothers that He should go into Judea and work miracles was an iteration of the devil's temptation for Him to cast Himself down from a pinnacle of the temple; namely, perform some prodigy in the very presence of the rulers, and thus extort immediate acknowledgment of His Messiahship. Theirs was the wisdom of this world. "If one wants to be known, and, of course, that is the thing to be desired, he must be ostentatious and force public attention." How ill could they understand a kingdom that cometh not with observation. They had heard in vain the parable of the leaven in the meal.

Had Jesus come to the feast with the Galilean caravan He might have appeared a partisan. Sectional animosity, always ripe, would have been inflamed; preaching would have been out of the question and riot imminent. Divine His prudence! When the edge of curiosity had been taken off by lapse of time, the murmuring and interchange of opinion, as well as the progress of the festive services, unheralded and with benignant calmness, the Master appeared in the temple, and on an occasion especially designated by the law for the purpose of instruction, He took the task out of the unworthy hands of the Pharisees.

The evangelist gives us but the briefest outline of what was, perhaps, an extended discourse, well named "the first great colloquy with the Jewish populace and their rulers"—a discourse much interrupted by the contradiction of sinners. Jesus' exordium consists in an affirmation of the Divine origin of His teaching. "My doctrine is not that of a mere man, as I appear to be. It is not earthly wisdom. It is the message of Jehovah, who sent Me. This shall be confirmed by an inward consciousness to those who obediently receive it."

Bread, water, light, the indispensable, are the emblems Jesus selected to represent His offices to the human soul. It was His custom to draw contrasts to passing events. Probably after the pretty illumination in the temple, caused by the lighting of the multitudinous lamps upon the candelabra in the treasury, He exclaimed, "I am the Light of the world." So, on this occasion, when the priest came with the rejoicing procession, bearing aloft the golden urn filled with water from Siloam, in memory of the water miraculously supplied in the wilderness, and was just on the point of pouring it out beside the altar, Jesus diverted attention from the joyous spectacle. He cried in strong antithesis, "If any man thirst, let him come to me!" Limitless the invitation! The "whosoever" of the Apocalypse is an echo to this, "If any man." He identifies Himself with the spiritual Rock that followed the fathers in the wilderness and of which they drank. It is evidence of the invincible depravity of the human heart that even Jesus could not convince His hearers. There was a division at the close of the service. The Prince of Peace had brought a sword. The gospel still causes a tumult in the heart of the individual, creates a variance,

and makes even those of the same household foes. Yet its ultimate effect is peace for the individual and the race. The trend of the Christian centuries is steadily out of sin and strife and toward universal millennial righteousness, peace, and joy.

The Teacher's Lantern.

Tabernacles was preeminently a joyous feast. The rabbis say, "He has not seen joy who has not seen the joy of the drawing of the water." But Pentecost eclipses Tabernacles. It was "joy unspeakable and full of glory." Jesus' words had quick fulfillment. "Out of his belly shall flow rivers of living water." Peter's sermon was a torrent of salvation at which three thousand drank.

The booths of the Tabernacle Feast commemorated those in which the Jews lodged for the last time before entering the wilderness. This feast was also a harvest home, and celebrated the ingathering of the fruits of the field. It ended the annual reading of the Pentateuch, for on the last day of the feast the last section of the law was read. These eight days were especially commemorative of Jehovah's fatherly care of Israel in the wilderness.

Religion is not in the blood; it is not a matter of heredity, or else Jesus' own brothers would not have been skeptics. Devout parents, even ministers, have wayward sons. This is no more an argument against religion than the unbelief of Jesus' brothers was a reflection upon Him or a discount of His doctrine.

The marveling of the Jews is that of the ages. Jesus' words are miracles of speech. They are "spirit" and "life." The framers of the Racovian Catechism, attempting to account for the preternatural wisdom of Jesus, affirmed that He attained it by ascending into heaven, supposedly after the manner of Moses in the mount. It is more natural to admit Jesus to be the original Source of the doctrine he taught, as He Himself affirmed. "I speak truth; I am Truth."

Prejudice, deference for authority, and that better mood, teachableness, produced a contrariety of opinions and corresponding attitudes. Some pronounced Him a good man (faint praise), others a deceiver, some marveled, others said He was possessed; some, after the manner of Thomas Hughes, admired His manliness; others wanted the opinion of the rulers. Some would have done Him violence; others thought Him a prophet, and happily many believed. There is still the surfeit of human thought about this great historic character. He is set for the fall and rise of many. He is savor of life or death.

A College-Bred Farmer.

Somewhere—from some old paper or book—we have found the following, which is so interesting that we are glad to repeat it:

It is not an uncommon thing in New England to find farmers who are graduates from colleges. These men are held to the soil by a strong love of rural life, and the thorough mental training they have received in no sense unfits them for the work of the farm. They accept the fact, not admitted by many young men, that no matter how much education they have they must work. The world is not going to give up its choice plums to any man without an equivalent in return. The day laborer and the learned professor must pay the same price for the same kind of meat and bread. In conversation with several of these college-bred farmers they have told us that they thought their schooling had been an advantage to them as farmers. It enabled them to all the more easily understand the science of agriculture. We would find, as a rule, that their book shelves contained books on agricultural chemistry, animal industry, soil culture and management, horticulture, gardening, etc. Not that they proceeded at once to practice all they read in their books, but the reading of

them broadened their comprehension, as well as sharpened their perception, concerning the great mass of important facts that lay about them. One man explains himself to us as follows:

"My neighbors are constantly asking me if I think it paid to go to college simply to be a farmer. Their idea is that there is nothing in farming that calls for a well-educated mind trained to habits of close study. They talk that way to their boys. They do not have an intellectual idea of the business of farming. To them it is nothing but drudgery and hard physical labor with small rewards.

"I do not see how it can be anything else with their estimate of it. Large rewards in anything never come to men who take a narrow view of that thing. There is a chance on every farm in the country for the owner to do a great deal better and larger work, and make a good deal more money, provided he has a mind broad enough to take in the problem. It all depends on the man, and how well he has developed his mind and intellectual perception.

"A farmer, the same as a manufacturer or lawyer, must see before he can act, and if he has never trained his mind to see, how can he act in either case, to any profit to himself? I know farmers who barely skin out a poor living on a farm, and work hard for it too. More than that, such men usually end by impoverishing the farm as well as themselves. There is no real exercise of intelligent brain work in that sort of farming.

"They have tried it for years, and yet they seem to think there is no better way. If I speak to them about the value to them of paying more attention to the brain side of the business, of making an effort to read how the most successful dairymen, for instance, manage their work, they bring up the same old objection about 'book farming.' Yes, I think it pays well for a farmer to have as good an education as he can possibly get, but I think he ought to educate himself and his boys towards the farm, not away from it."

The world never saw the time when as much good valuable knowledge could be had for so little money as today. Our dairy schools and short courses will take any boy with a fair district school education, and give him a big boost towards making a brainy, successful farmer of himself. Let a boy spend two winters in such study and it will open his mind to see new possibilities and much better profit in farming. One thing those schools should teach more than they do, and that is the necessity of being snug and orderly in all matters of farming. Money is wasted everywhere, and on nearly every farm, by loose, disorderly habits of caring for tools, fences and farm buildings. We never saw a neat farmer that did not make a good living, and a little to lay by every year. Such a farmer always keeps up the fertility of his farm. That is the key note of good farming.

Farm Buildings.

The above is the title of a new volume from the Sanders Publishing Co., Chicago, and is in the main a compilation of plans contributed to the Breeder's Gazette by farmers and stockmen all over the United States. The illustrations are many and the types show a great variety of buildings adapted to different farms, different latitudes, and different lines of farming. There are exact plans for general farm-barns, cattle-barns, horse-barns, sheepfolds, swine-pens, poultry-houses, silos, feeding-racks, ice-houses, and ingenious and convenient devices for farm-gates, dipping-vats, and many other appliances for use on the farm, all representing not theory but construction in actual use.

It would seem that every farmer ought to have the book, and that the perusal of it would immediately inspire him to "go and do likewise," and construct more comfortable or more commodious buildings, or other improvements suggested by its pages.

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95 Per Cent Strong. Eighteen varieties. Bred and grown by a twenty-year corn-breeder, with extensive trade that covers the United States, including your country, who knows from Kansas customer reports, the lands that yield heavily and mature well there. \$1.40 per bushel for shelled, \$2.00 per bushel for selected ears, bags free. Cash with order. We will send your money's worth. Catalogue, proof and samples free. Address to-day Corn Breeder, Decatur, Ill.

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Grange Department

"For the good of our order,
our country, and mankind."

Conducted by E. W. Westgate, Manhattan, to whom all correspondence for this department should be addressed. Papers from Kansas Granges are especially solicited.
The Kansas Farmer is the official paper of the Kansas State Grange.

NATIONAL GRANGE.

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Lecturer..... N. J. Bachelder, Concord, N. H.
Secretary..... C. M. Freeman, Tippecanoe City, Ohio

KANSAS STATE GRANGE.

Master..... E. W. Westgate, Manhattan
Overseer..... A. P. Reardon, McLouth
Lecturer..... Ole Hibner, Olathe
Steward..... R. C. Post, Spring Hill
Assistant Steward..... Frank Wiswell, Ochiltree
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Grange Interests.

MRS. M'CRACKEN, SECRETARY OAK GRANGE.

The dearth of news from our Shawnee County Granges leads one to question whether they have not become dormant. It seems a case needing evangelistic treatment.

A report of grange work now and then given to our column in the KANSAS FARMER would appeal to patrons as a warm fraternal greeting from brothers and sisters interested in a similar line of work. If we are not interested in the progress and development of all granges, we are not fulfilling our obligations taken, no doubt, with all honesty of purpose. Why fold our hands instead of reaching out to grasp the many pleasures and benefits thus waiting to be appropriated?

It has been said, and truly, that the children of grange members imbibe its principles unconsciously until of an age to themselves become members. If their elders are lax in attendance, in work for its upbuilding, may not the children form a light opinion of its obligations? This question suggests itself: Do we lose by taking time for prompt attendance at all grange meetings and cheerful compliance with the demands of the worthy lecturer? Nothing can be gained by narrowness and selfishness. Brothers and sisters we urge you to consider this seriously from the standpoint of duty.

New members should fully understand the duties required of them and to this end the reading of the constitution and by-laws should be a part of grange work as soon as convenient after initiations.

Topic, March 1—what is the most important matter to come up for consideration in our primary caucus or local election? and what is our duty in regard to it?

There are many local matters of more importance from the individual standpoint than State or National matters, as the responsibility and duties of local officials in charge of schools, roads, etc.

Do we not fail to appreciate the importance of interest and action in local affairs? A discussion of this topic will bring out many points of value and importance.

Supplementary topic: What grange events should be observed by our grange in addition to holding the regular meetings?

The observance of our anniversaries is of interest and commendable. Children's Day is appointed in June by authority of the National Grange. Would it not be both pleasant and profitable to make of this a red-letter day for the little folks? Begin now to plan for it. It is none too early.

Some Whys in Regard to the Parcels Post.

Why should we have a Parcels Post? Because it is a matter of public necessity.

Because, as Postmaster General Wynne informs us, there are 70,000

postoffices and only 30,000 express offices in the United States.

Because many small postoffices and R. F. D. routes do not have enough business to pay expenses; but with the additional business incident to parcels post would make a profit.

Because for lack of it, as our consuls abroad tell us, we are losing annually untold millions of dollars.

Because it would prove as it has in other lands an inestimable boon to all people and an incalculable stimulus to trade.

Because the people demand it, and ours is a Government for and by the people.

Because it would save our farmers millions of miles of travel and millions of dollars annually.

Because it would tend to abolish discrimination in freight rates and rebates.—President Postal Progress League of California, in American Grange Bulletin.

The Veterinarian

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the Kansas Farmer. Give age, color and sex of animal, stating symptoms accurately, of 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 his full name, and should be addressed to the Veterinary Department, Kansas Farmer, Topeka, Kans., or Dr. C. L. Barnes, Manhattan, Kans.

Ailing Calves.—Will you tell me what is the matter with my calves and what can be done for them? I have lost two. They died about an hour after they were taken sick. They go backward and whirl around until they fall over and die. I feed them alfalfa and cane. T. P.

Assaria, Kans.
Answer.—It is difficult, from your description to prescribe treatment. But the probabilities are they have eaten some material that is causing the symptoms you mention of the nervous system. Would advise giving each calf, that is at least six months old, that is sick, one half pound of epsom salts, in a quart of water, to clean out the system. If you can give me more symptoms, and especially their conditions after death, I may be of more service to you.

Mare With Diseased Eye.—I have an 11-year-old mare weighing 1400 pounds. Her right eye has been running for two years, at first watery, then the last year matter. She is blind now in that eye; it still runs dirty looking material, and has a bad odor. She is in good order and eats well. What can be done to stop the discharge and the bad odor? I thought of using carbolic acid, 1 drop to ten of water. B. R.

McPherson, Kans.
Answer.—You had better examine the mare's eye and see if there is any foreign substance that is lodged in the eye, and if so, remove it. Use a teaspoonful of creolin to a quart and a half of water to wash out the discharge from the horse's eye which will also help destroy the odor.

Itchy Cows and Horses.—My horses and milch cows are not doing well and are rubbing some. I guess they are lousy although I haven't found a single louse on them. Could it be something else? What is a good remedy to kill lice this time of year? J. J. M.

Hutchinson, Kans.
Answer.—Under separate cover we are sending you the press bulletin from the Experiment Station on Scab or Itch in Cattle. This gives the formula for preparing lime and sulphur dip, which is effective for either scab or lice. It should be used hot, and if only a few animals are to be treated, can be applied by hand instead of dipping.

If you think your horses or cows need a tonic for a general run-down condition, the following is good: Pulverized iron sulphate 1½ pounds; pulverized nux vomica 9 ounces; pulverized ginger 1 pound; pulverized gentian 4 ounces; oil-meal 35 pounds.

Mix thoroughly, and feed in ground feed three times a day, giving as a dose for horses two and one-half

ounces; and for cattle, four and one-fourth ounces.

Scours in Cattle.—Kindly tell me the cause of scours in cattle at this time of the year. We are feeding wheat straw, sorghum, Kaffir-corn and corn-fodder with the corn shucked out. They have the straw before them all the time, but the others we feed, one a few days then change to one of the others. We have lost two and have two more sick. One of the sick ones is a fine calf in good shape. The fat ones seem to take it as badly as the poor ones. Young cattle seem to be bothered the worst. They all pass considerable blood. I would be very much obliged for a remedy.

Spivey, Kans. A. L. B.
Answer.—There is no doubt but that your cattle are getting something in their feed that is causing the trouble. You had better change their feed; give at least to the sick cows, 1 pound of epsom salts dissolved in two quarts of water, as a drench, and then give them the following tonic: Pulverized iron sulphate 1½ pounds; pulverized nux vomica 9 ounces; pulverized ginger 1 pound; pulverized gentian 4 ounces; oil meal 35 pounds.

Mix thoroughly and give 4¼ ounces in ground feed three times daily.

Barb-Wire Cut.—I recently purchased a 2-year-old-mare. She has a bad front foot, caused by a barb wire cut; the cut was healed up and apparently sound when I bought her, except that there was a crease in the hoof on inside about an inch and a half from the heel, that seemed about ¼ inch wide and ¼ inch deep, but she was not lame. About 5 or 6 weeks ago the hoof split in that crease and she is lame. The crack runs to the hair and seems to have a tendency to widen out; there is a bulge in the foot just above and a little in front, and I thought perhaps the foot was growing too fast for the hoof. She continues lame, and I want to do something for her, and if you will give me some good treatment for her, I will be much obliged.

St. John, Kans. C. W. S.
Answer.—If you will have your blacksmith cut a crease in your horse's foot across the place where it is split it will greatly lessen the pain when the horse puts weight on the diseased foot. There are clamps prepared especially for this trouble. And if your blacksmith could put a couple of those on the crack they would greatly help keep the crack from spreading. A poultice on the mare's foot would also tend to relieve considerable of the inflammation. C. L. BARNES.

If I got places, sir, it was because I made myself fit for 'em. If you want to slip into a round hole, you must make a ball of yourself,—that's what it is.—George Eliot.

Edmund McLatchie's Experience With Doctor D. N. Bye's Combination Oil Cure for Cancer—What It Did for Him.

Afton, Wyo., May 25, 1904.
Dr. D. M. Bye Co., Indianapolis, Ind.
Dear Sirs:—I received your letter of May 20 to-day. I will state the reason why I have not ordered more of your treatment, and that is—the cancer, which was on my lip, is gone entirely. I applied the oils the first time on March 8, and in one week from that time it was gone, leaving a small hole in my lip, which is now filled up, and my lip is just as sound and healthy as it ever was; and all this was done within a month, so that it is now nearly two months since it got well; and Dr. Bye, I consider you are a poor man's friend, and I will ever praise and remember your kindness. You can use any portion of this letter for publication, if you wish to do so. Yours gratefully, EDMUND McLATCHIE.

This combination of soothing and balmy oils readily cures all forms of cancer and tumor. It is safe and sure, and may be used at home without pain or disfigurement. Readers should write for free book to the originators, whose Home Office address is Dr. D. M. Bye Co., Drawer 505, Indianapolis, Ind.

A business career of nineteen successful years is something any firm may look back upon with pardonable pride. And when to the achievements of the past is added the more progressive methods of the present, the outlook for the future assumes a most promising prospect. Nineteen years is certainly a sufficient length of time in which to test public sentiment and appreciation, so much so that the proprietor of "The German Nurseries," Mr. Carl Sonderegger, of Beatrice, Neb., may reasonably expect a continuation and steady growth of the patronage which has enabled him to not only carry on a successful business, but to so increase his facilities as to be able to handle a much larger trade than heretofore.

PURE WHITE LEAD

On your house adds money value and dignity. Pure White Lead will preserve a good fresh appearance longer than any other paint—it is impervious to sudden weather changes, wears evenly and smoothly and retains a good appearance for several years longer than any substitute.

Our Booklet "What Paint & Why" tells this and names the brands of White Lead that are purest and best. Sent free from any of our branches.

NATIONAL LEAD COMPANY

Largest makers of White Lead in the world.

New York, Buffalo, Chicago, Boston, Cincinnati, St. Louis, Cleveland.

National Lead & Oil Co. John T. Lewis & Bros. Co. Pittsburg. Philadelphia.

I AM
RUSSELL E. GARDNER
THE "BUGGY KING" ST. LOUIS, U. S. A.
BANNER BUGGIES
BEAT THE WORLD
Ask your dealer for a Banner Buggy, Runabout, Surrey or Harness. If he doesn't handle them write me before buying. I manufacture more buggies than any other man in the world and can save you money.




CHALLENGE
When your wind mill and tower blow over, or when the mill is blown from the tower, or when the wheel warps or buckles in the wind, or a short and delicate mast snaps off, then you realize that it would have paid well to have bought a better wind mill. The

Dandy Wind Mill
is that better wind mill. It's better made of better material and of better design. The shafts and bearings are extra long. The gears and all head castings are extra strong. The compound lever brake will control and hold the mill in any wind that blows.

We can't go into details of construction here, but we have a new illustrated circular which tells about the Dandy and the entire Challenge Line. Write for it. Challenge Upright, Horizontal and Mounted Gasoline Engines are the best for all purposes.

Challenge Wind Mill & Feed Mill Co.,
16 River St., Batavia, Ill.



In the Dairy

Experimenting With Dairy Cows.

Excerpts from Bulletin No. 125, Kansas Experiment Station, by D. H. Otis.

(Continued.)

FEEDING GRAIN.

From tests made at this station, we find that dry milch cows and dairy stock need no grain when supplied with nitrogenous roughness. When the cow freshens her system is taxed to its utmost to produce milk, and it requires just as much energy to produce milk as it does to pull a dray wagon, and, on account of this taxation of the cow's system, it is necessary that she be supplied with more concentrated feed, so there will be more energy given off from the same weight of feed consumed than in the case of roughness. There is a limit to the bulk that it is possible for a cow to consume, and if she has consumed about as much bulk as she can handle before calving, the increased energy must come from the more concentrated feed. The amount of grain that is to be supplied depends upon the amount of work that is to be done. It likewise depends upon the richness of the roughness that is fed with it. There is much greater variation, due to the individuality of the cow, that is to be considered in feeding grain than in feeding roughness. The idea should be to get each cow to eat what grain she will handle at a profit. As an aid to determining the most economical grain, this station has been using the figures recorded below:

Table XXVII.—Comparative Value of Grains and By-products. Value per 100 pounds when corn is worth 10 cents per 100.

Feed.	Total nutrients	Protein nutrients
Concentrates—		
Barley.....	\$0.10	\$0.11
Broom-corn seed.....	.08	.09
Corn.....	.10	.10
Corn-and-cob meal.....	.07	.08
Cow-peas.....	.15	.23
Cottonseed hulls.....	.02	.003
Cottonseed-meal.....	.28	.47
Flaxseed.....	.18	.26
Chicago gluten-meal.....	.21	.40
Kafir-corn seed.....	.09	.10
Linseed-meal.....	.22	.37
Millet seed.....	.09	.11
Oats.....	.09	.12
Rye.....	.11	.12
Sorghum seed.....	.08	.09
Soy-bean meal.....	.23	.38
Wheat.....	.11	.13
Wheat bran.....	.10	.16
Wheat middlings.....	.12	.16
Wheat shorts.....	.11	.15
Milk—		
Whole milk.....	.03	.04
Skim-milk.....	.02	.05
Whey.....	.008	.01
Buttermilk.....	.03	.05

This table is constructed in the same manner as the table for roughness, taking corn at ten cents per 100

pounds as the basis. This table is also arranged on the basis of total nutrients and protein nutrients. After the cheapest grain ration is selected, and getting the test of the cows by watching the milk record, the amount fed can be increased or decreased according to the ability of the individual cow to consume it at a profit. The experience of the Kansas Experiment Station shows that one cow will produce butter-fat at 10.11 cents per pound for feed consumed and another by her side will charge 24 cents per pound. This difference would never have been found out if we had not kept records as to the amount of milk produced and feed consumed.

It is usually desirable to feed two or three pounds of grain per head daily to milch cows during the summer. For the best cows, the allowance may be increased to six or eight pounds. As the cows get considerably more protein out of fresh green hay than they do out of cured hay, their grain ration may be more carbonaceous for summer than for winter. Corn-and-cob-meal will answer very well. If the meal is used without the cob, it is well to distend it with a little bran. The value of this extra summer feed was tested by this station in the summer of 1898.

The college herd consisted of thirty common cows that were fed an average feed of three pounds per day per head. These cows were compared with fifty-five cows of the same class belonging to eight different patrons of the Manhattan creamery, and which had received no extra feed in addition to pasture. On July 5 the college cows were yielding an average of 18.42 pounds of milk per day per head, while the patrons' cows were yielding 12.67 pounds per head. On August 16, six weeks later, the college cows were yielding 17.59 pounds per head, while the patrons' cows were yielding 7.71 pounds per head. This makes a drop of 0.83 of a pound per head per day—4½ per cent—for the college cows, and 4.96 pounds per head per day—39 per cent—for the patrons' cows. The feeding of a little extra grain has much to do with keeping up the flow of milk during the critical period of dry weather, and adds materially to the profits that occur after the dry weather is past.

Following the dry season of 1901, the high prices prevailing for grain caused a good many dairymen to dry up their cows and feed them on rough feed. This station inaugurated an experiment to determine whether this policy would pay or not. It required so much feed to maintain the animal, and the question to determine was, how much more feed would it take above the feed of maintenance to obtain a good flow of milk.

Three cows, representing a fair average of our Kansas milch cows, were fed wheat straw, ground wheat, and cottonseed-meal. The cows became accustomed to the cottonseed-meal gradually, by starting with one-half pound, and increasing one-fourth pound daily until the maximum of 4 pounds per day was reached. This transition period required fourteen days. As these cows had been receiving sorghum pasture and alfalfa hay, they did not relish the straw at first, and were allowed 52 pounds of alfalfa hay during the transition period. The following figures give the results in the production of butter-fat:

Daily production of butter-fat per cow previous to experiment, thirty days, 0.74 pound.

Daily production of butter-fat per cow during transition period, fourteen days, 0.70 pound.

Daily production of butter-fat per cow during experiment, thirty days, 0.62 pound.

The reduction of 0.1 pound in the daily production of butter-fat is accounted for in the sudden change from succulent pasture to dry straw and the increase in the lactation period. After the cows were accustomed to the change, the production of milk and butter-fat was fairly uniform.

During the thirty days under experiment these three cows consumed:

	Pounds.
Wheat straw.....	1,410
Ground wheat.....	590
Cottonseed-meal.....	244.3

BUYING A CREAM SEPARATOR

Thousands of dairy farmers are going to buy a Cream Separator this Spring. The purchase of a separator is a most important investment. Great care should be taken to make no mistake.

No other farm investment is of equal importance to the cream separator. It makes or wastes money twice every day in the year, and it may last two or twenty years.

There is easily a difference of from \$50 to \$150 per year between the benefits and savings of a De Laval machine and a poor one. A De Laval machine lasts at least twenty years with small cost for repairs, while other machines last from two to ten years and cost a great deal meanwhile.

So far as advertisements and circulars are concerned, about as much is claimed "on paper" for poor machines as for the De Laval. Some of the biggest claims are made for the poorest and trashiest machines.

If the buyer wishes to be guided by the best experience of others and the best of authority he must purchase a De Laval machine, and he can surely make no mistake in doing so.

98 per cent of the creameries of the world, which have been using Cream Separators for twenty-five years, now use De Laval machines. Almost every prominent dairy user does so. 600,000 farmers scattered all over the world, or more than ten times all others combined, do so. Every important Exposition for twenty-five years, ending with St. Louis in 1904, has unhesitatingly granted Highest Honors to the De Laval machines.

But if from any imaginable reason the buyer wants to get his own experience or make his own choice, then let him TRY as many machines as he pleases, but by all means TRY a De Laval before he reaches a conclusion and actually invests his money in any of them.

There are De Laval agents in every locality whose business it is to supply machines in this way, and who are glad of the opportunity to do so. If you don't know the nearest agent, send for his name and address. It will cost you nothing and it may save you a good deal.

By all means don't make the foolish mistake of sending your money in advance to some "mail order" concern and getting back a "scrub" separator not actually worth its weight in scrap-iron. If content to buy such a machine at least SEE and TRY it first before you part with any money.

THE DE LAVAL SEPARATOR CO.,

Randolph & Canal Sts.,
CHICAGO.

1213 Filbert Street,
PHILADELPHIA.

9 & 11 Drumm Street,
SAN FRANCISCO.

General Offices:

74 CORTLANDT STREET,

NEW YORK.

121 Youville Square
MONTREAL.

75 & 77 York street,
TORONTO.

248 McDermot Avenue,
WINNIPEG.

Sharples Tubular SEPARATORS

We want you to know Tubular Cream Separators as they are.

The low can, enclosed gears and ease of turning are shown in this illustration from life. Tubulars have neither oil cups, tubes, nor holes—they oil themselves. They have bowls without complicated inside parts—they hold the world's record for clean skimming, durability, capacity, easy turning and easy washing. They save half the work—greatly increase the amount and quality of butter—are wholly unlike all other separators. Catalog H-165 will interest and benefit you. Write for it.

The Sharples Co.
Chicago, Ill.

P. M. Sharples
West Chester, Pa.

The Cream Separator World's Record

It has come to our attention that the representatives of our "Would-be competitors," in order to bolster up their sales, are claiming that the United States Cream Separator

did not make a World's Skimming Record at the Pan-American Exposition at Buffalo. The United States Separator did make that record, and beat out the De Laval Separator, and every other separator that dared to enter the contest.

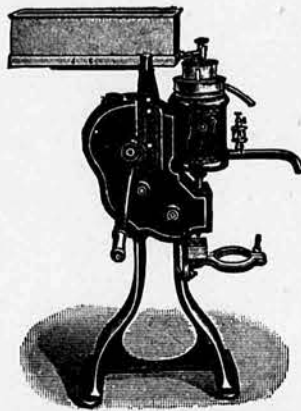
We Will Give \$5,000.00

to any State Dairyman's association before whom the De Laval Separator Co. can prove that the U. S. did not beat them, provided the De Laval Co. will give \$5,000.00 if the U. S. did beat the De Laval Separator in that contest—the amount to be distributed in premiums.

Again these "Would-be competitors" are claiming they were awarded a Grand Prize at Paris in 1900. We have made them own up in the papers in days gone by that they did not get such a prize, but they start up now, thinking, no doubt, that the public has forgotten that admission. They advertise lots of other things not in accordance with the facts. It troubles them immensely because the United States is beating them in all contests.

The United States Separator has beaten the De Laval Separator in every National or International Exposition, where contests have been held for the last ten years.

The United States is better made, gives better results, is less trouble to clean, and needs less repairs than any other separator on the market.



The U. S. Holds the World's Record

THE VERMONT FARM MACHINE COMPANY, Bellows Falls, Vt.

Warehouses at Chicago, Minneapolis, Omaha, La Crosse, Wis., Portland, Me., Kansas City, Mo., Buffalo, N. Y., San Francisco, Cal., Montreal and Sherbrooke, Que., Hamilton, Ont.

According to experiment reported under "Maintenance Ration," these cows would consume as much or more straw and 360 pounds of wheat of the above grain as a maintenance ration. This leaves 230 pounds of ground wheat and 244.5 pounds of cottonseed-meal to be charged against the butter-fat account. At \$1 per 100 pounds for wheat and \$1.50 per 100 for cottonseed-meal, this would amount to \$5.96. During this time these three cows produced 56.2 pounds of butter-fat. At 17 cents per pound, the financial statement stands as follows:

Value of 56.2 pounds of butter-fat.....	\$9.55
Cost of feed.....	5.96
Total profit.....	\$3.59
Profit per cow.....	1.19

In the above account the skim-milk is to pay for the hauling. With good management it will do more than this.

It will be noticed that this experiment represents an extreme case. Nearly every farmer has some corn or Kafir-corn fodder, millet, sorghum hay, prairie hay, red clover, alfalfa, oat hay or even oat straw that can be used instead or in place of part of the wheat straw with much better results. Any of these rough feeds will enable the dairyman to reduce the amount of grain needed. Where red clover or alfalfa is available, little or no cottonseed-meal is required.

By feeding his milch cows on a milch ration, the farmer will not only save more money than he would to winter them on a maintenance ration, but he will keep his cows in the habit of giving milk (a very important point), will help to keep his creamery, skimming-station, or cheese factory operating on a paying basis, and will have his cows on hand as a paying investment in the spring. If he then desires, he can dispose of any of his surplus stock at high prices.

Corn.—This grain makes an excellent balanced ration in connection with alfalfa. This station fed alfalfa and corn as the dairy ration for a considerable length of time, and it was found to give excellent results. Corn is appetizing and is relished by the cows.

Kafir-Corn.—We have fed Kafir-corn in comparison with corn, and find that we can get very nearly as good results with it as with corn, and we have used it in the place of corn in figuring out balanced rations. When it comes to yield, the Kafir-corn has the advantage of corn. Eleven years' experience on an upland farm belonging to the Kansas Agricultural College shows that the average yield of corn has been 34.5 bushels per acre, while the average yield of Kafir-corn has been 46 bushels. Wherever we have fed corn and Kafir-corn mixed we have obtained better results than with either one alone.

Some complaints have reached this station of the poor flavor Kafir-corn gives to butter when fed to dairy cows. The Kansas Station has fed the grain

and fodder of Kafir-corn for months at a time, and has never experienced a particle of trouble in its producing a poor quality of butter. During the months of February and March, 1898, the station herd was fed almost exclusively on Kafir-corn meal for a grain ration. At that time the dairy school was in session, and we were making butter from the milk of this herd without the addition of any milk from outside sources. The butter was tested by competent judges and pronounced excellent in quality. Since then the grain and fodder of Kafir-corn have been fed as the whole or part of the ration for our dairy cows, and the milk from these cows has been used as starter for ripening cream, and in no instance have we heard a single complaint from the use of college milk on account of the Kafir-corn flavor. We have noticed that when the season is poor for growing fodder considerable penetrating dust arises from the crop when handled at feeding-time. If the feeding is done just before or at milking-time, particles of this dust with the germs they carry will undoubtedly find their way to the milk-pail, and will undoubtedly cause a poor quality of butter. Usually the complaints have come where the Kafir-corn is more or less damaged by rains, and where the feed was damaged the most the milk made the poorest quality of butter and indications pointed to a slight decomposition of the feed. As hays and fodders of all kinds contain a large number of offensive germs, every effort should be made to prevent their entrance into the milk.

(To be continued.)

A Kicking Cow.

I have a cow that kicks when I milk her and I think some of the readers of the KANSAS FARMER can give me some good plan by which I may break her of this disagreeable habit.

Brown County.

J. W. M.

In milch cows the habit of kicking while being milked is sometimes quite difficult to break. A number of plans have been suggested by different ones and undoubtedly some one of them might fit your case.

You might try placing a leading snap on her nose at milking time and elevate her head to about the level of her back and tie there. This will often break up the habit. A plan recommended and used with considerable success is to take a quarter-inch rope and loop it around the back just in front of the udder and over the point of the hips, drawing it quite snugly.

It Makes the Most Dollars for You.

THERE ARE REASONS FOR IT.

That's the Easy Running EMPIRE Cream Separator

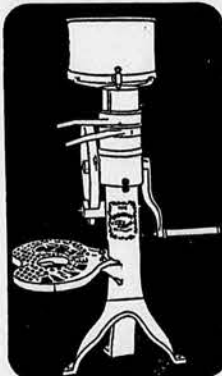
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EMPIRE CREAM SEPARATOR CO.

Bloomfield, N. J. Branch Office, Wichita, Kansas.



Cleveland



This Separator is the only salesman we have. We ship it direct from our factory to your farm and let it prove its own case. If it does not clean easier, run easier and skim better than any other Separator you have ever seen, you may ship it back to us. The working parts of the Cleveland being made of aluminum cannot collect dirt or wear away on the surface and they are wonderfully light and easy to handle. The CLEVELAND is ball bearing throughout and runs 200% easier than any other Cream Separator in the world. We can save you from \$20.00 to \$30.00 on the price of your Cream Separator. Don't you think it would pay you to write for our free catalogue? It tells the whole story of the Cleveland in a plain, simple way.

THE CLEVELAND CREAM SEPARATOR CO.

334 Michigan Street,

Cleveland, Ohio.

No expense to you to receive, try and return the Separator. We pay the freight both ways.

30 Days Free Trial

Low Rate Spring Trips To Sunny California



All the way

You can go to California any day between March 1st and May 15th for \$25.00, a little more than half fare one way.

Travel comfortably in tourist Pullman or chair car.

An unusual opportunity to inspect California farm lands.

Ask T. T. KING, Ticket Agent
A. T. & S. F. Ry., Topeka,
Kansas.

When the cow attempts to kick with this rope on, the points of the hips move backward as the leg moves forward and tends to draw the rope still tighter. Others have suggested strapping the legs together with a short strap, like a hame strap. The first two plans, however, I think are more to be recommended. The treatment of the cow will have something to do with the kicking habit. It is never a good plan to beat or pound a cow for kicking.

G. C. WHEELER.

Kansas Experiment Station.

Flint's Condition Powders all Right.

Lake Charles, La., June 27, 1904.
Dr. B. J. Kendall Co., Enosburg Falls, Vt.
Gentlemen:—Will you kindly mail me a copy of your "Treatise on the Horse and His Diseases." I have been using Professor Flint's Condition Powders for years and always recommend them whenever I find any one in need of a good, reliable powder.

A gentleman here whose horse had some trouble with back or in hind legs, had tried everything he knew of and finally called in a veterinary whose only conclusion was that he could not tell what was the trouble, so did him no good. I suggested Flint's Powders, he has used two packages and horse is improving right along.

Yours truly,
A. P. STEWART, M. D.

POULTRY BREEDERS' DIRECTORY

S. C. BROWN LEGHORNS—Exclusively. Cockerels all sold. Eggs for hatching from as choice a flock as is found in Central Kansas. Write for prices. J. A. Kaufman, Abilene, Kans.

WHITE WYANDOTTE hens 50 cents each. Address Chas. Staley, Rose Hill, Kans.

FOR SALE—Waddell's Buff Rocks. Sixty good birds for sale at unheard of prices, quality considered. Females from \$1.50 up; males from \$2.50 up. Eggs for setting, \$2.00, \$2.50 and \$3.00. Per 100, \$10, \$12 and \$15. A. J. Waddell, 210 Y, New York Ave., Wichita, Kans.

A LIMITED NUMBER OF CHOICE WHITE WYANDOTTE cockerels for sale, at \$1 each. Mrs. C. E. Williams, Irving, Kans.

WHITE PLYMOUTH ROCKS Exclusively. Two grand pens scored stock. Eggs from my best matings, \$1.50 per 15; \$2.50 per 30. Incubator eggs, \$5 per 100. J. C. Bostwick, Route 2, Hoyt, Kans.

S. C. BROWN LEGHORNS—Exclusively. Pure-bred cockerels, \$1. Eggs, 15 for \$1; 100 for \$4. Poor hatch replaced at half price. Frank T. Thomas, Irving, Kans.

FOR BUFF PLYMOUTH ROCK eggs, from best stock, send to Gem Poultry Farm, 15, \$2; 30, \$3.50. Pure M. Bronze turkey eggs, 11, \$3. C. W. Peckham, Haven, Kans.

FOR SALE—Eggs, express prepaid. B. P. Rocks, \$1 per 15; \$4.50 per 100. S. S. Hamburgs, \$1.50 per 15; \$7 per 100. Mammoth Pekin Ducks. Also a few high-scoring Hamburg cockerels for sale. Circular giving score and full description free. Mrs. Walter Roswurm, Route 2, Council Grove, Kans.

WHITE WYANDOTTES—15 choice, pure-white cockerels cheap. F. H. Sutton, Minneapolis, Kans.

WHITE WYANDOTTES—50 choice cockerels for sale. Prices reasonable. Eggs, \$1 for 15. S. W. Artz, Larned, Kans.

A LIMITED NUMBER OF CHOICE WHITE WYANDOTTES cockerels for sale, at \$1 each. Mrs. C. E. Williams, Irving, Kans.

M. B. TURKEYS—Young toms and pullets; large-boned, healthy stock. Call and see them, or write for description and prices. J. E. Miller, Pawnee Rock, Barton County, Kans.

FOR SALE—Barred and White Plymouth Rocks. Now is the time to secure your breeding stock. Won all first premiums and sweepstakes at Ottawa Fair, September 1904. Choice cockerels and pullets and eggs in season. Mr. & Mrs. Chris. Bearman, Ottawa, Kans.

FOR SALE—Two male Scotch Collies, nearly full grown. Eligible to registry, strong in the blood of Metchley Wonder. Price, \$10 each. Geo. W. Maier, Lawrence, Kans.

SINGLE COMB RHODE ISLAND COCKERELS \$2.50 to \$5 each. H. C. Statey, breeder, Rose Hill, Butler County, Kans.

FOR SALE—Silver Wyandottes, choice hens and pullets, score 90 or more. Eggs \$1 for 15. Orders booked. Address W. C. Keening, First National Bank Building, Nortonville, Kans.

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

S. C. BROWN LEGHORNS—Only a few choice cockerels left. First come, first served. Prices reasonable. Stock guaranteed to be pure-bred. J. A. Kaufman, Abilene, Kans.

TO GIVE AWAY—50 Buff Orpingtons and 50 Buff Leghorns to Shawnee county farmers. Will buy the chicks and eggs. Write me. W. H. Maxwell, 921 Topeka Ave., Topeka, Kans.

SCOTCH COLLIE PUPS—Four more litters of these high-bred Collies, from 1 to 3 weeks old, for sale. Booking orders now. Walnut Grove Farm, H. D. Nutting, Prop., Emporia, Kans.

256 TO 278 EGGS A YEAR EACH. Our Barred Rocks bred for business. Profits doubled by new methods in breeding, hatching, and feeding. Instructive catalog free. F. Grundy, Morrisonville, Ill.

WHITE WYANDOTTES

White ones, pure-bred, and good layers. Eggs in season.

ALVIN LONG, Lyons, Kans.

"PARTRIDGE COCHINS"

A few extra nice cockerels for sale. Pure-bred, and only \$1 each.

R. J. CONNEWAY, Elk City, Kansas

BEE & POULTRY SUPPLIES

If you are going to need any Bee or Poultry Supplies, the coming season, write for our Catalogue NOW. We save you money. We are also Agents for the Famous Cyprian P.O.B. Turkey and Gamecock. At Factory prices.

40 BREEDS Fine, pure-bred chickens, Northern raised, hardy and very beautiful. Largest poultry farm in the Northwest. Fowls, eggs and incubator at low prices. Send 4c for fine 70-page poultry book and catalogue. R. F. NEUBERT, Box 894, Mankato, Minn.

PRESERVE YOUR EGGS.

Highest known market prices will be paid this season, inevitable; scarcity, great demands; preserve yours with my Reliable Egg Preserving Method. Keeps eggs fresh indefinitely, prevents staleness and spoiling; peerless, indispensable, economical, guaranteed. Price \$1. Order now. Send stamp for further particulars. Address,

W. L. JOHNSON, Dept. N, Clarksville, Tenn.

BARRED ROCKS AND COCHINS

Bred for winter laying as well as beauty. My 1st 1904 pullets laid first egg at 4 months and 18 days old. They lay much earlier than most strains and lay in winter when most strains are idle. Worlds fair winners. Send for beautiful catalog with photos of prize winners, etc. Sharpest and best 611, 50c. per 100 pounds; \$1 per 500 pounds. Agent for CYPHERS INCUBATORS.

O. E. SKINNER, Columbus, Kansas.

"A Nine Times Winner"

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

Won in Every One of Them. If they win for us, their offspring ought to win for you. Eggs, \$1.50 per 15. Elmwood str-in of White Wyandottes also hold their own in the show-room. Eggs, \$1 per 15.

W. L. BATES, Topeka, Ks.

The Poultry Yard

CONDUCTED BY THOMAS OWEN.

The Value of Little Things.

The four prevalent causes of disease among poultry are: Over-feeding, the continuous feeding of one article of food which results in imperfect nutrition, an insufficient supply of clean drinking-water, and unclean premises, or vermin-infested sleeping-quarters. It seems a little thing to see that the poultry are supplied with fresh water; but when we consider how helpless they are it ceases to be of small importance. In many farm-yards watering the poultry is a thing of accidental occurrence rather than of systematic regularity. In fact, we have seen the fowls drink out of filthy pools near the manure pile. No wonder the fowls get sick and die. Nothing else can account for the run-down, unthrifty appearance of farm poultry unless it may be the uncleanness of their sleeping-quarters. It would take but a little while to thoroughly white-wash the poultry-house and place some lice-killer on the roosts and in the nest-boxes and thus get rid of the lice.

It takes but a few minutes to fill an old iron vessel or wooden trough with lime and place it in a corner of the poultry yard; but if this is done there will be no more complaint of soft-shelled eggs. The lime slakes and becomes hard, with probably an outer coating of dust, but the hens remember where it is and what it is good for, and if you look at it now and then you will see the fresh print of their bills. It is a little thing to clean out the poultry-house once or twice a week, but if neglected it amounts to a big thing in the loss of a great many chickens whose death was caused by neglecting to keep the house clean.

It is a little thing to sift the wood ashes from the cooking-stove now and then and give the charcoal to the fowls, but there is no estimating its usefulness as a preventive of disease or even as a corrective for bowel disorders after they have appeared; in which case the charcoal should be pounded and mixed with their soft feed. At other times, it may be simply broken in small pieces and conveniently placed where the fowls can get at it. They are smarter than we think, possessing an instinctive knowledge of their needs. Some bits of old iron and small lumps of copperas thrown in their drinking-water will prove an excellent tonic. A few drops of coal-oil or turpentine in their drinking-water will often prove a preventive of many diseases. Neglect not the small things of poultrydom, for of these small things are composed the larger things of success.

Hints for Beginners.

This is the time of year when people have the chicken fever. Chickens are scarce, eggs are high, the backbone of winter is broken, the snow is melting, spring is here, and we'll go to chicken-raising.

Now raising chickens is all right to a certain extent, but it is poor policy to embark in it with the idea of rushing things, to make it an industry of magnitude, with all the machinery and appliances of hatching, brooding and slaughtering the prospective thousands of chickens, and growing rich all at once. A man with ten fowls can easily make a profit of \$2 per hen per year. Then he argues, "If I can make a profit of \$2 each with my ten hens, why can't I with a thousand hens, make a profit of \$2,000 a year out of them?" Well, he could, if he would only give them the same care, attention, and housing that he gives his ten hens. Can he provide such nice table-scrap for his two thousand hens that he gives to his ten fowls? Will he be as liable to keep his large houses clean as he does his small house wherein he keeps his ten? We think not.

It is sound policy to be familiar with the breeding, rearing, and management of poultry before one begins to raise pure-bred fowls for private use; and it

is better in all events to make it a secondary pursuit. If in the course of time the business would warrant the use of one's whole time, and the profits accruing amount to more than the primary pursuit, then it is all right to make it an exclusive business. But you had better go slow and sure to success, than fast and certain to destruction.

Nearly every day people begin raising fancy poultry who do not know anything about the business. They think it is an easy thing to gather eggs and place a dozen under a setting hen. The chicks come themselves and the mother hen will teach them to eat. The food will make them grow and when full grown they will sell for a good price. Some with more theoretical than practical ideas begin with several breeds at once. They think this is smart and attractive, and the surest plan to capture the bulk of buyers; and forget that it takes twice as much care to look after two breeds as it does one, besides the danger of mixing breeds. These confiding novices are sure to see the folly of their hasty and unprepared attempts, for they will learn that it takes years to work up a paying trade and that it will require intelligence, skill, and industry to do it.

We have noticed for years that the tendency of poultry-raisers who have been handling many breeds is to discard one breed after another until they eventually have but one. To be a specialist in one variety of fowls is much better than to be just a dabbler in half a dozen varieties. You can make just as much money with one breed as you can with a dozen and if you raise a great many of one kind you are bound to have some extra good ones, for you have so very many to pick from; whereas, if you have only a few of half a dozen different kinds of fowls, the chances are that you will only have a medium lot of birds, for you have only a few to choose from, and you must discard a good many culs before you can get a few first-class fowls. We know it is pleasing to the novice to contemplate a large henry fitted up in attractive style, with its hundreds of living inmates, the very picture of health and egg-production, resting upon perches or skipping about the grass and shrubbery, every mail bringing in orders for eggs, and the scores of baskets passing through light fingers while packing and marking directions. In a little while wagons come rushing from the planing mills, saw and hammer are kept busy making coops for the young stock and the astonished neighbors turn out to see the huge freight of fancy poultry sent every day to the express office. Such are the pleasant imaginings of the possible growth of poultry culture. And they are really the sanguine expectations of scores who take up poultry-keeping to make a fortune by it.

There is no doubt that poultry-keeping, intelligently managed, is profitable. The proceeds from sales singly do not seem much, but in the aggregate the profit is large. Little springs feed mighty rivers. Poultry, living or dead, can be converted into money. One does not wait for years to get back some returns; after one gets a good start, there is a little coming in every day. It is in itself an independent way of making a living without entirely depending on others for employment. The poor or the sickly of either sex could not find any occupation more suitable and agreeable than raising poultry for the recreation and profit there is in it, if rightly pushed. And while the work is not hard, still there are many little details to be attended to; and unless they are attended to properly, success can not be accomplished. There are scores of people who start in the poultry business with a rush and drop out in a year or two, saying it doesn't pay. Others again, go into it slowly and surely and make money at it. Experience has taught that there is no legitimate business that pays better, but it must be conducted with care and skill. The lack of these is the reason nine-tenths of our farmers do not make it a success. A farmer who keeps a strict ledger account of all the returns and expenditures from his poultry is an exception.

POULTRY BREEDERS' DIRECTORY

YOU WILL TRANSFORM all fertile eggs into strong, healthy chicks by using the **TRIUMPH INCUBATORS**. It is thoroughly tested, built by an experienced poultry breeder, very durable, copper tanks, double walls, automatic regulator, etc. 30 days trial. 40 breeds, Northern raised, fine poultry. Prices low. Large catalog free. R. F. NEUBERT, Box 894, MANKATO, MINN.

\$12.80 For 200 Egg INCUBATOR

Perfect in construction and action. Hatches every fertile egg. Write for catalog to-day.

Geo. H. STAHL, Quincy, Ill.

The "Mandy" Lee
Incubators and Brooders
Embrace nine original and distinct improvements not found in other machines—increasing their money-producing powers, making them simpler and easier to manage and insuring success to all users. Are all described in our new, free catalogue. Write for it. Geo. H. Lee Co., Box 41, Omaha, Neb.

BURR INCUBATORS

Up-to-date: no night watching. Perfect regulator, economical heater, price low. Test it yourself for 30 days; if you don't want it, fertile eggs must hatch. Freight paid Burr Incubator Co., Omaha, Neb.

ONE HATCH FREE. ROYAL Incubators.

30 Days Free. Absolutely automatic. Send it back if not perfectly satisfactory. Built to last years. Send for free trial plan. Incubator, poultry and poultry supply catalog FREE. Poultry paper 1 year 10c. ROYAL INCUBATOR CO., Drawer 66 Des Moines, Ia.

EASY and SURE PROFITS FROM THE Iowa ROUND Incubator. Simple to operate. Cheapest in fuel. Perfect heat regulation. Largest per cent hatches. Healthier chicks. Thousands testify to the hatching qualities of these machines. "No Cold Corners" Descriptive catalog FREE for asking. IOWA INCUBATOR CO., 359 Locust St., Des Moines, Iowa

40 DAYS FREE TRIAL

This Great Western 100-Egg Incubator is sold on 40 days free trial for \$10, to be paid for when satisfied. Positively the best incubator made; obtains most successful hatches. Best for the amateur as well as expert poultry raiser. Large Catalog free. Great Western Incubator Co., 920 Liberty St. Kansas City, Mo.

SHOEMAKER'S BOOK on POULTRY

and almanac for 1905, contains 284 pages, with many fine colored plates of fowls in life. Tells all about chickens, their care, diseases and remedies. All about INCUBATORS and how to operate them. All about poultry houses and how to build them. It's really an encyclopedia of chicken-dom. You need it. Price only 15c. C. C. SHOEMAKER, Box 905, FREEPORT, ILL.

Do You Need a Brooder?

Bates' Security Brooder

is no experiment, having been thoroughly tested the past three years under the most trying conditions, and it has proved its worth. Price, 100 chick size, at Topeka, \$7.50. Write for particulars.

W. L. Bates, Topeka, Kans.

White Plymouth Rocks

EXCLUSIVELY.

Good for eggs, good to eat, and good to look at

W. P. Rocks hold the record for egg-laying over every other variety of fowls; eight pullets averaging 289 eggs each in one year. I have bred them exclusively for twelve years and have them scoring 94 to 96%, and as good as can be found anywhere. Eggs only \$2 per 15; \$3 per 45, and I prepay express to any express office in the United States. Yards at residence, adjoining Washburn College. Address THOMAS OWEN, Sta. B, Topeka, Kans.

WHY SO SURE?

It's made on the right plan, it works right. It brings best results to the beginner as well as the experienced poultry raiser.

THE Successful

is the nearest of all the out and out automatic machines, both incubator and brooder. They can be depended upon under all conditions to hatch the most and brood them the best. 100 pens standard fowls. Incubator, poultry and poultry supply catalogue free. Poultry paper 1 year ten cts. Des Moines Incubator Co. Dep. 83, Des Moines, Ia.

Many keep no account at all. These are the ones who say "Poultry don't pay." Lack of experience, patience, system, and understanding of the amount of work connected with poultry-raising tell the reason of their failure.

But if you go at it in a right way, there is no need of failure. Go slowly, get your start of fancy poultry by buying a trio or a pen of fowls; raise all you can the first season; get an expert to examine your birds; cull and sell off the poor ones and breed only your very best the next year, and so on until you get more and more fowls and more and more experience. If you do not care to invest enough money to buy fowls, then get a start by buying some thoroughbred eggs from some reliable breeder.

The Hen.

The honorable Secretary of Agriculture has finished his count of the eggs laid by the American hen during the last year. The result entitles every rooster to crow just as loud and lustily as he cares to. Like most other families, that of the chicken is one in which the female works and the male boasts. But in this instance the sequel is reversed, and instead of laying low for her mate, the hen has laid high, for the Honorable Secretary's count came out an even 20,000,000,000. Think of it!

Passing over Farmer Wilson's task, which has cooped him up for some time, let us do a little figuring on our own hook. Placed end to end—well, that is a little hackneyed, but it's according to the Hoyle of statistics—these eggs would form an endless chain that would almost reach from the earth to the moon and back again; and there would still be enough of them to circle this big egg on which the hens and we live.

A limited train, running fifty miles an hour and making no stops, would have to run one year and one month to take a passenger from the first egg to the last one, and it's ten to one the passenger wouldn't want to get out of the car at the finish—unless the last egg was in cold storage! If the first egg in the line were to burst with enthusiasm—or something more common to eggs—and some one near the last one were possessed of absolutely perfect hearing, and sound could travel that far, it would be thirty hours before the echo of the explosion became audible. And this is straight, even though it is a shell game!

Placed in the balance and not found wanting, the combined weight of this layout would equal three-fourths of the total tonnage of the whole British navy, though, of course, all the eggs would not float. Made into one omelet, the dish on which it was served would have to have a minimum area of at least 9,000 square miles, and every human being alive could have one generous helping. Made into eggnog, they would, according to the most reliable authority at hand, set 2,599,999,999 gentlemen hunting keyholes, allowing for the number who would never get to the place where the keyhole was.

If Adam and the Apple Woman had begun soft-boiling these eggs the very minute after they reached Eden, and had taken them one at a time, the job would still be in its infancy, and would have 104,000 years to run, unless the Egg Boilers' Union stepped in and enforced an eight-hour day, under which circumstances multiply by three.

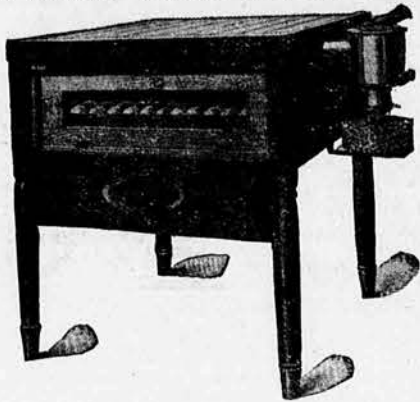
Valued at 20 cents a dozen, which is probably a fair average, the country over, season in and season out, these oblong spheres would about represent the nest-egg of our esteemed fellow-citizen, John D. Rockefeller, or in round figures \$333,333,333.

Truly, the American egg is a great institution. The eagle may scream, but the hen lays it all over him in good form, except when it's bad!—Pa. Farmer.

The Racine Incubator.

We are reproducing here a cut of the Racine Incubator, manufactured by the Racine Hatcher Company, Racine, Wis. This is the incubator that has resulted from the continuous work on incubators, of a man who has given twenty-three

years over entirely to this occupation. Our readers have doubtless been struck with the distinctiveness, we might say peculiarity, of the Racine Hatcher advertising. It is devoted almost exclusively to their Incubator Book, rather than to the machine itself. We give the illustration, but must follow the same plan in this notice. The points made, the theories demonstrated and put into practice, the workings and the why of it all, that comprehend twenty-three years' work of an incubator specialist, are not to be covered, or even hinted at, in a notice like this. The book itself must be read. The book is not sold. A postal will bring it, and



aside from showing wherein the Racine differs from most incubators, it contains a fund of sound sense which every poultry-raiser must appreciate. The vital feature in the Racine, as in all incubators, is heat supply, regulation and ventilation. Of this problem the Racine Incubator presents what seems to be a well-nigh perfect solution. The uniform good results produced by many thousand users, in all parts of the country, attest this fact. There is no question about the Racine being in the first rank of incubators. We advise sending for the book and learning the theories of incubation which it has reduced to practice. Consult the advertisement elsewhere and direct accordingly.

A Kansas Incubator for Kansas.

The Hiawatha Incubator is the only one that is manufactured in Kansas and, like other Kansas things, it is good enough for anybody. After using a number of different makes of incubators, including two of the best known and most popular kinds made in the United States, the writer was induced to try a Hiawatha. This machine was used in the same room and under exactly the same conditions as were the other machines which were in use at the same time.

One hatching was enough to show its superiority in the automatic regulating device and in its hatching power, and before the end of the season we were satisfied to sell the other incubators and order more of the Hiawathas. We have never regretted this and now have a very fine flock of Barred Plymouth Rocks, each one of which was hatched by a Hiawatha incubator. Kansas now sells \$7,551,871 worth of poultry and eggs per year and this amount could be greatly increased by the proper use of good incubators. A good incubator takes the place of many hens and does the work better and with less trouble. A poor incubator is not worth having. The Hiawatha is a good incubator. Write the Hiawatha Manufacturing Co., Hiawatha, Kans., for catalogue and prices. It will pay.

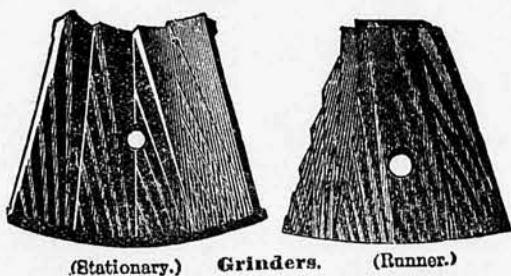
Breeding Seed Oats.

Almost every reader of this paper knows of the Funk Bros.' seed farms at Bloomington, Ill. We hope that before this most of our readers have got their catalogue. You will notice if you watch the advertising columns that Funk Bros. are advertising pure-bred seed oats.

Now, you may be interested in knowing how Funk Bros. go about it to get the highest class of oats for their customers. Funk Bros. have thousands of acres of rich land in Illinois. On their many farms they have been making, for a number of years, a comparative yield test of over eighty varieties of oats. Twenty of these varieties were planted in one-half acre plots. This test was duplicated in two different fields upon different farms, the fields being over four miles apart. This was done to reduce the liability of loss by wind, insects, etc. All of these tests are under uniform conditions, being planted on the same fields on the same day, and each variety thrashed separately.

The work has been carried on consistently for three years. As a result Funk Bros. are able to offer to their customers

Wise Feeding.



(Stationary.) Grinders. (Runner.)

Good management and saving is of more importance than the growing of large crops with wasteful methods of feeding. Nature helps those who help themselves; and one way of assisting nature is by properly preparing the feed before it is given to the stock. The C. N. P. Bowsher Co., South Bend, Ind., make this their hobby, and it is the business of their life to furnish the best mills for feed grinding that mechanical skill can produce. While there are dozens of features about the mills that are of importance,

the manufacturers refer especially to the peculiar grinding surface in the Bowsher Mills. This is conical shape, and the grinders are made in sections. With the conical shaped grinders the work is done close to the center of the shaft; thus securing light-running qualities. Another advantage is secured in a 40 per cent reduction in end pressure on the shaft as compared with disk mills.

There are many other features that the firm will be glad to explain in detail to such of our readers as will send them their address.

The Kansas Incubator

Was recently pronounced by the U. S. T. R. to be the best Incubator in the country. The KANSAS INCUBATOR is the "HONEST INJUN" Incubator, built right here in our own State, up at Hiawatha. It's a warm air machine, and has no leaky copper tank to give out. Ten-year guarantees won't prevent copper tanks from leaking, no more than an insurance policy will prevent sickness. We have a special proposition to make to every Jayhawker, who writes us a postal, immediately, and mentions the KANSAS FARMER.

THE HIAWATHA MFG. CO.

81 Oregon St., Hiawatha, Brown Co., Kansas

Incubator Book

The Best That Was Ever Written

If you wish to buy an incubator wisely, read this book. It will tell you the facts that you need to know. It is written by a man who has spent 23 years in perfecting an ideal incubator. It tells of the mistakes that he made and that others are making—and how to avoid them. It tells you his experience with all sorts of incubators—the good points and the weaknesses of all. It tells you how he has perfected the Racine Incubator—in 23 years—until it includes all the good points that any man has discovered. The book is interesting—fascinating—and it is written by a man who knows most about incubators. You will know which incubator you want when you read it—the book is free. Write today for it. Remember, We Pay the Freight. Address

Racine Hatcher Co., Box 88, Racine, Wis.

We have Warehouses at Buffalo, N. Y.—Kansas City, Mo. and St. Paul, Minn.



Standard Cyphers Incubators

are guaranteed to hatch more and healthier chicks with less oil and less attention in your hands than any other, or your money back. Absolutely automatic and self-regulating. Used and endorsed by 42 Government Experiment Stations and by America's foremost poultrymen. Complete Catalogue and Poultry Guide, 212 pages (8x11), more than 500 illustrations. FREE, if you send addresses of two neighbors who keep good poultry and mention this paper. Address nearest office.

CYPHERS INCUBATOR CO.,

Buffalo, Boston, Chicago, New York, Kansas City or San Francisco.

POULTRY BREEDERS' DIRECTORY.

FOR SALE—Young M. B. turkeys, large bone, fine plumage, healthy stock. A 44-pound tom scoring 96½ points, heads flock. Hens, \$2.50 to \$3. Toms, \$4 to \$5. Call and see them or write for further information to G. W. Perkins, Newton, Kans.

FOR SALE—Back Langshan cockerels. Mrs. E. Forward, Clearwater, Kans.

WHITE ROCK COCKERELS—\$1 each; good ones; worth double. White and Barred Rock eggs, 75 cents for sitting of 15. D. S. Thompson, Route 1, Welda, Kans.

ROSE COMB RHODE ISLAND RED CHICKENS—Eggs from choice matings, \$1.50 per 15. Leon Carter, Asherville, Kans.

FIVE R. I. Red S. C. cockerels for sale at \$1.50 each. Harold Willis, Minneapolis, Kans.

SUNNY SUMMIT FARM—Pure-bred poultry. Stock and eggs for sale from high-scoring varieties of S. Sp. Hamburgs, S. C. and R. C. Brown, S. C. White Leghorns, S. C. Black Minorcas. Eggs, \$1 per 15; M. B. turkey eggs, \$2 per 9. Vira Bailey, Kinsley, Kans.

this year six different types of seed oats. Their seed oats are entirely free from mustard and other obnoxious weed-seed; all dirt, light oats and foreign matter has been removed. Their oats are all thoroughly treated with formaldehyde, which is an absolute preventive of smut. This treatment is effective for two years. Every reader of this paper knows that seed oats should be changed every two or three years, as when sown upon the same farm they quickly run out.

A new big seed book of Funk Bros. tells about their seed oats, describes some of their great and successful varieties and gives scientific reasons why their oats are all they claim them to be. Bear this in mind—Funk Bros. are the greatest commercial oats-breeders in America. They have a reputation unequalled for having nothing but the highest class of seed. We believe it will pay you to write for their catalogue at once. Please mention this paper.

Barred Plymouth Rocks

20 Cockerels for sale. E. W. Caywood, Clinton, Kansas

White Plymouth Rocks

FOR SALE—Cockerels, Hens and Pullets. ACHENBACH BROS., Washington, Kans.

Rose Comb Rhode Island Reds and Barred Plymouth Rocks

Have sold all the breeding stock I can spare, but can furnish eggs for hatching at a very low price from a winter strain of layers that have layed all through the winter weather in January and February. First prize winners at Lawrence and Topeka fairs. Write for circular and list of matings, telling you how we can produce fertile eggs so low. Italian bees for sale.

H. A. SIBLEY, Lawrence, Kans.

Get Rid Of Lice

Before warm weather begins and your hens will raise 100 per cent of all chicks hatched. Lice are the poultry-keeper's greatest enemy; you can clean them all out NOW cheaply and quickly. For years I have successfully used the only real louse-killer that is absolutely certain in result. It costs but eight cents per pound to prepare and the hens apply it themselves. I will sell the formula, with complete directions, for 25 cents—satisfaction guaranteed or money refunded. American Poultry Co., Third Ave., Springfield, Ohio.

INCUBATOR

Johnson started his new Pay-for-Itself hatcher last year and raised a rum-pus with high prices. Don't get fooled. Put your trust in

Old Trusty.

The Incubator that is sent on 40 Days Trial Five Year Guarantee.

The training he got making 50,000 other incubators enabled him to make "Old Trusty" right. Every user says it's right. No other incubator ever got in first rank the first year. You should get Johnson's Free Catalog and Advice Book. He wrote it. Makes his success your success. M. M. Johnson Co., Clay Center, Neb.

A Better Incubator

We waited a long time before making an incubator—waited long enough to find the weak points in incubators in order to avoid mistakes in this one. We have experimented until we are satisfied. We know the

Belle City

is right. Has double walls—dead air space—perfect insulation all around—self regulating—copper tank—no moisture—large nursery. Very light, strong and durable. Can never warp nor crack. We make a double walled brooder that raises all of the chicks. Our book, "Hatching Facts," isn't like other catalogs. You ought to have it. Mailed free. Write today. We pay the freight. Belle City Incubator Co., Box 18, Racine, Wis.

Crop Rotation in Kansas.

(Continued from page 281.)

seed. But in each case the peas have made but little growth until quite late in the fall; in fact, the peas have made very little growth previous to the cutting and shocking of the corn. Last fall the corn was cut the first part of September, and the peas made considerable growth after that, reaching a height of ten or twelve inches, and we allow them to remain as a cover-crop during the winter; or they would have furnished considerable pasture, if we could have used the field for pasture. These experiments have not yet been carried on long enough so that we have any data as to the effect which cow-peas have upon the yield of succeeding crops of corn.

It is my judgment that cow-peas will be found a valuable crop to use as a catch-crop in the manner described above. The greatest objection at this time is the cost of the cow-peas for seed. When they can be produced so that the seed may be sold at \$1 or less per bushel it will certainly be desirable to use the peas as a catch-crop after other crops.

We have sown as much as 1½ bushels per acre in the catch-crop trials which we have carried on at this station.

I hope that other readers of the KANSAS FARMER may give their experience along these lines.

A. M. TENENCK.

The Draft of Wagons.

R. MEYER, KANSAS AGRICULTURAL COLLEGE.

The first and most important of all the factors that influence the draft of a wagon is the road-bed. The harder the surface of the road the less will be the indentation made by the wheels. When a load is pulled over a road in which the wheels cut from two to three inches deep the wheels continually tend to pull up grade and the deeper rut the wheels make, the steeper will be the grade. In case of a steel track where there is no indentation caused by the load, a horse hitched to a wagon can move about fifty times his own weight, while on a dirt road he would do well to move four times his own weight. When we have a road with a hard surface the road must be more nearly level than when we have a soft road. It has been shown by experiment that when a load is hauled up a hill which rises 4 feet in 100 feet, the draft increases 4 per cent of the load and if the hill rises 6 feet in 100 feet the draft increases 6 per cent and so on. Thus it does not take a very steep hill to give a horse all he can pull, a horse ordinarily pulling ½ of his weight in a very hard pull. On a road with a hard surface a horse is more able to pull a larger load to the hill than when the road is soft, so we must decrease the grade that the horse may pull the load up the hill. If a horse exerted a 150-pound pull on one ton on a dirt road and a 150-pound pull on three tons on a macadam road, the horse will come to the hill in case of the macadam road with three times as large a load, and if the hill has a 4 per cent grade, the increase in draft on the dirt road will be 80 pounds and in the case of the macadam road, 240 pounds.

The next factor of importance is the length of the spoke in the wheel and this effects the draft in two ways, first by the difference of indentation in the road-bed and second when passing obstructions. When the length of the spoke is increased, the circumference of the wheel is also increased and gives the wheel a larger bearing surface on the road-bed, and in this way the draft is decreased with respect to the indentation.

As regards an obstruction we find that it acts the same as going up grade, and the large wheel reaches the obstruction sooner and at a greater distance than the small wheel, thus giving greater leverage to the larger wheel to pass over the obstruction, and by this we can easily see how the draft would be influenced by the obstruction. Experiments have shown that when a wheel passes an obstruction of 4 per cent of the radius of the wheel that the draft is doubled, or in

other words a wagon with a 48-inch spoke will pull over an obstruction 9-10 of an inch in height as easy as a wagon with a 24-inch spoke will pull over an obstruction of 4-10 inch in height.

Another factor which influences the draft and is very much discussed at the present time is the width of tire. We can see that this will vary with the road and the condition of the road-bed. When a road is hard, experiments have shown that there is very little difference between the draft of the wide and the narrow tire, and when a road is soft and dry the wide-tired wagon will pull the easier, and on a road that is soft and wet so that the mud will fill between the spokes, the wide-tired wagon will pull the heavier. The great disadvantage with the wide tire is that it usually has to form a new track because of the large number of narrow tires used, and also that we usually find the wide tires on the small-wheeled wagons.

The line of draft is also a factor that influences the draft of a wagon. If the line of draft is in upward direction the pull is against gravity and if the line of draft is in a downward direction the load is made heavier, therefore the conclusion is that a line of draft parallel to the road-bed is best, but because of the indentation caused by the wheel, the wheel tends to go up hill and for this reason the line of draft should tend in an upward direction making a slight angle with the road-bed.

Another factor that influences the draft of a wagon especially upon a rough road is the springs under the box or pneumatic tires enabling the wheel to rise over an obstruction without raising the whole load.

We have seen that there are a large number of factors that influence the draft of a wagon. We cannot change the factors but we can make the conditions as nearly perfect as possible and thereby reduce the draft of the wagon so that a great amount of energy may be saved that is now so often wasted.

Farm Notes.

N. J. SHEPHERD, ELDON, MO.

A change of feed will often improve the appetite.

The good cow is a comparatively lean one.

Do not depend too much upon breed. Feed is breed's equal partner.

If you have a good cow see that she has a good manger.

Cattle can thrive only by good feeding, and without thrift there can be no profit.

So far as it is possible it is always best to avoid selling on a falling market.

It is a well settled fact that it pays best to keep good stock and to keep it well.

In a dairy cow good care and keep is as essential as proper selection and breeding.

While feed has much to do with the quality of the milk, breed is equally important.

While all the elements of growth are in skim-milk, it has but little tendency to fatten.

It is wasteful feeding to give corn meal to cows without mixing it with more bulky food.

Cheap feed is the best feed so combined as to produce the best results for the least money outlay. Cheapness in quality is often dear in results.

Millions in Oats.

Salzer's New National Oats yielded in Mich., 240 bu., in Mo., 255 bu., in N. D., 310 bu., and in 30 other states from 150 to 300 bu. per acre. Now this Oat if generally grown in 1905, will add millions of bushels to the yield and millions of dollars to the farmer's purse!



Homebuilder Yellow Dent Corn grows like a weed and yields from 157 to 260 bushels and more per acre! It's the biggest yielder on earth!

Salzer's Speltz, Beardless Barley, Macaroni Wheat, Pea Oat, Billion Dollar Grass and Earliest Cane are money makers for you, Mr. Farmer.

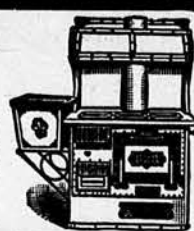
JUST SEND THIS NOTICE AND 10c in stamps to John A. Salzer Seed Co., La Crosse, Wis., and receive their big catalog and lots of farm seed samples.



"ON CREDIT"

Elegant Century steel ranges with large reservoirs, from \$8 up, warranted for 25 years. Cash or easy monthly payments. We trust honest people located in all parts of the world. Write for free catalogue.

CENTURY MFG. CO., Depot 305 East St. Louis, Ill.



Care of the Face.

You would not try to shave with a rip saw, would you? Then don't use ordinary soaps to make a lather for shaving. Such soaps are not suited to the delicate tissues of the face, and are bound to make it sore and rough and uncomfortable. Use the soap made especially for shaving the very best, made by the J. B. Williams Co., Glastonbury, Conn. If you wish to try a sample of Williams' Shaving Soap, see their offer in another column. Remember that nature has given you but one face and it is up to you to take care of it.

The C. R. Harper Manufacturing Co., Marshalltown, Iowa, as may be seen by advertisement on another page, are making a special line of tools expressly for farmers' use, consisting of Malleable Iron Vises, Malleable Iron Drill-Frames, Drill Sets, Ball-Bearing Steel Forges, Anvils, etc. Their aim has been to make tools which will give satisfaction and that are durable. Last year they were awarded diplomas at the Iowa, Nebraska, and Kansas State Fairs. We believe that this company is manufacturing a line of goods that is thoroughly dependable and it will be worth while for readers to write them for catalogue. We understand that they are making some prices which are especially low. It is often the case that a piece of machinery gets a little out of order but still runs all right. The farmer neglects to take it to the shop and soon he has to buy a new machine. Had he the tools on the farm, he would, on some rainy day, have done the work himself and thus saved buying a new machine for a year or two. It takes but little practice for the average farmer to learn how to use the tools to good advantage. A shop is also one of the greatest enjoyments a farmer can give his boys. Most boys on the farm take great delight in working with tools. Give them good ones and the knowledge they gain will be of much benefit to them as they grow older. If you will read the advertisement carefully, you will learn how to get a forge absolutely free.

At the start the owner of Sleepy Hollow Farm determined that only reliable seeds should be sold under his name and only those he could guarantee, and that full measure, just weight and true description should be the rule. He began by making his neighbors his first customers and they soon discovered that in him they had a man who could always be depended upon to furnish nothing but honest goods. They spread the news to others and the ever-widening circle of pleased patrons necessitated the steady increase of his facilities, until now the name of Henry Field, Seedsman, or as he is often called, the "Ear Seed Corn Man," is known far and wide among farmers and gardeners

High Point Stock Farm

I have choice O. I. C. and Duroc-Jersey males. Also bred O. I. C. and Duroc-Jersey gilts for sale. B. P. Rock cockerels and eggs in season. Write or come and see

J. R. EBERT,

Route 3, Hunnewell, Kans.

GOLDEN RULE STOCK FARM

LEON CARTER MGR., Asherville, Kans. Gilt edged Duroc-Jersey Swine.

JUST ISSUED

POULTRY FEEDING AND FATTENING

A handbook for poultry keepers on the standard and improved methods of feeding and marketing all kinds of poultry.

The subject of feeding and fattening poultry is prepared largely from the side of the best practice and experience here and abroad, although the underlying science of feeding is explained as fully as needed. The subject covers all branches, including chickens, broilers, capons, turkeys and waterfowl; how to feed under various conditions and for different purposes. The whole subject of capons and caponizing is treated in detail. A great mass of practical information and experience not readily obtainable elsewhere is given, with full and explicit directions for fattening and preparing for market. The broad scope of the book is shown in the following

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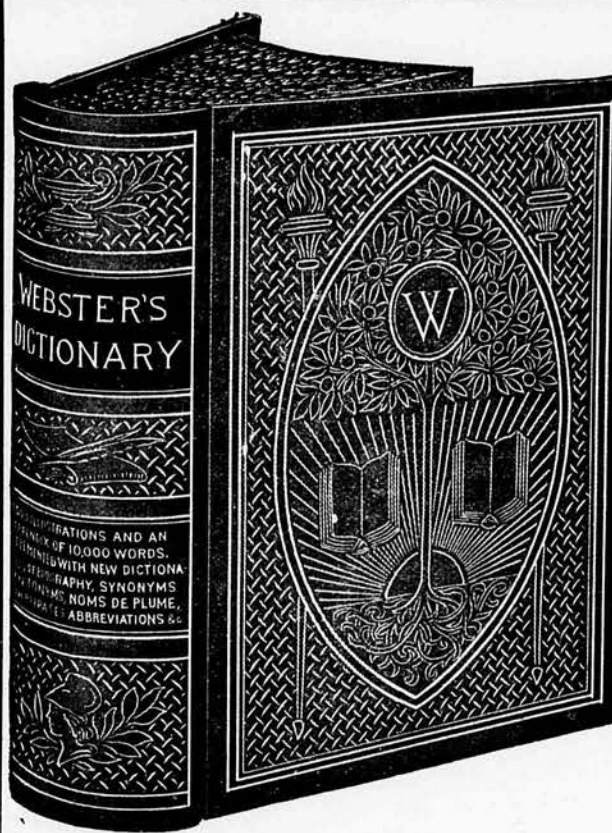
Thrifty Growth, Expert Chicken Feeding, Broiler Raising, Nutrition for Layers, Special Foods, To Finish and Dress Capons, The Art of Poultry Fattening, Lessons from Foreign Experts, American Fattening Methods, At Killing Time, Preparing for Market, Marketing Turkeys and Waterfowl, Finish and Shaping. Profusely illustrated, 160 pages, 5x7 1-2 inches, cloth. Price 50 cents postpaid.

Kansas Farmer Company

Topeka, Kansas

throughout the Middle West. His annual catalogue is a mine of information on seed subjects and a carefully prepared list of good things to be found in the "Red Packet" seed packages, red packet being Mr. Field's method of identifying the seeds shipped from his establishment. Before purchasing seed it is worth while securing a copy of Mr. Field's catalogue, which he sends free of charge, and becoming acquainted with the good things he offers. The 1905 edition is now being sent out.

OUR GREAT DICTIONARY OFFER.



New Census Edition

Full Sheep Binding

Thumb Indexed

Regular Price, \$9.00

We are now enabled to offer our readers This Great Work and the Kansas Farmer for one year for only

\$2.75

Send Cash or Money Order to

Kansas Farmer Co., Topeka, Kans.

Prescott, Kans., Feb. 6, 1905.

Kansas Farmer Co., Topeka, Kans.

Gentlemen:—The dictionary, ordered with the KANSAS FARMER, has been received, and am much pleased with it.

C. B. BURTON.

The Apiary

Conducted by A. H. Duff, Larned, Kans., to whom all inquiries concerning this department should be addressed.

How to Make Candy for Bees.

EDITOR KANSAS FARMER.—Please tell me how to make candy for the purpose of feeding bees. Also, how is the best plan to kill bees in the hive?

G. A. VANCE.

To make candy for bees, take granulated sugar and add a little water to it, say about half the bulk water, or for a quart of sugar add a pint of water. Set it on the stove and stir well until it boils. Let it boil about ten minutes, then take off and stir well after taking off until it begins to grain a little. Pour out quickly in some pans or plates the shape you wish the candy moulded. Better place paper on plates as the candy may stick to the same. Some make feed for bees by mixing sugar and honey together until it forms into a stiff dough. When warm weather approaches in spring it is not necessary to make candy for feeding bees, but feed syrup instead.

What do you want to kill the bees for? We never kill bees in the hive. Get a good bee-smoker, and drive the bees anywhere in or out of the hive. The best way to kill a colony of bees in a hive is to roll up a little ball of rags saturated with sulphur on a stick, or rather on the end of a stick, about six inches long. Now dig a hole in the ground about the size of an ordinary bucket. Half way down in the hole stick your sulphur match and set it on fire, and when burning, set the hive of bees over the hole, and in a moment's time no bees will be alive. But this old-fashioned method of killing bees to get the honey is a thing of the past, and you should not do it. It will not pay to rob a colony of its honey in the brood-chamber, but let them live until next honey season, and if you manage right, you will secure much more and much better honey.

What Beehives to Use.

EDITOR KANSAS FARMER.—Notwithstanding the fact that the Langstroth hive has been in constant use for about fifty years, there has been and still is a constant effort being made to supercede this old reliable standby. I was well acquainted with Mr. Langstroth, and talked with him concerning the depth and length of his comb frames, in connection with the peculiar shape of the body of the hive, which looks like a box-hive, being on its side and its length nineteen inches from front to rear, a fraction over fourteen inches wide, and about ten inches deep. The rear end of the hive is or should be elevated three or four inches higher than the front end. This places the stores to the rear and above the bees, as they go into winter quarters in the front and lower part of the hive. It was ascertained by Mr. Langstroth that bees will winter about as well in a hive of this shape, placed on the stand as above stated, as they will in a tall box-hive standing in a perpendicular position. And that, when lying almost flat, like the Langstroth, there is on the upper surface a larger space for placing surplus honey receptacles than is afforded by the ordinary tall hive of the old box kind, or any tall, movable hive. The American hive sold many years ago by H. A. King, was a tall hive, and at one time was quite extensively used. But in time the features above-mentioned in the Langstroth hive were seen to be preferable, and took the place of the King or American hive. And so it has been with many others.

Lately there has been quite an effort made to introduce a hive with shallower frames than the Langstroth has. These in warm weather will possibly succeed quite well; but in the latitude of Kansas, I can not encourage the use of any hive shallower than the standard Langstroth frame. Let it be borne in mind that a shallower hive is made of narrower lumber than the Langstroth, and costs the manufac-

turer less money than lumber an inch wider, yet a hive made of narrower lumber costs the beekeeper quite as much as the Langstroth. My objection to the shallower hive is that it is not as safe to winter in on the summer stand, the stores being situated in less quantities above and in rear of the cluster of bees. Hence, if they consume all the honey above and in their reach, during a protracted cold spell of weather they will starve with honey on either side of them, it being inaccessible on account of the comb being covered with frost though but a short distance from the bees.

Now is the time to prepare hives for the coming season. And in buying hives, I can not recommend very highly a double-walled hive. The most important matter in sheltering bees is to keep them dry and free from wind, and they will winter in a hive not over half an inch thick. If a hive is made of lumber six inches thick, it will freeze inside just the same as if only an inch thick, and just so with the double-walled hive.

All that can in reason be hoped for by the use of the double-walled hive is that when the sun shines out during cold days it will not warm up quite so soon as a single-walled hive, and will keep the bees quiet and in the hive, which is something in their favor; for to have bees fly out often during chilly weather causes greater loss of bees than if they were to remain quiet in the hive.

To winter in the cellar is a custom among many beekeepers, and if the cellar be dark and ventilated, and kept at a temperature ranging from 35° to 50° above zero, they will winter with the loss of less bees than if left on the summer stand. But this can not be done in every case. Where but a few colonies are kept, they may be covered with straw or a shock of fodder may be built around them, leaving the front of the hive open for ventilation and to afford the bees an outlet for a winter flight on a really warm day, that being the only proper time for flight. The fodder will keep them quiet on days too cold to be out.

Rice County.

G. BOHRER.

Bees in a Cave.

EDITOR KANSAS FARMER.—There came to my place a stray swarm of bees last July and went into a cave in a bank facing the south. The door stood slightly ajar. They went in at the top and located on the under side of the door frame. They have made lots of comb attached to the door frame and the roof of the cave. The comb projects out so that I cannot shut the door tight. The cave is pretty warm, potatoes grow there all win-

ter. Can I detach the comb and put them in a hive with any success, or had I better make a box around them and leave them there? What is the best feed to feed them and how shall I feed it? I do not think they have much honey, the cells seem to be empty. Also, give the address of some good bee paper.

THOMAS BURTON.

Sherman County.

Your best plan would be to get a good movable frame hive and transfer the bees into it. Cut out all the comb and fit it in the frames of the hive, and in addition get some foundation comb to fill out the frames. If you have foundation alone in the frames, you can drive the bees out into the new hive, and have a much better set of frames of comb than you will have by using the old comb. It is well to use all the comb containing honey and brood if there should be any. Early springtime is the best time to transfer them to the hive. After thus putting them into the hive, it is well to feed them abundantly of sugar syrup. They should be fed regularly about every day a small amount until they have fifteen or twenty pounds stored in their combs. Let the weather get warm before thus operating, and if the bees are gathering a little honey from flowers, so much the better.

Manure-Spreaders in the Future.

The time is certainly approaching when practically every farmer in the land will own a manure-spreader, just as he now owns a twine-binder or harvesting machine of some kind. In all the correspondence we have had with farmers of practical experience in the use of a manure-spreader and in all the articles we have published touching the subject, there has not been a single adverse report. There is an almost unparalleled endorsement and approval of the manure-spreader as an economical, labor-saving, profit-bringing farm implement. The experiment stations and the best farmers from every section endorse their use. This much in substantiation of our first statement.

The manufacturers of the Great Western Endless Apron Manure-Spreader lay claim to points of superiority in its construction, which seem to us to be well founded. As its name implies, this is the only manure-spreader equipped with, and possessing the advantages of the endless apron. Stated simply, this means that the slat web which holds the load and which carries it gradually back to the beater in the rear is continuous. This means further that the machine is ever ready to load—that is, it does not need to be turned back into a special position before the machine can be loaded. This certainly is a very positive advantage and one which saves much time, annoyance and danger of breakage. Another advantage of the endless apron is in the fact that the manure may be heaped up to any desired height for hauling to the field, for just as soon as the machine starts the operator may throw the extra manure back upon the free position of the apron toward the front of the machine and the entire load leveled as it approaches the beater. This means practically that a half more manure may be delivered at one draft if the operator so desires.

There are other special features in this machine which may not be mentioned

Allen's Lung Cures COUGHS COLDS CROUP

DO YOU KEEP BEES?



Then learn how to make them pay by sending for our large illustrated FREE catalog for 1905, showing the latest up-to-date hives, and all other goods used by progressive bee-keepers. J. S. NYSEWANDER, 565-567-569 7th St., Des Moines, Iowa.

Asthma

Cured to Stay Cured

Attacks stopped permanently. Cause removed. Breathing organs and nervous system restored. Symptoms never return. No medicines needed afterward. 21 years success treating Asthma and Hay Fever. 58,000 patients. Book L Free. Very interesting.

Write P. HAROLD HAYES, Buffalo, N. Y.

Farm Engines and How to Run Them.

THE YOUNG ENGINEER'S GUIDE.

By Stephenson, Maggard & Cody, Expert Engineers. Fully illustrated with about seventy-five beautiful woodcuts. A complete instructor for the operator or amateur.



The book first gives a simple description of every part of a boiler and traction or simple stationary engine, with definitions of all the technical terms commonly used. This is followed by over 50 test questions covering every point that precedes. Then come simple and plain directions to the young

engineer as to how to set up and operate his engine and boiler, followed by questions and answers to what should be done in every conceivable difficulty that may arise, covering such subjects as scale in the boiler, economical firing, sparks, pressure, low water and danger of explosions, lining and gearing the engine, setting the valves, oiling, working injector and pump, lacing and putting on belts, etc. There are two chapters on farm engine economy, giving the theory of the steam engine, especially in its practical applications to securing economy of operation. Chapter XII describes "Different Types of Engines," including stationary, compound, Corliss and high speed engines, and all the leading makes of traction engines with an illustration of each. Also chapter on gasoline engines and how to run them, and another on how to run a thrashing-machine. The book closes with a variety of useful recipes and practical suggestions and tables, and 175 questions and answers often given in examinations for engineer's license. Beautifully illustrated with plans, etc. 12mo cloth. Price, \$1.

Given with one year's subscription to the Kansas Farmer for \$1.50, postage prepaid. Address Kansas Farmer Company, Topeka, Kans.



SPECIAL

Homeseekers' Rates

via

Santa Fe

On February 21st and March 7th and 21st Special Homeseekers' tickets will be sold to Ft. Worth, Dallas, Galveston, Houston, San Antonio and other Texas points at the extremely low rate of \$15.00 for the round trip. Points in Pecos Valley and return \$20.00. El Paso and return \$26.50. Rate of one fare plus \$2.00 to points in Oklahoma, Indian Territory, Arizona, New Mexico, Arkansas and Texas, tickets limited to 21 days from date of sale and stop-overs allowed on the going trip within 15 days.

For full information, literature, etc., address

T. L. KING, C. P. & T. A., Topeka, Kan.

here for want of space. We suggest that all those of our readers who are in any way interested in manure-spreaders, write at once to the manufacturers for their illustrated and descriptive catalogue. Address the Smith Manure Spreader Co., 16-18 South Clinton St., Chicago, and kindly say to them that you saw this article in our paper.

Publisher's Paragraphs.

The Cook-Clarke Co., of Spokane, Wash., have some very fine wheat- and fruit-lands they are offering at reasonable prices in Yakima County, Washington. A postal card or letter sent them will bring full information.

We call attention to the advertisement of a Kansas institution, known as the "Marvelline Company," of Leavenworth, Kans., who are advertising "Marvelline," a remedy for catarrh or eczema. If your druggist does not keep it, send 50 cents as per advertisement in this issue.

The Markets

Kansas City Grain Market.

Receipts of wheat were moderate for Monday, 119 cars. The demand was not good and trade was slow. Prices were 1¢2c lower, mostly 1¢1½c down. A fair clearance was made. The railroads reported 119 cars of wheat received, compared with 143 cars a week ago and 122 cars a year ago. Sales of car lots by sample on track, Kansas City: Hard wheat—No. 2, 3 cars \$1.08, 11 cars \$1.07½, 1 car \$1.07, nominally \$1.07@1.10. No. 3 hard, 1 car \$1.07½, 3 cars \$1.07, 3 cars \$1.06½, 16 cars \$1.06, 2 cars \$1.05. No. 4 hard, 1 car \$1.05, 1 car \$1.04½, 5 cars \$1.04, 4 cars \$1.03, 2 cars \$1.02½, 7 cars \$1.02, 1 car \$1.01½, 2 cars \$1.01, 6 cars \$1, 1 car 99c, 1 car 98c. Rejected hard, 1 car 91½c, nominally 85¢95c. Soft wheat—No. 2 red, nominally \$1.09@1.12. No. 3 red, nominally \$1.06@1.09. No. 4 red, 1 car \$1.03½, 1 car mixed \$1.04, 1 car \$1.03, nominally 99c@1.06.

Corn sold ¼c lower. Receipts were large, but offerings on the floor were only moderate. The demand was rather light. The railroads reported 137 cars of corn received, compared with 77 cars a week ago and 71 cars a year ago. Sales of car lots by sample on track, Kansas City: Mixed corn—No. 2, 2 cars yellow 47½c, 2 cars yellow 47½c, 6 cars yellow 47c, 7 cars 47c, 4 cars 46½c; No. 3, 2 cars 46½c; No. 4, 3 cars 46c; no grade, 1 car 36c, 2 cars 35½c. White corn—No. 2, 1 car 48c, 7 cars 47½c; No. 3, 2 cars 47c.

Oats receipts were heavy again, 38 cars, chiefly from Iowa. The demand was light. Prices were ¼c or so lower. The railroads reported 38 cars of oats received compared with 10 cars a week ago and 5 cars a year ago. Sales of car-lots by sample on track, Kansas City: Mixed oats—No. 2, 1 car color 32½c; No. 3, nominally 31½@32c, 1 car red 40c. White oats—No. 2, 1 car 33½c, 5 cars 33c, 2 cars 32½c; No. 3, 4 cars 32½c.

Rye—No. 2, nominally 78¢79½c. Corn chop—Nominally 89c, in 100-lb. sacks.

Flaxseed—Nominally \$1.14½ per bushel. Timothy—Nominally \$2.62½ per 100 lbs. Bran—3 cars 85c, in 100-lb. sacks. Shorts—Nominally 90¢95c, in 100-lb. sacks.

Millet—German, \$1.40@1.50; common, \$1.25 @1.35 per 100 lbs.

Red clover and alfalfa—\$9@11.50 per 100 lbs.

Cane seed—\$1.40@1.50 per 100 lbs.

Kafir-corn—Nominally 80¢85c per 100 lbs. Lined casks—Car lots, \$27 per ton; ton lots, \$28; per 1,000 lbs., \$15; smaller quantities, \$1.60 per cwt. Bulk oil cake, car lots, \$26 per ton.

Castor beans—\$1.35 per bushel, in car lots; \$1.80 less than car lots.

South St. Joseph Live Stock Market.

South St. Joseph, Mo., February 27, 1905.

Moderate marketing of steers last week caused a general advance of 10¢15c per hundredweight, and the demand was strong with a higher range of prices; good to choice heavy steers are salable at \$4.80@5.25, while strictly fancy kinds are selling up to \$5.50; good light weight butcher steers are selling largely at \$4.25@4.50, common to fair light weight grades at \$3.75@4; canners are about steady with a week ago, while good butcher cows and heifers show an advance of 10¢15c; prime offerings of heifers would sell around \$4.25@4.40 but there are very few such kinds being offered; a pretty good class of heifers are selling at \$3.50@3.75, with good fat weighty kinds at \$4@4.15; good to choice cows are selling from \$3.75@4.15 with exceptions up to \$4.25, while the great bulk of the offerings are selling at \$3@3.50. Feeding steers have been in better demand and prices are ruling 10¢15c higher; choice, well-bred heavy heifers are quotable at \$4@4.25 with handy styles at \$3.25@3.75; yearlings and calves are meeting a good request at \$2.60@3.80 for common to choice.

The receipts of hogs last week would more than double those of the previous week and supplies at the five large markets show an increase of over one hundred thousand, but prices have shown a little stronger tendency. The market today was active and a big 5c higher than Saturday with prices ranging from \$4.60@4.92½ and the bulk selling at \$4.80@4.90; while there is not anything in general conditions to warrant any particular change in values, trade believes that prices will strengthen some during the month and they are advising their customers to ship all stock that is ready for market. The demand here is very strong and a great many more could be sold to advantage without impairing the healthy tone of the market.

The market on good, fat wethers and yearlings is about steady with the high point of last week but lambs are fully 25c per hundredweight lower. Good Colorado lambs to-day sold up to \$7.65 as against \$7.90 for the extreme high point; yearlings are quotable at \$6.75@7; wethers \$5.75@6, and ewes at \$5.50@5.75.

WARRICK.

Special Want Column

"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time will be inserted in this column without display for 10 cents per line of seven words or less per week. Initials or a number counted as one word. No order accepted for less than \$1.00.

CATTLE.

FOR SALE OR EXCHANGE—For another of same kind equally as good, my registered Hereford bull, Farmer 44354, calved Dec. 20, 1897, S. O. Thompson, Route 2, McPherson, Kans.

FOR SALE—A 2-year-old solid red Shorthorn bull, Guardsman 206476, by Charming 4th; also 2 Thistle-top cows. Address J. P. Engle, Alden, Rice County, Kans.

FOR SALE—Shorthorns—Our herd bull, Greenwood 165865 and 3 young bulls, all Scotch-topped. Brookover Bros., Eureka, Kans.

FOR SALE—A registered Red Polled bull, 30 months old, weight 1,600 pounds, in good condition, will guarantee him a breeder; price, \$100. For pedigree or other information address W. E. Brockelsley, 815 E. Hancock, Lawrence, Kans.

FOUR GOOD HEREFORD BULLS, 15 to 20 months, at reduced prices if taken at once; also a few younger ones. A. Johnson, Clearwater, Kans.

FOR SALE—Guernsey bulls from best registered stock. J. W. Perkins, 423 Altman Building, Kansas City, Mo.

FOR SALE—Shorthorn bulls, 11 to 18 months old, sired by Godoy Butterfly 142584; two are Rose of Sharon, one Wild Eyed and one Lydia Langish; none better bred and few better individuals; each one out of an extra good big cow; will sell my herd bull, Godoy Butterfly, having used him 4 years. E. S. Myers, Chanute, Kans.

FOR SALE—Eight good, registered Shorthorn bulls, four straight Oriskany, good ones and prices right. H. W. McAfee, Sta. C, Topeka, Kans.

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

FOR SALE—2 choice Hereford bulls, 22 months old; something good. Call on or address A. Johnson, Route 2, Clearwater, Sedgewick Co., Kansas.

HORSES AND MULES.

FOR SALE—Five high-grade Percheron stud colts, two coming 2 years old, weight, 1,450 pounds; three coming 1 year old, Two are thirty-one thirty-seconds. One fifteen-sixteenths, and two are seven-eighths. Would sell cheap if anyone can use the whole lot. C. M. Garver, Abilene, Kans.

WANTED—To trade standard bred stallion for a good jack. Six stallions to choose from. J. T. Axtel, Newton, Kans.

FOR SALE OR TRADE for other stock; three fancy saddle stallions, 4 and 6 years old; four serviceable jacks, 8 and 4 years old. Address Fairview Stock Farm, Route 3, Hartford, Kans.

FOR SALE—George Novar 40579, dark brown or mahogany bay stallion, foaled 1903. Sire Novar 26434, by Novar 2144; by Electioneer; dam by Dams, son of Jerome Kddy 2163, second dam by Patchen Wilkes, sire of Joe Patchen 2013. This is a promising colt, good size, good bone and muscle, kind and gentle, good investment for either stud or track. The Wilkes-Electioneer is the acme of fashion. Will sell at a bargain as I have no place for a stud. Address W. J. Flintom, Lawrence, Kans.

FOR SALE OR TRADE—Riley T 37803, sired by Happy Riley 18312, sire of Riley B 2054½ and others; dark bay, 15½ hands, 1,150 pounds, 7 years old, sound, sure footed, best kind of a disposition, a good looker, has been used as a family horse, never trained but can show a 2-40 clip; will sell to a responsible party and let him pay out or trade for a good big jack. This will appear once. L. A. Lullier, Prop. Pleasanton Stock Farm, Pleasanton, Kans.

FOR SALE CHEAP—Or trade for cattle. One M. mammoth-bred jack, 4 years old, black, good performer, a breeder; one Norman brown stallion, 1,800 pounds, 10 years old; one trotting-bred stallion, by Silkwood, 16 hands, weight 1,200 pounds, 4 years old, sure breeder. J. C. Hentzler, Route 2, Topeka, Kans.

FOR SALE OR TRADE—One large, black 4-year-old jack, sound, good bone, good actor, and sure. Address Lock Box 53, Sterling, Kans.

FOR SALE—Imported Shire horse, weight 1,800 pounds; Black arrior Jack, 15½ hands, weighs 1000 pounds; both in fine shape; will sell cheap. C. J. Patterson, Duquoin, Kans.

FOR SALE—A grand son of Lord Russell, 4 years old bay, smooth, stylish, fearless and well broken; has never seen track or sulky; can surprise you with speed; perfectly sound; offered for no fault; a low price if taken soon. Address Jno. W. Yeoman, Lyndon, Kans.

FOR SALE OR TRADE—One imported black French draft stallion, 4 years old weight 1,900 pounds. K. C. Berry, Eskridge, Kans.

FOR SALE OR TRADE—French draft stallion, black in color, 12 years old, registered, weight 1,800 pounds, sound. One imported black Percheron, 12 years old, weight 1,600 pounds, sound. One steel gray jack 7 years old 15½ hands in height, sound and good performer. One unbroken 3-year-old black jack, 15½ hands high. Colts to show; prefer young jacks, Jennets or registered Draft mares. No land wanted. Am quitting the business. J. A. Marshall, Gardner, Johnson County, Kans.

FOR SALE—A Registered Percheron stallion, All nice. A splendid sire, mahogany bay, easy terms. Address, J. H. Pennick, Menoken, Kans.

LEAVENWORTH COUNTY JACK FARM. 5 miles north of Easton; 20 jacks and Jennets for sale.

O. J. Corson, Potter, Kans.

EIGHT REGISTERED PERCHERON and French Coach stallion and one large black jack, cheap for cash, to close them out by April 1. H. C. Staley, breeder, Rose Hill, Butler County, Kans.

FOR SALE—Black Mammoth jack, with white points, 8 years old, good breeder, can show colts, easy handled, quick service. \$175 if taken at once. A. E. Cooper, Route 1, Miami, Indian Ter.

FOR SALE—A registered black Norman stallion, weight 1,800, coming 6 years old; also a three-quarter grade, coming 5 years old, weight 1,600, a good individual and breeder. R. E. Casad, Ocheitree, Kans.

STRAY MARE—A black mare came to Wm. Cook's residence, one-half mile east of the city of Downs, Kans., on or about the 10th day of October, 1904, weight about 900 pounds, age about 8 years, worth, \$40; branded on the left shoulder, owner or owners will please come prove property and pay expenses.

PATENTS.

J. A. ROSEN, PATENT ATTORNEY
418 Kansas Avenue, Topeka, Kans.

SWINE.

FOR SALE—Poland-China boars for immediate use. Sons of Proud Perfection second, out of Black Mission Chief sows. Fall gilts, \$5 each. W. H. Peck, Garnett, Kans.

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

CENTRAL Kansas Stock Farm has for sale cheap, splendid Poland-China boars and gilts, May and June farrow, sired by Corrector Woodburn, and K. O. Perfection, out of Sunshine and Tecumseh sows. E. J. Knowlton, Prop., Alden, Rice Co., Kans.

FOR SALE—Boars for immediate use. Sons of Perfect I Know, out of daughter of Ideal Sunshine. Geo. W. Maffet, Lawrence, Kans.

SEEDS AND PLANTS.

ASPARAGUS PLANTS—Palmetto and Barr's Mammoth, two best varieties. Every home garden should have a bed of this early, healthful and delicious vegetable; succeeds everywhere; endures a lifetime. 1-year-old plants, by express, 50 cents per 100. James C. Jones, Leavenworth, Kans.

SEEDS WANTED—There are many inquiries for seeds adapted to various parts of Kansas: Black Hulled White Kafir-corn, different varieties of oats, corn suited to localities, etc., are in demand. Those who have such for sale may make profits for themselves and confer benefits on others by advertising in this column.

ALFALFA SEED—J. T. Axtel, Newton, Kans.

FOR SALE—Choice alfalfa seed, guaranteed pure. For prices write J. E. Fife, Newton, Kans.

FOR SALE—Speltz, 60 cents per bushel; Soy Beans \$1.25; Red Kafir corn, 50 cents; sacks free in 10 bushel lots. Seed extra nice and clean. C. M. Garver, Abilene, Kans.

FOR SALE—300 strawberry plants, five kinds, early, mid-season and late, for \$1.100 Kansas raspberries, \$1.25 Concord grapes, \$1.200 Palmetto asparagus, \$1. A. J. Nicholson, Maunattan, Kans.

STRAWBERRY PLANTS—Best varieties, low price. J. H. Wendell, Route 5, 2½ miles north on Central Ave., Topeka, Kans.

ALFALFA SEED, \$7. J. Glenn, Wallace, Kans.

FOR SALE—Good speltz (emmer) seed, in sacks, at 60 cents a bushel. A. C. Axtel, Bigelow, Kans.

FOR SALE—Pure Kubanka macaroni seed wheat, \$1 per bushel. Hayes Moyer, Ludell, Kans.

FOR SALE—Speltz 60c per bushel, sacked. L. G. Patterson, or M. Arnett, Blue Rapids, Kans.

WANTED—Cane, kafir-corn, millet, alfalfa, clover, English blue grass and other seeds. If any to offer send samples and write us. Missouri Seed Co., Kansas City, Mo.

SEED CORN—"Hildreth Yellow Dent easily ranked first as the best producing variety." Bulletin 123. Write C. E. Hildreth, Altamont, Kans.

50,000 TREES AT HALF PRICE—First-class apple, plum, cherry. Plants, shrubs at wholesale. Peach trees, \$10 per thousand. Freight prepaid anywhere. Catalog free. Seneca Nursery, Seneca, Kans.

FOR SALE—Speltz, 70c bushel; macaroni wheat, \$1.10. Wheeler & Baldwin, Delphos, Kans.; or S. B. Wheeler, Ada, Kans.

SHEEP.

WANTED—For Western Kansas ranch, 500 to 1,000 ewes bred to lamb about May 1. F. A. Lonner, Weaster, Iowa.

FARMS AND RANCHES.

TWO SNAPS—160 acres, 130 acres cultivated, 65 acres wheat, one half good, 5-room house, other farm buildings. Price \$2,800; \$500 down, balance in payments 25¢. Acre farm, 145 ac. cultivated, 6-room house, barn and other out-buildings. Price, \$20 per acre. Write us when you come to see these. Garrison & Studebaker, Minneapolis, Kans.; also office at Florence, Kans.

FIFTY farms in Southern Kansas, from \$15 to \$70 per acre; can suit you in grain stock or fruit farms. I have farm in Oklahoma, Missouri and Arkansas for sale or exchange. If you want city property, I have it. Write me, I can fix you out. Wm. Green, P. O. Box 966, Wichita, Kans.

A DESIRABLE FARM on the road from Topeka to Billings, for sale or rent, 150 acres, has R. F. D., new school and church. For particulars address W. C. Thomas, Odessa, Delaware.

GOOD bottom farm for cash or grain rent, 147 acres, 7 miles from Emporia. Address J. M. Rhodes, Emporia, Kans.

I HAVE a section in a body 160 acres of it creek bottom hay land, 60 of this bottom is good alfalfa land, 100 acres level farm land, one mile of creek, fenced and cross-fenced, good 4-room house, 12 by 16 hay mow, 12 by 16 lean-to stable, telephone, daily mail, 8 miles to Meade, 1½ miles to school. Price, \$4,000; one-half cash, balance any kind of time at 7 per cent. E. H. Boyer, Meade, Kans.

FREE LIST—California farms, ranches. Write National Clearing House, San Francisco, Cal.

FOR TRADE—200 acres improved near county seat, central Tennessee; fine. Also Franklin county, Kansas farms to sell. Buckeye Agency, Route 2, Williamsburg, Kans.

SOME GOOD BARGAINS—160 acres, 40 acres bottom, fine orchard, \$3,500; 320 acres, \$4,000 worth of improvements, \$6,500; 320 acres, 70 acres bottom, well improved, \$6,200; 240 acres nice smooth land, good improvements, \$3,600; 400 acres, 170 acres of first and second bottom in cultivation, \$5,000; 444 acres, 110 acres in cultivation, \$11 per acre, one-fourth cash, balance to suit. Grass land in any sized tract from 160 to 4,000 acres, from \$10 to \$12.50 per acre. Try us. Garrison & Studebaker, Florence, Kas office at Minneapolis, Kans., also.

IMPROVED FARMS, ranches, alfalfa farms, pasture lands, Osborne, Russell, and Rooks Counties, Kansas. Mercantile stocks to sell or trade. Correspondence solicited. Write to-day. Otis & Smith, Natoma, Osborn County, Kans.

FOR SALE—200 acres fine pasture land, 175 acres of it is mow land, two miles from Alma, living water that never falls, all fenced. This is a bargain if taken soon. Call on or address Mrs. M. A. Watts, Alma, Kans.

MARION COUNTY BARGAINS—160 acres, 5½ miles from county seat, 4-room house, barn 44 by 18 feet, with shed addition, 11 acres alfalfa, 40 acres pasture with spring, balance all good farm land, part bottom. Price, \$5,200. 400 acres, finely improved, all good land except 20 acres, which is a little stony, will sell on easy terms, or will take smaller farm as part payment. All kind and sized farms for sale. Let me know what you want to buy, sell or trade. A. S. Gulesbury, Marion, Kans.

FARMS AND RANCHES.

LAND FOR SALE. In western part of the great wheat state. H. V. Gilbert, Wallace, Kans.

CHEAP HOMES in Southern Arkansas and Texas; no winter, fine health, good water, good crops of cotton, corn and all kinds fruit in abundance; good schools and churches; can get excursion rates for home seekers there.

I have fine bargains in land near this city; also in city property. I want 100 salesmen to handle a swift-selling article. Something new. A hustler can make big money. If you are interested in any of above, enclose stamp, write to

D. A. Williams,
206 North Main St.,
Wichita, Kans.

75 A1 FARMS FOR SALE in Harvey County, Kansas—S. D. Williams, of Harvey County, Kansas, can sell you any kind of a farm you desire, from eighties to whole section. Many of these farms have running water thereon, some of them highly improved, others moderately. Correspondence solicited. Address S. A. Williams, Newton, Kans.

FARMS For rich farming and fruit-growing Write J. D. S. Hanson, Hart, Mich.

Fine Farm For Sale.

Located in Anderson County, Kansas, 90 miles southwest of Kansas City and 60 miles from Westphalia, on main line Missouri Pacific Railway. Fine lay of 320 acres with very comfortable house and good barn. Lowest cash price, \$22.50 per acre, worth \$30. For full particulars, address L. A. B. care of Kansas Farmer, Topeka, Kans.

"WE CAN SELL"

Or trade your farm, merchandise, or other property. Write description and price of what you have to sell. Tell us what you want to buy or trade for.

SOUTHERN KANSAS REALTY CO., Elk City, Kans.

LAND IN THE OIL DISTRICT

We have land from \$5 to \$50 per acre in tracts of 160 to 1,500 acres. List your property with us. We sell or trade everything. Money loaned. Farms rented and rents collected.

ENLOW & CO.,

Elmdale, - Kansas.

FARM LOANS

Made direct to farmers in Shawnee and adjoining counties at a low rate of interest. Money ready. No delay in closing loan when a good title is furnished and security is satisfactory. Please write or call.

DAVIS, WELLCOME & CO.,

Stormont Bldg., 107 West 6th, Topeka, Ka



CASH For Your Real Estate
or Business Anywhere
I Can Sell It; I MEAN IT
Send me Description and
LOWEST CASH PRICE today
W. E. MINTON.
New England Bldg., Kansas City, Mo.

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

Properties and business of all kinds sold quickly for cash in all parts of the United States. Don't wait. Write to-day, describing what you have to sell and give cash price on same. A. P. TONE WILSON, Jr., Real Estate Specialist, 413 Kansas Ave., Topeka, Kans.

MISCELLANEOUS.

WANTED—An English Mastiff pup. State price, give description and address. Rev. P. Alphonse Beanslaetter, Garnett, Kans.

WANTED—Responsible position on farm by practical working farmer. The science of agriculture in all branches understood and applied; accounts accurately kept; married; no children; state requirements and salary in first letter. References given and required. F. C. Johnson, Hastings, Nebr.

NOTICE—Is hereby given, that the name of the Farmers Mutual Hall Insurance Association, having its principal office and place of business in the City of Topeka, County of Shawnee, and state of Kansas, has been duly changed, according to the provisions of the Statute in such cases, made and provided, to the Farmers Hall Insurance Company. W. F. Bagley, President of said Corporation.

W. G. HAWORTH, Stock Auctioneer, Eudora, Kans. Choice Galloway cattle and a farm for sale.

HONEY—New crop, water white, 8 cents per pound. Special prices on quantity. A. S. Parson, Rocky Ford, Colo.

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

HONEY—Old-fashioned, best white, such as you used to get "back East." 50-lb. can, \$4.80; two, \$9.50. C. A. Hatch, Richland Center, Wis.

The Stray List

Week Ending February 23.

Woodson County—Fred Jackson, Clerk. MARE—Taken up by S. Archer, in Perry tp., Jan. 23, 1905, one brown mare, about 7 years old, weight 700 pounds, star in forehead, left hind foot white; valued at \$50.

Week Ending March 2.

Pottawatomie County—C. A. Krutzmacher, Clerk. HEIFER—Taken up by Wm. Kolterman, Mill Creek tp. (P. O. Onaga), Feb. 13, 1905, one red, white-spotted heifer, silt in right ear; valued at \$12.

Wichita County—F. G. Jones, Clerk. CATTLE—Taken up by Jesse Bucy, in White Woman tp., Dec. 18, 1904, one black cow, between 6 and 8 years old, large horns with ear marks; one black yearling steer, dehorned, a little white in forehead; two 4-year-old spotted faced cows, dehorned; one white and red cow with horns black cow with dash and heart; others branded with heart; valued at \$60.

Painkiller PERRY DAVIS'

The world-known household remedy for cuts, burns, bruises—coughs, colds, sore throat.

\$7.00 Daily Av. selling IDEAL PUMP EQUALIZERS. Make all pumps work EASY. Windmills run in slightest wind. FIT ALL PUMPS. Merit sells them. FULLY WARRANTED. Exclusive territory. Write Pump Equalizer Co., 40 V Dearborn St., Chicago, Ill.

\$3 a Day Sure Send us your address and we will show you how to make \$3 a day absolutely sure; we furnish the work and teach you free, you work in the locality where you live. Send us your address and we will explain the business fully, remember we guarantee a clear profit of \$3 for every day's work, absolutely sure. Write at once. ROYAL MANUFACTURING CO., Box 884 Detroit, Mich.

FIELD POST Made where used. No freight charges. Simple of construction. Excell in beauty, convenience and strength. Costs little more than oak or locust, will last for all time. Renders universal satisfaction. Reliable men wanted who can work territory. Descriptive matter free. Address with stamp. ZEIGLER BROS., Hutchinson, Kans.

SENT ON TRIAL A Fence Machine that will make over 100 styles of fence and from 50 to 70 rods a day AT ACTUAL COST OF WIRE. Horse-high, Bull-strong, Pig and Chicken-tight. Wire at Wholesale Prices. Catalogue Free. Kitzelman Bros., Box 61 Muncie, Ind.

PAGE FEWEST POSTS required with Page Fences, because of strength and springiness of our high carbon wire. That's a saving Page Woven Wire Fence Co., Box 7840, Adrian, Mich.

THE LARGEST AND BEST LINE OF WELL DRILLING MACHINERY in America. We have been making it for over 20 years. Do not buy until you see our new Illustrated Catalogue No. 41. Send for it now. It is FREE. Austin Manufacturing Co., Chicago

Well Drilling Machinery Portable and drill any depth by steam or horse power. 42 Different styles. We challenge competition. Send for Free Illustrated Catalogue. KELLY & TANKYHILL CO., 33 Chestnut St., Waterloo, Ia.

\$10.00 Sweep Feed Grinder \$14.00 Galvanized \$16.00 Steel Wind Mill. We manufacture all sizes and styles. It will pay you to investigate. Write for catalog and price list. CURRIE WIND MILL CO., Topeka, Kansas

THE FARMER'S JOY Sickle and Tool Grinder, with Emery Dresser and Wrench, \$3.45. Sharpens Mower Knives, all Tools, Sickle, Shears, etc. Guaranteed satisfactory or money back. With all Steel Foot Power Frame, and Polishing and Disc Grinding Attachments, \$3.95 extra. Western Implement Co., Dept. 1 Port Washington, Wis.

BOWSER (Sold with or without elevator.) Grind all kinds of small grain, and head of flour. Use Conical Shape Grinders. Different from all others. **LIGHTEST RUNNING.** Handy to operate. 7 Sizes—2 to 25 h.p. One size for wind wheel use. Also make Sweep Grinders both Geared and Plain. C. N. P. Bowsher Co., South Bend, Ind.

FEED MILLS **LIGHTNING SCALES** **U S STANDARD** ACCURATE DURABLE GUARANTEED KANSAS CITY HAY PRESS CO 129 MILL ST KANSAS CITY MO

Largest Optical Mail Order House in the West. Eyes examined free accurately by mail. Any style glasses for \$1. Write for free examination sheet and illustrated catalogue. Satisfaction guaranteed. E. S. Baker Optical Co. 824 Kansas Ave., Topeka

The Story of a Success.

Back of every great business success there is a story, if one can but get at it. The success of the Ohio Carriage Manufacturing Co., of Cincinnati, makers of the famous Split Hickory Vehicles, with whose merits thousands of our readers are already familiar because they own Split Hickory buggies, is a striking instance of this truth.

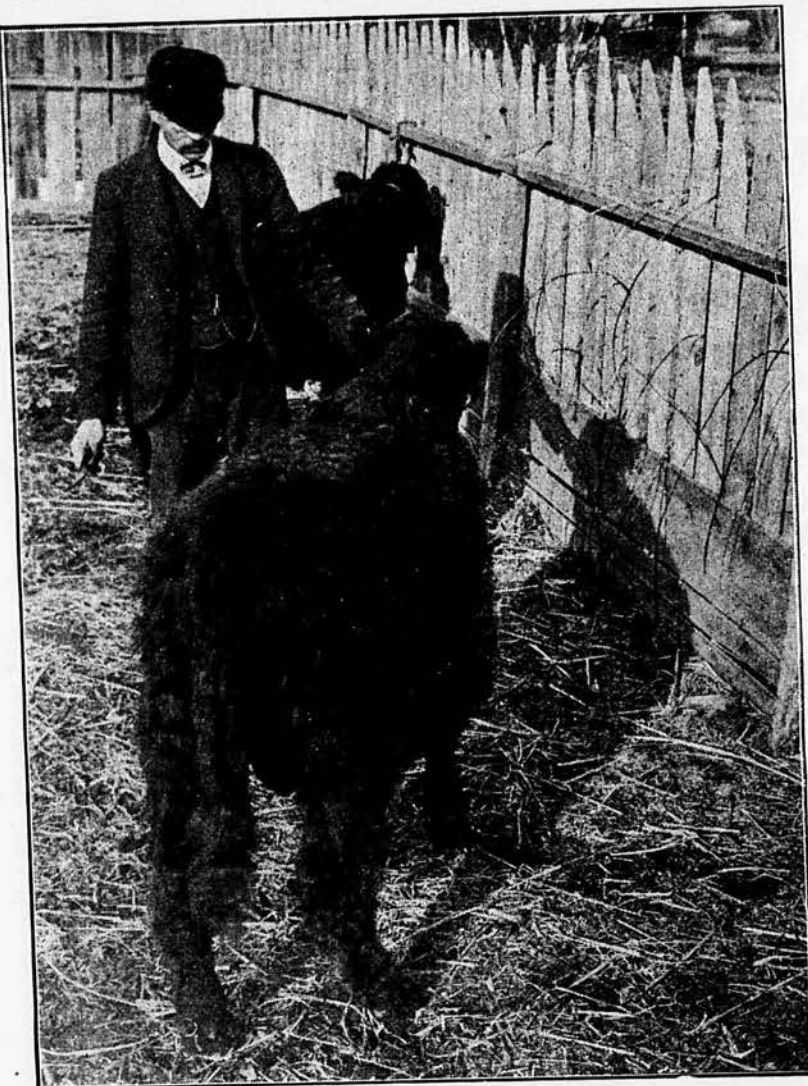
Mr. Phelps, the president of this concern, is a man of original ideas, and during his years of practical training in all branches of buggy-making, he thought out a plan of selling buggies that was so radical a departure from established methods that when he organized The Ohio Carriage Mfg. Co., and announced his policy, the "wise" heads of the carriage world said, "Phelps, you're crazy! If you persist in starting your business on that plan your company will be bankrupt in a year!" A few more liberal in their views, gave him two years in which to make a business failure. "Just give the young man enough rope and he'll hang himself, sure," was the way they put it.

Phelps said nothing—just smiled. That was many years ago, and H. C. Phelps is in business to-day—his com-

The use of split hickory in wheels and running gears was decided upon, and from that day to this every Split Hickory buggy has had wheels and running gears made entirely of Split Hickory. Small logs of second growth Shellbark Hickory are split with the grain, and the pieces that split straight are selected, all cross-grained wood being discarded.

Here is the secret of the wonderful wearing qualities of Split Hickory buggies. The great elasticity of the parts that must withstand the wear and strain of hard usage, not only adds to the life of the buggy, but to its easy riding qualities as well.

The Ohio Carriage Mfg. Co. have always held strictly to the lines of straightforward business policy. They keep their vehicles up to the highest standard of Split Hickory quality always, regardless of the competition of rattle-trap buggy-makers or the "scrap heap" catalogue houses. They employ skilled labor, and pay good wages. You will not find any boy painters in their painting department, or \$3-a-week girls in the trimming department. Every vehicle that they turn out is built from the ground up in their own great factory, and is just as good as modern methods, up-to-date equipment, and skilled labor can make it.



CAPITAL VIEW GALLOWAYS.

Herewith we show a correct likeness of the lot of Galloway bulls now being advertised by G. E. Clark, proprietor of the Capital View Stock Ranch, Topeka, Kans. This unusually fine lot of bulls may be seen at any time at Mr. Clark's city barn, 2301 Van Buren St., Topeka.

Among the lot will be found a number of the herd-header sort, some that promise to develop into something choice. Have exceedingly heavy coats with fine, furry bottoms, well-prepared for the kind of weather we have been having the past few weeks. They are sired by the well-bred bulls, Devoy of Wavertree 17094, a son of Mario of Castlemilk 15054 (7032), Peter Jackson H., 12461, by Phoenix of Dyke Creek 7183, out of Imported Bloomer of Kirkhill 704 (6445), and McGuinn of Clover Hill 21942, a son of Arno the Great 1502. Mr. Clark has had a life-time experience in pure-bred cattle business, has been very choice in picking his breeding stock, and now has about 75 head in his herd of registered Galloways which contain some very choice animals. He has a number of native cows on his ranch which have calves from the Galloway bull, and parties not familiar with the cross should call and get acquainted with Mr. Clark, and have him show them what the single cross will do on natives, which get market-toppers every time.

pany selling more buggies and better buggies by his "fool" plan than any manufacturer in the United States, and competitors are about breaking their necks in a fruitless endeavor to keep up with him.

Mr. Phelps' bold stroke of business policy was nothing more nor less than to build good, honest, absolutely first-class vehicles, sell them to the consumer direct on what he termed a "30 days' free use plan," and to show his good faith by giving the purchaser, as an additional safeguard, a full two years' binding guarantee, covering every part of the vehicle, covering its wearing qualities, covering the material used in it, covering the workmanship at every essential point.

On the success or failure of this policy he willingly staked his entire capital. He won because the public recognized almost instantly the new element of fair play in this policy, which afforded them a protection they had never before had, and gave them the immense advantage of buying at wholesale and from first hands. Mr. Phelps struck the keynote, and the public responded—"Send on your buggies!"

Orders began pouring in from all parts of the United States. The business of the Ohio Carriage Mfg. Co. has a history of continuous and rapid growth that has few parallels in the manufacturing world.

But we are getting ahead of our story. On every page of the history of this Ohio carriage manufacturer's remarkable success is written large the words "Split Hickory." At the very outset of his career as a manufacturer of vehicles Mr. Phelps laid as the corner-stone of the business, "Quality."

We have carried the advertisements of the Ohio Carriage Mfg. Co. in our columns for years and have never had a complaint from a single subscriber. Those of our readers who think of buying a buggy, or a vehicle of any kind, should send for a free copy of their beautiful 1905 catalogue, containing 192 pages, and showing their entire line of Split Hickory Vehicles and Oak-Tanned Harness. A postal card request will bring it. Address The Ohio Carriage Mfg. Co. (C. H. Phelps, Pres.), Station 25, Cincinnati, O.

Free Roofing Sample.

Until recently an absolute waterproof roofing was practically not to be found. But in the improved AMATITE—a Tarred Felt Roofing with a Mineral Surface—we believe those who are interested in the roofing subject will find exactly what they are looking for. The makers' claims have been fully substantiated by the test of surface, and the cost is slight. A sample and full information is sent free by addressing the Barrett Manufacturing Co., at New York, Chicago, Philadelphia, Cincinnati, St. Louis, Allegheny, Kansas City, New Orleans, or Minneapolis.

One of the first Cahoon Hand Broadcast Seed-Sowers made was sold to Mr. J. P. Shattuck, of Portland, Me., who has used it every season for more than forty years. Many other farmers have used these machines for twenty-five to thirty-five years, each. It pays the farmer well to get an accurate machine that will last a lifetime. This sower is made by the Goodell Company, Antrim, N. H. Write for catalogue.

VARICOCELE

SAFE, PAINLESS, PERMANENT CURE GUARANTEED 25 years' experience. No money accepted until patient is well. CONSULTATION AND VALUABLE BOOK FREE, by mail or at office. Write to DR. C. M. COE, 913-B Walnut St., Kansas City, Mo.

CANCER

Cured to stay cured. My TRUE METHOD kills the deadly germ which causes Cancer. No knife! No pain! Longest established, most reliable cancer specialist. 16 years in this location. I give a WRITTEN LEGAL GUARANTEE. My fee depends on my success. Send for free 100-p. book and positive proofs. DR. E. O. SMITH, 2836 CHERRY ST., KANSAS CITY, MO.

GRAND ISLAND ROUTE

DOUBLE DAILY SERVICE, with new 80-foot Acetylene Gas-lighted Pullman Chair Cars (seats free) on night trains and Pullman High-back seat Coaches on day trains.

Direct Line between Kansas City and St. Joseph, Mo., Hiawatha, Sabetha, Seneca, Marysville, Kan.; Fairbury, Hastings and Grand Island, Neb.

QUICK TIME TO CALIFORNIA AND THE PACIFIC NORTHWEST. S. M. ADSIT, Gen'l Pass. Agent, St. Joseph, Mo.

Learn About Pacific Northwest

Our new and handsomely illustrated 88-page book (with map) tells you about the leading industries in Oregon Washington and Idaho, where the best of everything grows and where there are more openings for the man with small means or the man with thousands, than anywhere else in the Union. Four cents in postage will bring it to you. Write today.

A. L. CRAIG, GENERAL PASSENGER AGENT THE OREGON RAILROAD & NAVIGATION CO. PORTLAND, OREGON

Don't forget the Great Lewis & Clark Exposition, Portland, Oregon, June 1, to October 13, 1905

Suffering

Will Not Help Your Disease, but Will Weaken Your Nerves.

Folks who think it is better to bear pain than soothe it—are wrong. Old-fashioned doctors used to say it was better, because they had nothing with which to ease pain but dangerous, heart-paralyzing drugs.

But now, that a safe remedy has been found, Dr. Miles' Anti-Pain Pills, it is wrong to suffer, for nothing can be gained but weakened nerves.

A safe rule to remember is: When in pain, take an Anti-Pain Pill.

This will soothe your quivering nerves. Dr. Miles' Anti-Pain Pills relieve pain by restoring the natural secretions, in which they differ from opium and similar narcotic drugs, which relieve pain by checking the action of the glands.

They are sure and harmless, and are the latest medical treatment for the cure of Headache, Neuralgia, Backache, Rheumatism, Dizziness, Toothache, Stomachache, Menstrual (Monthly) Pains. Also nerve irritations like Sea-Sickness, Car-Sickness, Sleeplessness, Indigestion, etc.

Pleasant to take, quick in results. "I have used Dr. Miles' Anti-Pain Pills for sick, nervous headache, and have received the best results. I heartily recommend their curative properties, for they are successful."—REV. RAY A. WATROS, D. D., Iowa City, Ia. Sold by druggists, at 25c. Money back if first box does not help. Never sold in bulk.

FREE Write to us for Free Trial Package of Dr. Miles' Anti-Pain Pills, the New Scientific Remedy for Pain. Also Symptom Blank. Our Specialist will diagnose your case, tell you what is wrong, and how to right it, free. DR. MILES MEDICAL CO., LABORATORIES, ELKHART, IND.

DUROC-JERSEY SWINE.

D. M. TROTT ABILENE, KAS., famous Duroc-Jerseys, Poland-Chinas.

COUNTY SEAT HERD DUROC-JERSEY SWINE.
Geo. Briggs & Son, Clay Center, Neb.
Young stock for sale.

Registered Stock, **DUROC-JERSEYS**, contains breeders of the leading strains.
N. B. SAWYER, CHERRYVALE, KANSAS.

DUROC-JERSEYS—Large-boned and long-bodied kind. A fine lot of fall pigs (either sex) for sale. Prices reasonable.
E. S. COWEE, R. F. D. 2, Scranton, Kans.

MAPLE AVENUE HERD **J. U. HOWE,**
Duroc-Jerseys Wichita, Kansas.
Farm two miles west of city on Maple Avenue

FAIRVIEW HERD DUROC-JERSEYS
Now numbers 150; all head for our two sales, October 25, 1904, and January 31, 1905.
J. B. DAVIS, Fairview, Brown Co., Kans.

THE OLD RELIABLE KLONDYKE HERD.
For Sale—One April and four September males. Two June and eight Sept. gilts. Choice of 80 head. Prices right. Quality right. **Wheeler Bros., Whiting, Ks.**

PEARL DUROC-JERSEY HERD.
Write **C. W. TAYLOR, Pearl, Dickinson Co., Kans.**, for prices on Duroc-Jersey hogs. He has them. Can ship on four roads, Rock Island, Union Pacific, Santa Fe and Missouri Pacific.

FOR SALE
Twelve head of pedigreed Duroc-Jersey hogs, good color; weigh from 150 to 175 pounds; at farmers' prices. \$9 to \$12 each.
CHAS. DORR, Route 6, Osage City, Kans

The Famous Fancy Herd DUROC-JERSEY SWINE
A few gilts and 7 fine young boars for sale. Breed sow sale at Concordia, Feb. 21, 1905.
JNO. W. JONES & CO., R. F. D. 3, Delphos, Kan.

Some Fine August and September Figs—Duroc-Jerseys
Either sex, as wanted. Price \$10 each. They are of good red color, good ear, back and feet; also some bred sows at low prices. All stock registered. Brood sows to farrow in March. Mr. & Mrs. Henry Shrader, Route 1, Wauneta, Kans.

Wheatland Farm Herd Duroc-Jerseys
For Sale—At reasonable prices, some fine October pigs, male and female; also some tried sows, bred and open. Our yearling herd boar, Nathan 6397, dam Lincoln Lass 32792, will also be sold.
GEO. W. WILEY & SON, South Haven, Kans.

DUROC-JERSEY BRED SOWS
Fifteen choice bred sows and gilts and two young male pigs for sale. Write for prices, breeding, etc.
R. F. NORTON, - Clay Center, Kans.

DUROC-JERSEY HOGS.
All stock registered. Pigs for sale weighing 150 to 200 pounds, both sexes. Will have sows for early farrowing at \$20 each. Spring males and gilts, \$10 to \$15. Address
Mr. & Mrs. Henry Shrader, Wauneta, Kans

PLAINVILLE HERD DUROC-JERSEYS
For sale, an extra fine lot of young boars large enough for service. Bronze turkeys, Barred Plymouth Rocks and Brown Leghorn chickens for sale.
J. M. YOUNG, Plainville, Kans.

DUROC-JERSEYS
A few very superior boars out of Gold Dust 20401, our premier herd boar, now ready for sale.
BUCHANAN STOCK FARM, Sedalia, Mo.

Rockdale Herd Duroc-Jerseys
All reserved for bred sow sale Feb. 20, 1905. 40 head of tried sows, fall yearlings and spring gilts, the tops of my herd. Remember the date.
Route 2, J. F. Chandler, Frankfort, Kansas.

MINNEOLA HERD DUROC-JERSEY SWINE
Prince 17799 and Red Rover 27665 at head of herd. Young boars and bred and open gilts for sale.
L. A. KEELER, Route 7, Phone 891 G, Ottawa, Kans.

Rose Lawn Herd Duroc-Jerseys
Now offering males only. Bred sows and gilts reserved for Feb. 22, 1905 sale. Visitors welcome and prices right. Can ship on Santa Fe, Mo. Pacific and Rock Island railroads.
L. L. Vrooman, Hope, Dickinson Co., Kans.

Maple Grove Stock Farm DUROC-JERSEY SWINE
Twenty-five gilts bred to farrow in March and April. A few boars and the herd boar Royal Top-Notcher 28075—12329, for sale at reasonable prices. Also a nice lot of yearling pigs.
DULANEY & DE BROT, Route 1, Wichita, Kas

Walnut Oak Durocs FOR SALE.

Ten yearling sows, including our World's Fair premium sows sired by surprise 16817, champion at Kansas City Royal 1902, and bred to a son of Bell's Chief and Bishop's Choice. Fifteen June boars, including our World's Fair fifth prize boar under 1 year. All the very best of the breed. Our motto is to please all.
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POLAND-CHINA SWINE.

FOR SALE Poland-China Hogs, Holstein-Friesian Cattle, either sex. Best strains represented. **H. N. HOLDEMAN, Rural Route No. 2, Girard, KANSAS.**

SHADY NOOK HERD.
Poland-Chinas. Up-to-date breeding. Correspondence solicited. Inspection invited.
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MAPLE VALLEY STOCK FARM
Pure-bred Poland-Chinas from leading strains. Visitors welcome and correspondence solicited. Satisfaction guaranteed. **C. P. Brown, R. 2, Whiting, Ks**

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POLAND-CHINAS
For Sale—June gilts, sired by Corwin's Model. This stock is first class. Weight from 150 to 200 pounds. Prices quoted on application.
Dave Stratton, Route 1, Walton, Kans.

Pure Bred Poland-Chinas.
of the Chief Tecumseh 2d, Black U. S., Wilkes, Free Trade, Corwin and Short Stop strains. Address
E. E. WAIT, Altoona, Wilson County, Kans.

Pecan Herd of Poland-Chinas
Model Tecumseh 64138, American Royal (S) 80783, and Best Perfection 81507 at head of herd. Write us your wants.
J. N. Woods & Son, Route 1, Ottawa, Kans.

Elm Grove Stock Farm Poland-Chinas.
Woodbury 33838, Highroller 33839 and Perfection's Profit 33234 at head. Sows of the most popular strains. Visitors always welcome.
F. A. DAWLEY, Waldo, Kans.

DIRGO BREEDING FARM
J. R. Roberts, Proprietor, Deer Creek, Okla.
Breeder of Poland-Chinas of the leading strains. Stock of all kinds for sale at all times. Satisfaction guaranteed. Write us and we will tell you what we have.

Kansas Herd of Poland-Chinas.
Has fifteen Sunshine gilts bred to a son of Mischief Maker, and some sows carrying their second litter and some good boars. Also White Rose Comb Leghorn eggs.
F. P. MAQUIRE, Hutchinson, Kansas.

ROME PARK POLAND-CHINAS and BERKSHIRES.
I have about twenty boars ready for use and twenty-five sows bred, and some unbred, and a large number of good pigs, both breeds.
T. A. HUBBARD, (County Treasurer Office.) Wellington, Kans.

HIGHLAND FARM HERD OF PEDIGREED POLAND-CHINAS
Twenty serviceable boars at special prices for next 30 days, sired by Black Perfection 37132, Slick Perfection 32604, Perfection Now 32590, and Ideal Perfection. They are lengthy and good-boned pigs, with plenty of finish. Write me description of what you want, and I will guarantee satisfaction.
JOHN BOLLIN, Route 5, Leavenworth, Kas

Main's Herd of Poland-Chinas
Empire Chief 30379 S, 62445 A, head of first prize herd at Iowa and Nebraska State Fairs. Mammoth bone and size, full brother to the champion Logan Chief. Chief Tecumseh 4th, sired by Chief Tecumseh 3d, whose get have won 110 prizes at State Fairs, heads the herd of
JAMES MAINS, Oskaloosa, Jefferson Co., Kan.
All ages and sex, out of sows of all the leading strains of the Poland-China breed. Write what you want.

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Route 5, Leavenworth, Kans.

Choice young boars of April and May farrow sired by Beauty's Extension, for sale. Also bred sows and gilts, all with good colors, bone, fancy head and ears. The head boar, Beauty's Extension 27966, for sale. Some snaps here. Visitors welcome. Mention Kansas Farmer and write for prices.

Big-Boned, Lengthy Poland-Chinas
I have for sale two herd boars, one sired by the great Missouri's Black Perfection, the other by Perfection Chief; they are extra good. Also 25 large, big-boned, growthy spring boars and about the same number of gilts. My specialty is to breed the kind that is the most profitable.
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For Sale, at bargain prices, from now till January 1, 1905, four boars ready for service, sired by Sherman's Corrector, a half brother to Corrector 2d, the reserve champion at the St. Louis Exposition, and out of up-to-date bred sows. Also a bunch of boars equally as well bred, sired by six good herd boars, and out of matured sows.

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Breeder of Improved Chester-White swine. Young stock for sale.

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Shorthorn cattle, Oxford sheep and Peafowls. I won 13 prizes on 14 head of Chester-Whites at World's Fair, 1904.
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Choice boars and gilts of August farrow for sale cheap; also a few extra good bred gilts. Write for prices. Satisfaction guaranteed.
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Choice stock for sale. Prices reasonable. Come and see them or write to
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200 pedigreed hogs, both sexes, all ages. Pairs or trios mated not akin. Bred for size and finish. Nothing but the best offered. We are now booking orders for bred sows. Describe build of hog wanted. Thoroughbred Poultry—W. and B. P. Rocks, W. and G. Wyandottes, and B. Langhans. Stock for sale. Correspondence solicited and satisfaction guaranteed.
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O. I. C. HOGS. 300 Beauties, all ages.

We take the lead, others follow. We were the first western breeders to take up the O. I. C.'s, consequently have advanced our herd to a place above all others. We have spared neither time nor money in perfecting this this breed. Write your wants and we will be pleased to give you information.

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Brandane Noble, Cragmore Wonder, Laddie McGregor, at stud. Write for terms. We assure you we can please you. We are selling more Collies than any firm in America. We guarantee satisfaction.

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BERKSHIRE SWINE.

CEDAR LAWN BERKSHIRES
My sows are sired by Elma's Prince 64778, and Berrington Duke 72346. Boar at head of herd, Jurlis Topper 76277. **Wm. McADAM, Netawaka, Kan**

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From the best breeding that can be had for sale at all times. Male and female, bred and open. Prices and breeding that will suit you.
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Are all O. K. in breeding and quality. One yearling boar and four boars, April farrow, for sale, besides fall pigs.

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30 extra choice Boars, 100 to 150 pounds.
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I have purchased the great S. B. Wright herd, of California—are of the best in America, and the best sows and boars I could find in Canada, and have some fine young boars by several different herd boars. Can furnish fresh blood of high quality.
Eight pure Collie pups, cheap.

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Pacific Duke 56691, the 1,000 pound champion show and breeding boar from herd of S. B. Wright, Santa Rosa, Cal., bred by N. H. Gentry; Model Princess 60134, by Halle 60125, sweepstakes Pan-American sow; Stumpy Lady 63409 by Combination 56023, sweepstakes Kansas City and Chicago 1902. Lee's Model Princess 62514, the \$180 daughter of Governor Lee 47971; Lady Lee 90th 63035, the \$160 daughter of Lord Premier 60001, and other "Blue-Bloods." Sows bred to 3 grand boars and young stock for sale.

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Ready for sale, consisting of 50 fall and spring gilts, that can be bred to any one of the three different herd boars, Mark Hanna, Red Stack Jolly, and a fine herd boar from Illinois. Also 40 young boars for sale for spring farrow.

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Plainville Shorthorn Herd

I have agreed to consign my herd bull, "Strawberry Baron 149498," to the Breeders sale at Plainville, February 23, 1905.
N. F. Shaw, Plainville, Rocks Co., Kans.

ROCKY HILL HERD

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J. F. True & Son, Perry, Kans.

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Breeder of Pure-bred Shorthorn Cattle. Herd bull, Imported British Lion 138692. Bull and heifer calves at \$50.

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Ten fine young bulls for sale—all red. Red Laird, by Laird of Linwood, at head of herd.

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Thirty young bulls to select from. Get prices and description. Sired by Baron Ury 2d 124970, Sunflower's Boy 127337 and Bold Knight 179054.
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For immediate sale, 12 bulls ready for service and 12 bull calves. Also 20 cows and heifers, 1 to 7 years old. Give me a call, or address

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The Imported Missile bull, Aylesbury Duke 159783 and the Cruickshank bull, Lord Thistle 129960, in service. A few bred yearling heifers by Imp. Aylesbury Duke are now offered for sale. These heifers are in calf to my Cruickshank bull, Lord Thistle.

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Harmony's Knight 218509

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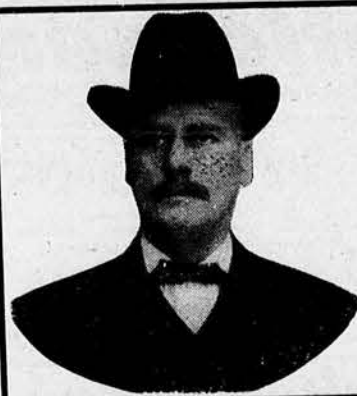
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Get busy, quick, Mr. Horseman—It's "16 to 1" that to-day is the "BEST TIME EVER" to begin breeding first-class DRAFT and COACHERS. Don't wait until the OTHER FELLOW "GATHERS THE CREAM." "BUTT IN." Put in your thumb, buy a "PLUM-GOOD ONE" of IAMS. His "PEACHES AND CREAM" are ripe. "IT'S A CINCIN" that you will save \$1,000 there and get BETTER stallions. Iams' "SENSATIONAL BLACK BOYS" are "WHIRLWINDS" in a "SHOWYARD." They won every first, second, and Championship prize (over all) on PERCHERONS, BELGIANS and COACHERS at Nebraska State Fair 1904. Iams' RESERVE BEST stallions were there for exhibition—not shown for prizes. None of his SPECIAL TRAIN of 100 stallions received August 18, 1904, were shown. At the

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Buyers throng his barns and say: Hello, New York; I'm Pete, of California. Say, Iams has the BEST LOT of stallions, and most of them, I ever saw. CHEAP, TOO. Yes; see those ten 2-year-old 2,000-pound "BLACK BOYS"—"RIPPERS." Iams' stallions are choice goods. WIE GEHTS? HANS, of OHIO. I'm Zeke, of Montana. See this barn of forty 2,100-pound 3-year-olds. All "TOP-NOTCHERS." Sure, dot vas dot vide-as-a-wagon stallion. Iams has one "HORSE SHOW more big as dot "ROYAL," and he saves me MORE as \$1,000. SURE TING. No studs like dot in Ohio. Mr. Illinois, I'm Peabody of Colorado. Iams has the GREAT-EST and LARGEST establishment of first-class stallions owned by one man in U. S. "HUMMERS, TOO." See those twenty 2,200-pound 4-year-olds LINED UP. "BLUE-RIBBON BOYS" None to compare with them in bone, big size, quality and finish at "INTERNATIONAL." You see stallions at IAMS JUST AS YOU READ ABOUT. Mr. Missouri, I'm "SOCKLESS JERRY," of Kansas. This DAILY HORSE SHOW of IAMS' beats any State Fair I ever saw. It's an "EYE-OPENER" to any man to see Iams' stallions. Best I ever saw. He sells these "TOP-NOTCHERS" at \$1,000 and \$1,500. Hello, Iowa, I'm Louie, of Minnesota. To see Iams' CHAMPION PERCHERON, BELGIAN and COACH STALLION, they are the "HOTTEST PROPOSITION"—(to competitors) I ever saw. Iams makes competitors "HOLLER"—and he "BUTTS IN," sells MORE stallions each year. Yes, saved me \$1,000. Mr. Indiana, I'm Hogg, of Texas. I came 2,000 miles to see Iams' 5,100 pound pair of "PEACHES AND CREAM." They are a "SENSATIONAL PAIR." Better than the pictures. SIMPLY IMMENSE. Iams is a HOT ADVERTISER. His horses are better than he advertises. AT LET-LIVE PRICES, too, Mr. Unbeliever.

\$100 WILL BE PAID YOU \$100

If you visit Iams and do not find every statement in ads or catalogue TRUE. Horses good as pictures in catalogue. "NOW WILL YOU BE GOOD, MR. KNOCKER?" Doo, I don't wonder at Iams' competitors wanting his horses barred from ROYAL or INTERNATIONAL. "SOMETHING DOING" when Iams makes HORSE SHOW. He always has "Rippers and in SHOW SHAPE. Tom, Mr. Utah bought that 2,000-pound 3-year-old at \$1,200 of Iams. Better than one my neighbors paid \$3,600 for. Kitty, Ain't Iams' Coaches "SWELL?" Iams handles only the "TOPS". Coachers that look over the house, and step high as a "red wagon." George, dear, buy a stallion of Iams. They are 50 per cent better than one our neighbor paid those Ohio men \$4,000 for. (Then I can wear the diamonds.) Iams has

149 BLACK PERCHERONS, BELGIANS AND COACHERS 149

50 per cent blacks; 50 per cent ton horses—IAMS speaks the language, buys DIRECT from breeders, pays NO BUYER, SALESMAN or INTERPRETERS. Has no THREEM to TEN MEN as partners to share profits with. His twenty-two years SUCCESSFUL BUSINESS makes him a safe man to do business with. Iams guarantees to sell you a BETTER STALLION at \$1,000 and \$1,400 than are sold to stock companies for \$2,500 to \$4,000 by SLICK SALESMEN, or pay your fare and \$25 PER DAY FOR TROUBLE, you the judge. IAMS PAYS HORSES' freight and buyers' fare, gives 50 per cent breeding guarantees. Write for EYE-OPENER and catalogue.

References: St. Paul State Bank and Citizens National Bank.

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AT MANHATTAN, KANS., TUESDAY, MARCH 14, 1905.

37 EXTRA CHOICE SHORTHORN CATTLE 37

This offering includes 16 HIGH CLASS SHOW BULLS, 12 Herd Headers among them. All red except two dark roans. Ten are sired by Red Gauntlet, 8 by Orange Champion and 3 by King's Guard.

21 CHOICE YOUNG COWS AND HEIFERS.
Some with calf at foot; and all bred to Scotch bull. This sale will comprise the best offering as a whole ever made from Elmwood Herd. Catalogue sent on application.

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Reliable Shorthorns

In the best possible condition for usefulness. Absolutely healthy and GUARANTEED TO BE BREEDERS.

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March 15,

The two herds making this offering have been built on foundations of reliable families that have never failed to produce good ones. Everybody knows John McCoy's kind of Shorthorns. Ellis Ludwig has the same kind. These two men have topped every bull sale in which they have consigned. This year's bull off-ring of 17 head is the strongest they have ever made and includes the

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GLADYS CHIEF 152984, a 2,200-pound 5-year old, out of a sister to the champion, Lavender Viscount.

Nearly half of the 24 excellent females in the sale will be sired by this bull, bred to him or have calves at foot by him. For catalogue of these Scotch and Scotch topped Shorthorns, apply to

JOHN McCoy, Sabetha, Kas.,

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I will sell at the Henry Haub farm 1 1-2 miles north-west of Whiting, and 5 miles east of Netawaka, Kas.

Tuesday, March 14, 1905 Commencing at 12:30 p. m.

45--Registered Poland-China Brood Sows--45

These sows are in healthy, thrifty condition, are of high excellence, bred to high-class boars, such as Perfection I Know, Potent 36345 (sired by the \$1,480 Mascot), Star Corrector 36346, representing the best strains known to the breed.

Also ten young boars eligible to record just ready for service. Send for catalogue. Entertainment for parties from a distance. Conveyance will meet all trains.

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L. K. HASELTINE, of Springfield, Mo., and others, will offer at Public Sale at Divers Stock Barns, (one block west of Mo. Pacific depot) Wichita, Kans., at 1 o'clock p. m., Thursday, March 9, 1905, one car-load of registered Red Polls, consisting of both bulls and heifers, 8 to 24 months old. Terms of sale will be cash. For catalogue address

L. K. HASELTINE, Springfield, Mo.

CLOSING OUT PUBLIC SALE

Having rented the farm I will close out at Public Sale, commencing at 10 o'clock a. m., on

THURSDAY, MARCH 9, 1905

HORSES—Consist of 2 aged stallions and 1 4-year-old stallion; brood mares, driving horses, work teams, Standard-bred mares, colts and fillies.

CATTLE—Two milch cows, 3 yearling heifers, 1 yearling steer, 2 calves.

HOGS—One pure-bred Berkshire boar, 6 sows with pig, and 25 fall pigs in fine shape.

FARM IMPLEMENTS of every kind—buggies, break carts, road carts, track wagon, harness, etc.

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CLOSING-OUT SALE OF THE

Maple Grove Herd Duroc-Jersey Swine

At the Maple Grove Stock Farm,
Wichita, Kans., Tuesday, March 14, 1905

On account of having sold Maple Grove Stock Farm, and having to give early possession, we have decided to make a closing out sale of our entire herd of about

150 DUROC-JERSEY HOGS 150

Comprising bred sows and gilts, and a large number of fall pigs of both sexes. Also the young herd boar. A number of the gilts are bred to Royal Topnotcher 28075-123329. There are also a number of famous brood sows, and in fact the whole offering is a very attractive one for breeders who can secure foundation stock at their own prices. For further particulars, address by letter or telephone,

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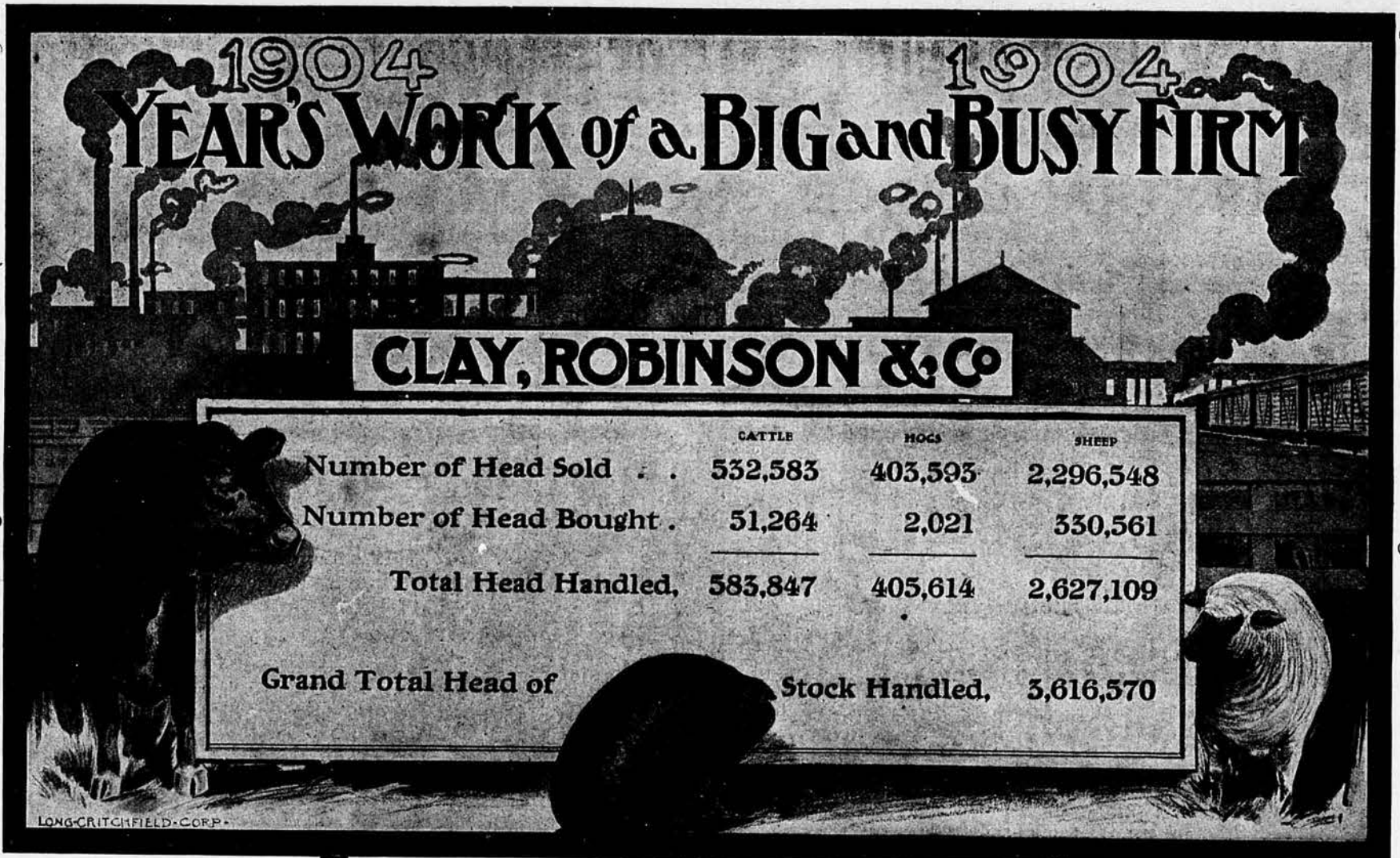
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Number of Head Bought .	51,264	2,021	330,561
Total Head Handled,	583,847	405,614	2,627,109
Grand Total Head of	Stock Handled,		3,616,570

LONG-CRITCHFIELD-CORP.

Total Amount of Cash Turned Over \$55,228,876.21.

The handling of the above volume of business involved office work—accounting, correspondence, etc., to the following extent:

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Circulars Mailed	-	-	619,805
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