

KANSAS FARMER

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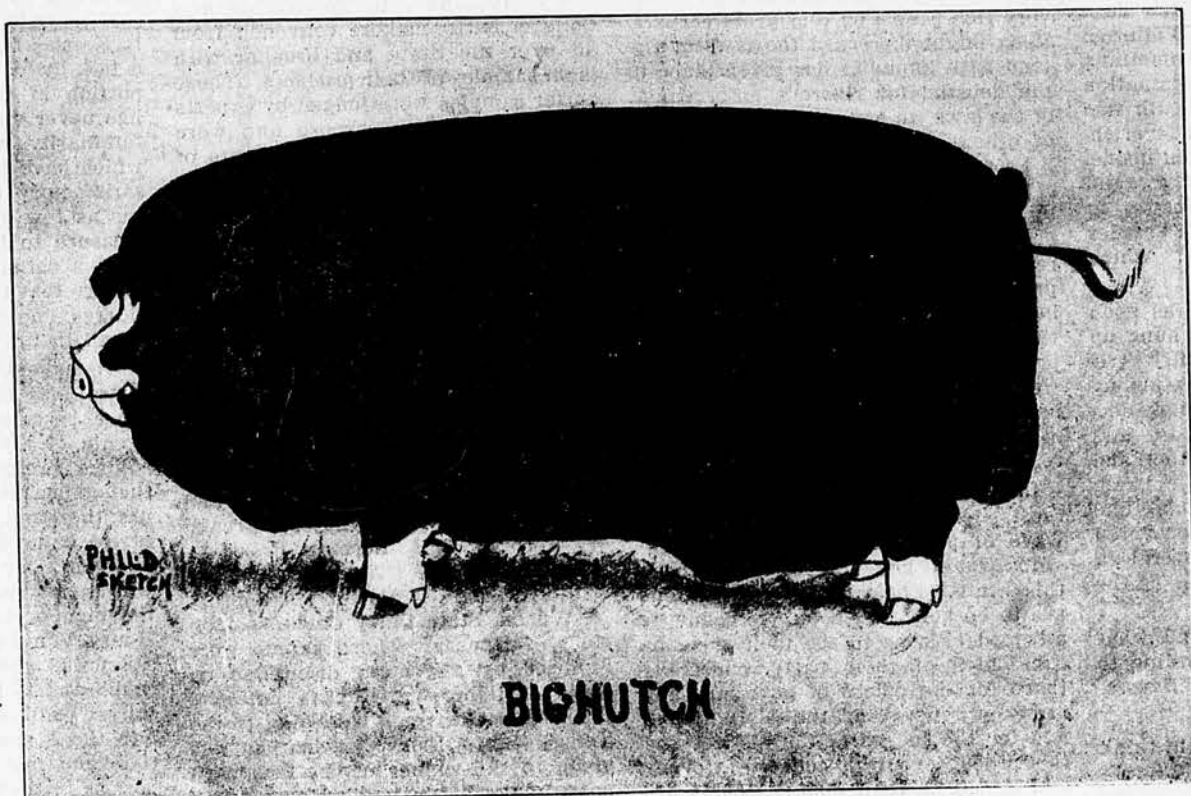
Farmers' Week at the State Agricultural College

The week beginning December 30 was a busy one at Manhattan, "Out There in Kansas." During this time there was held the annual meetings of a number of associations which, together with the work of instruction which was done by the college professors, constituted the State Farmers' Institute.

The State Agricultural College of Kansas organized the system of farmers' institutes now in existence more than a quarter of a century ago, though the work was not pushed aggressively until some time in the eighties. Unlike other States, who have their institutes organized as a separate institution, this work has been maintained by the

Agricultural College since its inception, and has been growing in importance each year. Formerly the college institute work was managed by a committee of the faculty, but a few years ago its importance demanded more personal supervision than the professors ought to give from their other duties. A superintendent of farmers' institutes was appointed who devotes his entire time to this work and under whose supervision several hundred institutes are held each year. This system of institutes is thoroughly organized and has its culmination or "grand round-up" in the State Farmers' Institute which is held during the Christ-

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THE KIND THAT MADE KANSAS FAMOUS.—Big Hutch, the great boar at the head of Thompson Bros.' Poland-China herd at Marysville, Kans., who will hold a bred-sow sale on February 1, 1908.

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SELLING DISEASED ANIMALS.

EDITOR KANSAS FARMER:—A is a sheep breeder. B purchased a ram for breeding purposes of A. A few days after bringing him home B turned ram with ewes and noticed something wrong with ram, and on examination it was discovered that the sheath was very much swollen, hard, and feverish, and seemed to be almost rotten inside. B wrote A regarding the matter and requested restitution. A's answer in substance was, "the ram was a breeder for me, and why not for you?" which was not satisfactory.

B called A by 'phone and as soon as A found who was talking hung up the receiver. B made inquiry (regarding the trouble with ram) among sheep men of the country and doctored the ram without success, and bought two young grade rams and turned with ewes, turning the old ram with some wethers. In something like two months later it was discovered that the young rams and several of the ewes were affected as same as the old ram.

Can you tell the trouble and what recourse has B (if any) according to law.
 W. C. DYER.

Linn County.

THE KANSAS FARMER is loth to think that any breeder of sheep would knowingly impose upon any one by selling a diseased animal. However, the explicit statement by B indicates that a wrong has been committed, one which ought to be righted without delay.

The name of the disease and treatment to be applied are given by THE KANSAS FARMER veterinarian in the veterinary department.

It will be well for A to give heed to Sec. 1 of Chapter 158, Laws of 1886, which reads:

"Any person being the owner of any domestic animal or animals, or having the same in charge, who shall turn out or suffer any such domestic animal or animals having any contagious or infectious disease, knowing the same to be so diseased, to run at large upon any uninclosed land, common, or highway, or shall sell or dispose of any domestic animal or animals, knowing the same to be diseased, without fully disclosing the fact to the purchaser, shall be deemed guilty of a misdemeanor, and shall be punished by a fine in any amount not exceeding five hundred dollars, or imprisoned in

the county jail not more than six months."

The person who sold the diseased animal in the case related by our correspondent will do well to consider that the law is made not to get people into trouble but to keep them out; that the intention of the law is to promote equity and fair dealing, and that its provisions are the best that society has thus far been able to provide for these beneficent purposes. Whether the purchaser shall or shall not be able to prove that the seller knew the animal to have an infectious disease at the date of the sale, the strong presumption from the facts stated, is that he did know it. In any case the seller has caused a serious loss to the buyer who had a right to depend upon his knowledge and integrity. If the facts are as stated, the right course, and probably the cheapest, is for the seller to make good the losses occasioned and that without compulsion.

TAKE PART IN POLITICS.

The present year is an important one politically. A president is to be elected by the country at large. In Kansas a full set of State officers must be chosen, including three justices of the supreme court. All members of the State Senate and House and all county and township officers are also to be elected this year. The Legislature will elect a United States Senator.

The general election this year will voice the views of the voters upon the important economic problems that have been under discussion for many months. Whether any decisive expression will be had on the tariff can not at this time be certainly stated. But there is no question about the prospect of a decisive expression on the question of enforcement of laws and the requirements of obedience by both great and small. The apathy which a few years ago assumed that very rich people or very great corporations might disregard the laws of the land with impunity has given place to the demand for rigorous enforcement of the laws we have and for enactment of others that will supplement them. Present prospects favor nomination of progressive candidates for president, by both of the great parties. Even persons who would gladly welcome a return to the old regime allowing predatory wealth to have its way are beginning to realize that the nomination of a reactionary candidate for the presidency by the party in power would more than likely lead to a serious consideration of public ownership of transportation facilities and perhaps of other utilities.

In Kansas the National questions will receive careful attention. The tidal wave of public opinion favoring law-enforcement has not failed to reach this State. Some of the conventions are to be held very soon. It behooves all good citizens to see to it that the candidates of their party, especially those for the offices of governor, and attorney general, on the State ticket, and for the judges of the district and the probate courts, county attorney and sheriff on their county tickets are men whose views are in harmony with the advanced thought of the present.

Every citizen owes it to his family to be an active politician just now.

GOOD YIELDS OF CORN.

In the great corn contest held at Manhattan last week the acre-yield awards were as follows:

First, J. M. Gilman, Leavenworth, Kans., yield 114 bushels per acre; second, Paul Gilman, Leavenworth, Kans., yield 107 bushels per acre; third, J. T. Martin, Hanover, Kans., yield of 81 bushels per acre.

The judges of boy's contest were: L. E. Call, E. G. Schafer, and A. B. Cron.

The judges of men's contest were: R. W. Hull, C. Doryland, and F. C. Miller.

Prof. A. M. TenEyck of the Agricultural College and Mr. Arnold Martin, Dubois, Neb., made the final awards.

Kansas young men who have accepted positions in Eastern institutions have not failed to make their marks creditable. The latest instance is that

of Prof. Charles W. Melick who went from an assistants position at the Kansas Experiment Station to that of professor of dairy husbandry at the Maryland Experiment Station. After getting comfortably adjusted to his new surroundings Professor Melick does a much needed service by bringing out a "Dairy Laboratory Guide." It bears the imprint of D. Van Nostrand Company, New York. This book will be found valuable in all creameries and other establishments which handle milk and its products and is especially well adapted to use in classes of dairy students. It is very concise and is well arranged for easy reference.

WHOSE MONEY IS THIS?

THE KANSAS FARMER is in receipt of a letter and remittance for two years subscription from Galena, Kans., to which no name is signed. If our subscriber will kindly give his name we will give him credit and send his paper.

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FARMERS' WEEK AT THE STATE AGRICULTURAL COLLEGE.

(Continued from page 25)

mas vacation at the Agricultural College.

The business of this very busy and very important week opened with the Boys' Corn Contest Association and the Kansas Butter Makers' Conference, each of which began the regular program on Monday afternoon. A report of the former will be found elsewhere in this issue.

KANSAS BUTTER-MAKERS' CONFERENCE.

Under the superintendence and by the invitation of Prof. J. C. Kendall, who was Kansas first Dairy Commissioner, and who has been elected to Chair of Dairy Husbandry in the Agricultural College, butter-makers convened from all over the State and brought with them samples of their products. These butter samples were judged by experts appointed for the purpose and were then judged again by the students of dairying whose score cards were compared and graded by those of the experts. Quite a large number of samples were on exhibition and cash prizes were given to the winners.

The work of judging was followed by a program in which these papers were read: "Points in Judging and Scoring Butter," J. G. Wynkjer, Agent U. S. Dairy Division; "How Cream Should be Sampled at the Receiving Station," G. E. Merritt, Great Bend; "Factory Milk and Cream Testing," J. R. Cates; "Some Butter Defects and the Remedies," J. G. Wynkjer; "Creamery Record," T. A. Borman, President Kansas State Dairy Association; "The Use of Starters in Butter Making," D. M. Wilson, State Dairy Commissioner-elect of Kansas. These papers were followed by a general discussion on ways of improving Kansas butter.

The \$60 silver cup, belonging to the Kansas State Dairy Association was given to the winner of the first cash prize in the butter scoring contest.

THE KANSAS STATE DAIRY ASSOCIATION.

Beginning on Tuesday afternoon, December 31. The Kansas State Dairy Association held its twenty-sixth annual meeting which was the most important in its history because of the work that has been accomplished along dairy lines in the year 1907. The meetings at Manhattan were so arranged that the first Butter Makers Conference was made to fit in with the twenty-sixth annual meeting of this association so that interested parties could hear both programs without loss of time.

Special agent J. G. Wynkjer gave some observations on the quality of the butter entered in the contest.

"Improving Cream and Butter Quality," J. C. Kendall, Ex-State Dairy Commissioner and now Professor of Dairy Husbandry.

"Dairy Economics," R. M. Washburn, Missouri State Dairy Commissioner.

"Development of Dairy and Creamery Interests in Kansas," W. W. Marple, Ex-President Missouri Dairy Association.

"The New Year and Kansas Dairy-

ing," D. M. Wilson, newly elected Dairy Commissioner of Kansas.

"Extension to Uncle Sam's Dairy Work," Ed. H. Webster, Chief of Dairy Division, U. S. Department of Agriculture.

"Building a Dairy Herd Quickly, and With Smallest Cash Outlay," this subject had been assigned to G. C. Wheeler of the Agricultural College, but in his absence was very comprehensively presented by Professor Kendall.

"Practicability of the Milking Machine," Henry Van Leeuwen, dairy farmer of Ottawa.

Every number on this program was presented and the papers will be given in full to our readers. Some special points of importance, however, should be mentioned. In his work as State Dairy Commissioner, Professor Kendall had established two stations at different points for the purpose of determining the practicability of grading cream. In connection with his report of these station, he mentioned a very simple method for the determination of the acidity of cream with the view to grading it on this basis. While it is well known that the acidity is not an absolute index of the quality of cream under all conditions, it has been determined that the cream with high percentage of acidity is nearly always that which has undesirable flavors as well.

Commissioner Washburn of Missouri gave one of the most valuable and most important addresses that was ever presented to this association.

His showing of the comparative value of the beef steer and the dairy cow as sources of human food, was the most telling point. Few people realize that the dairy cow, which gives six thousand pounds of milk a year, produces more human food and does it year after year than does the beef steer who gives up his life in his contribution to the welfare of men.

If there is any assemblage of people in Kansas that does not enjoy hearing a talk by W. W. Marple, it is in some portion of the State that the writer has never visited. He has a thorough familiarity with the ups and downs which have brought about the present satisfactory dairy conditions of Kansas as few men have. It is always a pleasure to listen to Mr. Marple and it is a satisfaction to be able to announce that this paper, which was considered one of his best, will be published in full in THE KANSAS FARMER.

We have heard a great deal about the milking machine, but nearly all of these reports have come from the agents of the manufacturers or from college professors who were testing them experimentally. It was a real pleasure therefore to be able to listen to a real dairy farmer who had invested his own money in these machines and who is now using them daily on one of the biggest dairy farms in the State. Henry Van Leeuwen of Ottawa, Kansas, milks about forty cows the year round and is the owner of two of the Burrell milking machines. He has had these machines in use for some time and makes a very favorable report as to their economy and practicability. It is known that eight or ten of these machines are in use in the State but it is not known that one man milks so many cows with them as does Mr. Van Leeuwen. He finds that he not only saves the expense of one man but he reduces the time in which the milking is done and he has no difficulty in solving the problem of incompetent help. He is of the opinion that any farmer that milks as many as fifteen cows can well afford to own one of these machines.

Hon. Ed H. Webster, is a man who is always welcomed home and no where more cordially than at the meetings of the State Dairy Association. He made a brief talk to the association in which he asserted that this department would do everything in its power to advance the dairy interests of Kansas and that he had placed an expert in this State and Nebraska for the purpose of collecting statistics, inspecting the field and rendering such personal assistance as might be needed.

The meeting as a whole was a very successful one and the program strong. The address of President T.

A. Borman was a strong paper presented by a strong man. There is perhaps no man in Kansas who is more thoroughly acquainted with the dairy business from the ground up than is Mr. Borman, and his knowledge has been gained by years of practical experience since boyhood. We publish his address in full in this issue of THE KANSAS FARMER.

When the committee on resolutions made its report a discussion was precipitated in regard to the attempt on the part of the railroads and others to create public sentiment in favor of increasing freight rates on cream by telling the people that the increase in these rates will result in blotting out the existence of the centralized creameries and establishing in their stead cooperative creameries. It was shown conclusively that a certain large manufacturing company was also interested in the creation of this public sentiment in order that it might have an opportunity to sell its wares to cooperative creameries. It was shown that one of these cooperative creameries, which was recently built by this manufacturing company and sold to the farmers for \$4,400, was equipped with old fashioned and out of date machinery, that the building has been erected without any foundation and that its invoiced value was only \$1,800. It was shown that the interests which are behind this movement had based their argument on the statement that the cooperative creameries in other States where they exist bring more money to the farmer than he received from the centralized creameries such as exist in Kansas and Nebraska. In the only trial of this case which has been had as yet, which was before the Nebraska Board of Railroad Commissioners, the railroads utterly failed to prove their case because statistics show that in Wisconsin and Minnesota where the old methods of the cooperative creamery and gathered cream and whole milk are in operation as they were in Kansas twenty years ago the farmers only received during the year 1907 an average of 16¼ cents per pound for their butter-fat, while in Kansas under the centralized creamery system the average price netted to the farmers for butter-fat was 18¼ cents per pound.

The election of officers resulted in the unanimous vote of the association to continue in office those who had served the past year. These officers are: President, T. A. Borman, Topeka; Vice-President, C. S. Craybill, Abilene; Secretary-Treasurer, I. D. Graham, Topeka.

The resolutions adopted were as follows:

Be it resolved by the Kansas State Dairy Association, That the dairymen of Kansas congratulate the people of the State upon the marked progress made in its dairy industry, within the past year; that we are grateful to the last Legislature for the most excellent Dairy Commissioner Law passed by that body. That we appreciate the selection thereunder of a competent and energetic dairy commissioner, and the adoption by the board of wise and efficient rules and regulations, well adapted to the improvement of the quality of Kansas dairy products, and to the development of this most important industry.

Be it further resolved, That we appreciate the excellent work done by the Kansas State Agricultural College, in the education of the Kansas farmers, not alone in the instruction of young men and women of the State, in the art of dairy husbandry, but in the general information disseminated throughout the State, by the college professors, by correspondence, and by institute work; and we hereby pledge ourselves to cooperate with the college, and with the dairy commissioner, that the dairy industry of Kansas may in the future make still greater progress and development, than it has heretofore done.

Be it further resolved, That we deplore the uncalculated and unwarranted attacks being made upon our industry, in an attempt to array cooperative creameries against centralized creameries, our principle being to give equal opportunity to all and special privileges to none, and then under such conditions to allow that system to survive, which is fittest to survive and which brings the greatest good to the greatest number; that system which will grow up on its own merits and not one created by promoters, who have cost the farmers of Kansas so dearly in the past.

Be it further resolved, That we are unalterably opposed to the proposed increase in rates for the shipment of cream and dairy products, which in the end must fall upon the producers of cream, and will inevitably tend to the destruction of the dairy industry of the State—and urge upon all dairymen and creamerymen to use every effort to prevent the proposed increased cream rates from becoming effective, and the legislative committee of this association is



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hereby instructed to take such action as will most effectually accomplish this purpose.

Be it further resolved, That we approve the general plan of Dairy Commissioner Kendall, for the grading of cream, with a view to effect the production and prompt delivery of high-grade cream, and the betterment of the quality of our dairy products.

THE DRAFT HORSE BREEDERS.

President H. W. Avery of Wakefield called the Draft Horse Breeders' Association together after noon with a brief, entertaining talk. The report of the secretary, Professor Kinzer, on the "Kansas Horse Situation," dwelt more at length on some investigations he had conducted regarding the number of stallions of the various breeds in the State and general information as to class of mares bred, number bred during past season, service fee, etc. Rather half hearted support on the part of those called on for this information did not allow of a very complete report, but it showed, as was to be expected, a preponderance of draft

horses, the majority of them being Percherons.

One of the most interesting talks of the meeting thus far was that made by Dr. J. T. Axtell of Newton, Kans., who was introduced to the meeting as a recent recruit to the cause of draft horses in Kansas. Dr. Axtell was asked to address the meeting on the question of "Alfalfa Meal as a Feed," a subject of interest to horsemen, although not confined strictly to the horse when taken as a feed proposition. Dr. Axtell said that when he was feeding alfalfa as hay, he found that the average amount eaten by each horse per day was from 60 to 80 pounds. They are now allowed 15 pounds of alfalfa meal per day and are doing as well as when on the heavy hay feed. Reasoning the matter out, he said: "Alfalfa contains from 11 to 16½ parts protein and 40 parts carbohydrates, while corn ranges about one-half that amount of protein and one-third that amount of carbohydrates.

You will see, then, that it requires considerably more corn to afford the animal the same amount of protein that he would get from a given quantity of alfalfa meal. Now, we have found that an animal (horse or cow) needs about 2½ pounds of protein and 12½ pounds of carbohydrates per day. Alfalfa is wasted feeding as hay, and the meal is too rich as a single feed, so we mix pound for pound of alfalfa meal and ground corn, and in a 25 pound feed, we have the required amount of both protein and carbohydrates. A cow giving a good flow of milk gets an average feed of about 6 or 7½ pounds of alfalfa meal and one-half to three-fourth gallons of ground corn, while our driving horses get a ration mixed with three pounds of alfalfa meal and two pounds of ground corn three times per day, with one feed a day of about five pounds of prairie hay. Our ration for swine is mixed with a bit more of corn in the proportion than in the ration for horse

or cow. I don't believe any of you have stock doing better than mine, and I know you are not feeding as cheaply as I am." No talk has been better received than was this one.

In the business meeting a discussion was held over the question of a uniform classification at county, district and State fairs, and also regarding the offering of more liberal prizes for the mare and colt classes than have been offered heretofore. A committee consisting of Kinzer, Gifford, and Treadway was appointed to handle this matter.

Another matter of interest taken up was that of recommending the passage of a State stallion law, such as is now enforced in a number of States, providing for inspection of a stallion before he is licensed and also for the protection of patrons of the owners of a stallion from misrepresentations as to pedigree, age, etc. Avery, Kinzer, and Brady were made a committee to draft a stallion law, and take up for action at the next session of the legislature.

The old officers were elected to another year's term. H. W. Avery being president, Prof. R. J. Kinzer, secretary, and Prof. G. C. Wheeler, treasurer. A few of the vice-presidents, of which there is one from each Congressional districts, were changed.

KANSAS GOOD ROADS ASSOCIATION.

Although the Kansas Good Roads Association announced a strong and interesting program the attendance upon its session was very light, except in the evening. This light attendance may have been accounted for in part at least by the fact that the Draft Horse Breeders' Association held its meetings at the same hour and that Prof. R. J. Kinzer was giving demonstrations in practical horse judging. We are not willing to believe that Kansas people have lost anything of the interest which they have in good roads and which they have manifested in past years by the large attendance at every meeting of the Good Roads Association.

The address of welcome was given by President E. R. Nichols, in which he made the members and visitors feel thoroughly at home in the farmers' college in his graceful manner, and a response by T. J. Anderson, Secretary of the Topeka Commercial Club, who took the place of President Bradford Miller of the Association who was confined to his bed by sickness. The large crowd present at the evening session listened to a very able address on Good Roads from a Granger's point of view, by Hon. E. W. Westgate of Manhattan. At this time Mr. Westgate is Analyst of the National Grange. He was formerly Master of the State Grange, and has been a leader in thought and action among his associates and the people of the State in the interests of good roads. It is a well known fact that the Grange is the first organized body to take up and push the question of good roads and that its influence has been a powerful one and has resulted in a passage of good roads laws and in the establishment of State Highway Commissions in very many States. Those who listened to Mr. Westgate could not help a feeling of regret that Kansas is so far behind its sister States in the matter of good roads laws and proper official control.

Another very important paper presented at this meeting was that of Judge Sam Kimble, of Manhattan, on good roads laws, their breach and observance. One of the most striking remarks which the judge made in his address was that indicating the chaotic condition of the present road laws in Kansas. It was shown that the legislature of our State began making road laws when we did not need them and had continued making road laws as amendments or substitutes for the earlier ones in an attempt cover conditions which now exist in the State. We hope to present this paper in full to our readers in the near future and only desire to say here that Judge Kimble's very able address made such an impression upon the members of this association that they appointed a special committee to outline a general revision of existing road laws to meet present conditions and suggest this

outline to the next legislature perhaps in the form of a bill for passage.

The office of road inquiry of the United States Department of Agriculture was represented by Mr. George L. Cooley, Road Expert and Superintendent of Construction, who read one of the best papers that has ever been presented to this association. Mr. Cooley's home is at Dover, Ohio, and one of the most interesting things he presented during his visit at Manhattan was a description of the method adopted in his home State for the securing needed road legislation and the establishment of the office of State highway engineer.

Another good paper was presented by Inspector C. A. Mills of the post-office department. Mr. Mills is in a position to know what is needed in the way of road improvement, especially where the rural route carriers travel and he represents a department that has been untiring in its efforts to secure good roads at least over the rural routes. Mr. Mills' paper with the others read at this meeting will be published in full in THE KANSAS FARMER.

THE SWINE BREEDERS.

The hog breeders got busy in earnest when they assembled at the college, and the first part of the program was taken up by business meetings of the various associations. The Poland-China breeders took up only routine matters, and in the election of officers, J. J. Ward of Belleville, Kans., was elected president; C. W. Dingham of Clay Center, vice-president, and L. D. Arnold, Abilene, secretary and treasurer. They also elected a vice-president from each Congressional district.

The Berkshire breeders took no action aside from routine work, except to decide to hold two sales of Berkshires each year at Manhattan, sales to be held on the second Wednesday of March and November. The present officers were continued in office, C. E. Sutton, president, and T. F. Guthrie, secretary and treasurer.

The Duroc-Jersey men made their strongest play in the adoption of a resolution that "it is the sense of this meeting that the members of the national association vote their proxies in the next annual meeting through the representative of the State association," an action that they believed would look better to the interests of Western breeders than the present system. They selected George Kerr president, James L. Cook and W. C. Whitney, vice-president and Carl Thompson, secretary and treasurer.

In joint session, presided over by C. E. Sutton, T. F. Guthrie read a strong and spicy paper on "Public Sales, Shall We Encourage Them?" Mr. Guthrie started out by saying that "the sale system is the life of the live-stock business." He pointed out that it enables the breeder to help clear out his surplus stock each year; that it gives wider publicity to the breed by the advertising and press reports of the sales; that it has been the means of raising average values of nearly every breed by giving the new buyer the confidence one should be able to have in a public sale where values are established by popular vote; that it enlarges the buying territory by interesting new breeders in the business that would probably not be interested in any other way. He cited the history of the Shorthorn bull, Master of the Grove, his obscurity when a young bull and the prominence and standing given him through the public sale ring.

Col. L. R. Brady talked on the "Arranging of Sales, Dates, and Circuits." He impressed on the audience that arrangements for a public sale should begin a year before time for the sale to be held. The date should be claimed and special attention paid to the breeding of sale animals even before the date of farrowing or calving. "The breeder should establish his type, breed toward the perfection of his type, and thus establish his position in the sale world. Select your auctioneer in plenty of time in order to get the choice of dates. Decide how much expense per head you wish to put on the sale stock and apportion your advertising and other expenses accord-

ingly. Advertise in papers that have circulation to bring results. Don't count too much on mail bids."

M. G. Hamm, of Holton, talked on a State fair and pleaded with each man present to take up the question with his representative, to talk State fair in his district and not let the question lag for a minute until it is settled.

J. J. Ward's paper on "Needed Legislation," brought out his views as to legislation on the "State veterinary control of infectious or contagious diseases of live stock." He, too, broached the need of State fair legislation. His argument for the need of action toward the lowering of express rates on live stock shipments brought out a storm of applause and provoked much discussion, in which nearly everyone got in line as advocating a general appeal by private citizens and breeders to the railroad commissioners for action on express rates, it being the interpretation of the laws that these commissioners have control of express rates. George M. Hammond of Manhattan led in the discussion on this paper.

The Kansas State Veterinary Association held its meeting on Thursday and Friday and announced a very excellent program. The papers read at this meeting have been promised for publication in THE KANSAS FARMER and we feel sure that they will be valuable to our readers.

The following were elected officers for the ensuing year: President, Dr. J. Jones, Arkansas City; first vice-president, Dr. H. S. Maxwell, Salina; second vice-president, Dr. C. B. McClelland, Lawrence; secretary-treasurer, Dr. Burton R. Rogers, Manhattan.

Resolutions were adopted approving and cooperating with the work of the international tuberculosis congress which meets at Washington, D. C., next September. A large number and variety of operations were provided for and performed in the clinic.

The State Farmers' Institute taken as a whole was a decided success, though some complaints were heard because of the necessity which compelled two or more associations to hold their meetings at the same time thus preventing visitors from getting the benefit of all. The attendance throughout the week was generally good though the meetings of one or two of the associations were characterized by very light attendance. The number of young men who were present during the week was large and the interest they manifested was great and too much credit can not be given the college professors, especially to Professors A. M. TenEyck of the agronomy department, Prof. J. R. Kinzer and Prof. G. C. Wheeler of the animal husbandry department, Prof. J. C. Kendall and Prof. D. M. Wilson of the dairy husbandry department, for the practical work they did during the week in judging live stock, corn, and dairy products.

Annual Address of T. A. Borman.

PRESIDENT OF KANSAS STATE DAIRY ASSOCIATION, DELIVERED AT MANHATTAN, DECEMBER 31, 1907.

The year 1907 has been one of unprecedented prosperity in Kansas. We have a net increase of 19½ million dollars in the value of the year's farm output as compared with 1906. The year's crops and live-stock products and value of live stock reaches the grand total and unprecedented value of 464 million dollars or 39½ million dollars in excess of the best prior year, which was 1906. In the last ten years the value of the products of our soil has increased 90 per cent. The value of our live stock in 1907 is 109 per cent greater than ten years ago, and the percentage of increase in the value of live-stock products is practically the same. The 1907 value of Kansas farm products and live stock apportioned equally among her inhabitants would place to each woman, man, and child residing in Kansas a credit of \$280. In this prosperity the dairy industry of the State has shared.

The following table shows the annual and aggregate production and value of butter made in Kansas for eleven years ending with 1907, as com-

piled from the official records of the State Board of Agriculture:

BUTTER.		
	Pounds.	Value.
1897.....	37,213,928	\$4,585,271
1898.....	41,450,981	5,230,144
1899.....	43,082,767	5,775,523
1900.....	41,745,759	6,841,692
1901.....	43,771,076	6,880,143
1902.....	44,350,829	7,517,331
1903.....	46,222,022	7,876,237
1904.....	42,862,365	7,021,220
1905.....	42,423,814	7,741,717
1906.....	43,378,171	8,183,665
1907.....	43,940,531	9,705,423

Totals.....470,442,244

77,248,356

The product of 1907, which in pounds is 43,940,531 and with a value of \$9,705,423, is slightly in excess of a half million pounds greater than the product of 1906 and the value is slightly in excess of one and a half million dollars as compared with the value of 1906. The pounds and value in the table above includes both farm-made and creamery-made butter, the creamery butter not being compiled separately from that of country butter. The above table shows a steady gain in the volume and value of butter produced annually from the year 1897 to and including 1903. During these years practically all of the creamery products was from whole milk delivered at skimming-stations and the proportion of creamery butter included in the above amounts was smaller than during succeeding years. The product of 1904 is 3,336,000 pounds less than in 1903. It was in 1904 also that creameries located in other States began drawing heavily on Kansas supplies. In 1902, 1903, and 1904 large quantities of hand separators had been sold, and the whole milk skimming-stations had gone dry, and this opened the way to cream shipments outside of the State, the butter from which is not included in the above figures. The figures in the table from 1897 to and including 1903 cover as near as is obtainable all of Kansas' butter including creamery and that made on the farm. The figures beginning with 1904 do not include butter made from shipments of cream to a half dozen creameries located in Denver, one at Lincoln, and two at Omaha, Neb., two at St. Joseph, and one at Kansas City, Mo. It is a fact that each year beginning with 1904 these creameries have extended their organization and scope in Kansas and each successive year have increased their business, but since 1904, with the exception of the year 1905 when that year's product is 440,000 pounds less than the preceding year, each successive year has shown an increase in the volume of butter actually made in Kansas.

But in spite of this period of decreased receipts the value of the butter produced has each year increased except in 1904, when there was a falling off of about \$800,000 in value as compared with the preceding year. This is proof that each succeeding year a larger proportion of the State's products has been made into a higher-priced quality of butter through the creameries. Any man who is at all familiar with the extent of the creamery business in the State knows that more Kansas cream is being made into creamery butter now than ever before and that this increase has been gradual and successive.

It is unfortunate that we do not have complete figures on creamery butter alone covering the above period. The Kansas Board of Agriculture, however, has these figures which are at this time the only available figures on creamery butter alone:

CREAMERY BUTTER.		
	Pounds.	Value.
1905.....	15,998,452	\$3,497,659.44
1906.....	17,759,406	4,084,663.35
1907.....	18,346,354	4,586,588.50

Prior to a few days ago only one of the creameries making butter from Kansas cream in another State had reported the pounds of butter made from such cream which amount was two million pounds and it is safe to conclude that other creameries not yet reporting would increase the 1907 creamery product five million, or a total of at least twenty-three million pounds of creamery butter made from Kansas cream in 1907.

It must be realized that there is a certain demand for country-made butter which must be supplied. It must be realized further that there are many farmers who have small herds

who are not interested in dairying yet who during certain times of the year make butter which, to be sure, increases the dairy product of the State but which cream is not available for use at the creameries. To make the same comparison in the increase and volume of dairy products, as has above been made in comparison of farm crops, live-stock products, and live-stock values, we have an increase in volume slightly in excess of six and one-half million pounds in eleven years and an increase in value slightly in excess of five million or an 18 per cent of increase in volume in 1907 as compared with 1897, and 111 per cent increase in value in 1907 as compared with 1897. And these figures appear in spite of the fact that since 1903 large quantities of Kansas cream has been shipped outside of the State and made into butter.

The above figures show a very gratifying increase in the volume and value of the State's dairy product in spite of the fact that the general prosperity of the State in all other lines was never so great as now. The detail of these figures and this somewhat lengthy statement has been made with a view to correcting some erroneous figures which have during the past four or five months gotten into print, the object of which figures is to prove that Kansas dairying has already gone to the dogs and that a new system of transacting business in this State is necessary to revive and promote the dairy industry.

DAIRY LEGISLATION.

The most active work done by the State Dairy Association this year, or ever for that matter in its history, was the work of securing legislation along dairy lines before the Kansas Legislature a year ago. The Dairy Association framed a dairy law which as drawn was asserted by those who had seen the law and who are familiar with the laws of the several States regulating dairy business as one of the best which had ever been written. The bill as presented did not become a law. Much of the effectiveness of the bill was destroyed by the legislative committee, whose business it was to get the bill in shape for passage. The law as it stands to-day, however, is a very good law and offers the opportunity for great improvement in dairy conditions. The law with money and help enough to make it effective will lend an impetus to the business which heretofore it has not had. This law provides the first step in rounding into shape systematic results. The original bill carried with it an appropriation of \$7,500 each year for two years. This appropriation, however, was cut in two, making the State Dairy Commissioner's job a one-man job and even then barely giving him sufficient funds to pay his salary and to maintain his office and cover his traveling expenses. The Dairy Association has made two or three prior attempts to get dairy legislation but was unable to do so until this year. This required a large amount of work and necessarily a considerable expense, all of which has been borne by the association and its active members and the cost has all been defrayed. In this connection I wish to say that the association owes its everlasting gratitude to I. D. Graham, our secretary, who devoted many hours of hard work from his urgent business in behalf of the association's efforts.

TRANSPORTATION RATES.

The association has also had this year to deal with the railroads and express companies on account of the determination of these roads and express companies to advance the rates for transporting milk and cream in cans. The railroads and express companies filed with the Kansas Board of Commissioners and asked for permission to put into effect a schedule of rates approximately 60 per cent in advance of the present existing rates. The same move on the part of the railroads and express companies was made in Nebraska, Kansas, Missouri, Oklahoma, and Iowa. B. W. Redfern, general dairy agent of the Rock Island and Frisco lines, was the man upon whom was dependent the advancing of these rates. Mr. Redfern made the

statement to the Kansas Board of Railroad Commissioners that the railroad companies and express companies desired to make a rate for the transportation of cream which would be prohibitive and which would absolutely eliminate from traffic the shipment of cream. The same prohibitive rates were asked for on all interstate business. The matter before the Kansas Board of Commissioners did not come to a hearing for the reason that Judge Kohlsatt, of the United States Circuit Court, issued a restraining order preventing the effectiveness of these rates. By agreement the temporary restraining order was permitted to stand and the matter was checked up to interstate commerce commission, in whose hands the matter now rests.

It is not plain as to why the railroad and express companies should attempt this move. The present schedule of rates has been in effect fifteen years and these shipping rates have seen the dairy industry in this State grow from very small proportions indeed to proportions above reported. When the shipment of cream was first inaugurated very little cream was shipped and the volume has increased until the railroad companies and the express companies have found it necessary to haul in their trains cream cars for the exclusive accommodation of cream shipments, and it is fair to presume that these rates have been remunerative, even on a much smaller proportion of business than that now being handled. The railroad companies lost their fight in the effort to raise rates before the Nebraska Board of Railroad Commissioners, although the result was a readjustment of the rates. The Nebraska case is the only one which has been heard and the evidence in that case was overwhelmingly against the railroads in that they could show absolutely no reason why rates should be increased. Their whole argument was that if the rates were increased cream could not be shipped and immediately small creameries all over the country would spring up in sufficient number to handle the present and increasing volume of business. It was ascertained, however, that the express companies and railroad companies had no intention of building these creameries or in engaging in the creamery business. The increase in rates would have increased the transportation one-half cent per pound butter for Kansas, which means a tax on the dairy industry of the State of \$100,000 per year on a make of twenty million pounds of butter. The patrons' battle has been fought by this association in connection with the creameries of the State and there is little reason for believing that the present shipping rates will be changed. It was significant in this Nebraska hearing that the State officials from States in which the creamery business is conducted along individual or cooperative lines aided the railroads in this attempt to raise rates and it was proven in the sworn testimony that the expenses of some of the State officials and representatives of the Federal Government were paid by the railroads.

PROMOTING CREAMERIES.

This rate proposition and the support given it by various officials of State and of Federal Government, together with the publicity given these matters has revived, not only in this State but in other States, the old-time creamery promoter who has a \$2,500 creamery to sell for \$4,800. He is working right now in Kansas and has been for some time past and in presenting to the people his proposition makes the statement that cream rates will ultimately be so high that cream can not be shipped and the only market which then can be obtained for cream will be through one of his plants. He cites also the attitude of State dairy inspectors, State dairy commissioners and others in support of his claim that the farmer must become his own creameryman. A Kansas subscriber wrote Wallace's Farmer asking the opinion of that paper of

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the promoter's proposition. We quote from Wallace's Farmer as follows: "To our Kansas subscribers and others we say: don't listen for a single moment to a creamery 'promoter' who comes to you from a distance. We can not now recall a single instance in Iowa, Minnesota, Illinois, Kansas, Nebraska, or Wisconsin in which a promoted creamery ever paid its stockholders. We do not know of a single instance in which dairying has not been set back from five to ten years by these promoted creameries. The railroad people call them 'sick sisters.' The creameries that have prospered are those that were organized by men who understand cows and dairy farming; who know how to throw out of the herd any animal that does not give a paying quantity of milk and who knows how to feed his cows for milk. When a sufficient number of this kind of men can be found in any community it will pay to organize a creamery with a minimum of five thousand pounds of milk per day which must be increased to ten thousand pounds." This is the opinion of Henry Wallace, whose authority on a matter of this character can not be questioned.

CREAMERY SYSTEMS COMPARED.

An Associated Press dispatch appeared in the daily papers of the last few days as follows:

"Washington, Dec. 27.—(Special. The Agricultural Department has taken up the cudgel in behalf of the dairy farmers of Kansas and Nebraska. It wants to reform the creamery business of those States as carried on by the trust. It claims the farmers are not paid enough for their cream, and it has voluntarily interested itself in a crusade against the creamery trust which practically controls the creamery business of Kansas and Nebraska. The plan of campaign does not include the filing of suits to wipe out the creamery trust but embraces the scheme to force the trust to pay higher prices for cream, and to encourage the development of the cooperative creamery industries.

"An expert creameryman, skilled in the organization and management of cooperative creameries, has been appointed by Secretary Wilson to assist the farmers of Kansas and Nebraska to establish independent creameries and thus obtain a higher price for their cream.

"The alleged creamery trust has heard of the proposed plan and has filed a protest with the department. In the protest it is claimed that 95 per cent of the cooperative creameries of Kansas and Nebraska have been failures and that the dairy business of those two States has only been developed under the centralizing system. It is further claimed that at the present time the cooperative plants can not secure enough product necessary for successful operation."

It would appear from this that the Agricultural Department of the United States has assumed the duty of changing the present creamery practise in this State to conform with that of States like Minnesota and Wisconsin and this would warrant, it appears, a brief comparison of conditions in Minnesota and Kansas both in so far as the inclination and disposition of the farmer is concerned and in the conditions which have made necessary or possible the particular method of conducting the creamery business in the respective States.

We believe that it is admitted that

the centralized creamery is the creation of the past nine or ten years. It is known that the cooperative creamery is a much older institution than this. In going over some of the reports of both the Minnesota and Wisconsin Dairymen's Association covering a period dating back as far as five years ago, I find the statement that the cooperative creamery was originally conceived through the fact that a creamery was needed and in order to get it the farmers had to build it. One speaker before a meeting of the Minnesota Association several years ago said it was necessary for the farmers to build their own creameries because there was no individual who would invest his money in a creamery and wait for the development of the business. We see, therefore, that the cooperative creameries were born of necessity. That many of them have been successful and are institutions of merit and highly productive to the farmer can't be questioned, and what is more there is no disposition or inclination to detract from their measure of success.

EARLY DAYS IN KANSAS.

The centralized creamery is also the outgrowth of an existing condition. Kansas in years past has had several hundred creameries owned and operated by farmers. They were promoted by the "promoters" of which Henry Wallace speaks. These creameries were built at a time when Kansas was hard up. They were built at a time prior to the ten years of unprecedented prosperity in Kansas. These creameries were unable, principally through bad management and the scarcity of raw material, to make a commercial success. In fact they were unable to succeed even to the point of surviving and at the same time paying a price for butter-fat which would encourage the production of butter-fat in their respective localities. The large majority of them were bought usually for the amount of the mortgage and converted into skimming-stations by individuals who had thought out the plan of separating milk and shipping the cream from such milk to a central point where the maximum quantity of butter could be churned at a minimum of expense. This was the conception of the centralizing idea. It is unnecessary to say that even this system of handling the business was so expensive to the creameryman and so expensive to the patron that there was little or no development in the production of dairy products. At this point the hand separator came into use, the more important dairy farmers recognizing the economy in operating a farm separator, economy at least as far as the farm end of the business is concerned. By the larger farmers separating milk and delivering the cream, the amount of milk received at the skimming-station was reduced to such an extent that it was impossible to continue the station and pay the farmer a price for his butter-fat which would justify him in continuing to haul the milk to the station.

The sale of farm separators was then encouraged by those who had their money invested in creameries and skimming-stations. In fact the hand separator was recognized as being the only means which would enable the dairy and creamery business in Kansas to thrive. The sale of separators was pushed and a large number sold by creameries and various companies, and soon the business be-

(Continued on page 49.)

Field Notes

LIVE STOCK REPRESENTATIVES.

J. W. Johnson.....Kansas and Nebraska
L. K. Lewis.....Kansas and Oklahoma
Geo. E. Cole.....Missouri and Iowa

Chas. J. Cook, Marysville, Kans., is the Barred Rock specialist that is rapidly forging to the front with his great strain of Barred Rocks. This winter he will show in the leading shows of the country and is really looking for hot competition. He has the finest lot of cockerels on hand at present that we have ever seen and they are for sale at prices that is sure to move them and in fact is moving them now. He can sell you a show bird or just a good big boned handsome cockerel. The writer has known Mr. Cook for a number of years and can recommend him to those who desire to secure something good at fair prices and want just what they buy. You can't miss it by dealing with Charley Cook of Marysville, Kans., if you are interested in Barred Rocks.

We all raise corn for profit, therefore the corn that yields the most bushels per acre is the corn for the progressive farmer to raise. The kind of corn that produces the most per acre is the kind the farmer wants. See Bulletin No. 147, p. 233, and you will see the Hiawatha Yellow Dent originated and perfected by J. D. Ziller, is one of the heaviest yielders of the 112 varieties tested at the Manhattan station. This is evidence of what is the best paying corn to raise in Kansas and the western corn States. Send and get the bulletin and then send and get seed from J. D. Ziller, Hiawatha, Kans. Mr. Ziller has been breeding corn for twenty-one years. He sends out a catalogue free for the asking, telling all about how to select your own seed corn. See his advertisement on another page. Mr. Ziller also gives some valuable premiums to encourage farmers to raise better corn. Write to him and mention THE KANSAS FARMER.

S. G. Trent, of Hiawatha, Kans., whose advertisement appears in this issue of THE KANSAS FARMER has been breeding prize corn for several years and the kind of corn he raises is evidenced by the number of prizes he wins with his corn and those won by parties purchasing seed from him. Mr. Trent furnished the Brown County boys their seed that won first in ten ears; second in ten ears and eighth and ninth in ten ears, and first in best single ear at the Manhattan Corn Show. These were the five boys who won at the Brown County corn contest. In the corn breeders' contest at Manhattan, Mr. Trent won first on Yellow Dent and first and sweepstakes on Yellow, and 4th on Boone County White. Last year Mr. Trent won first on Boone County White. The cash prizes won by Brown County amounted to \$230, all from seed raised by Mr. Trent. Mr. Trent desiring the best seed possible bought back the prize sample of Yellow Dent that won first prize at Manhattan.

J. H. Mellenbruch, Morrill, Kans., and the breeder of Duroc-Jersey sows will sell a draft of bred sows from his herd from Morrill at Hiawatha, Kans., on January 24 is putting up an offering that is first class in every particular. He is selling in the circuit with Cook, Kerr, and Davis and completes the circuit. His offering only numbers thirty-five head but make up in quality what they lack in number. The spring gilts are mostly sired by a good grandson of Pilot Wonder. Some of the spring gilts are by Hunt's Model and the tried sow part of the offering represent such families as Crimmon, Wonder, Tip Top Notcher, and Monarch. Most of the entire offering is safe in service to two good yearling boars, one by Monarch and the other by Golden Rule. The sale is being held in Hiawatha for the convenience of the breeders who desire to attend. Those who come direct from the J. B. Davis' sale of the day before at Fairview will be taken from that point to Hiawatha without charge. Free entertainment for breeders from a distance will be furnished at the Hiawatha Hotel. Catalogues are now ready and can be had for the asking. Bids can be sent to J. W. Johnson of THE KANSAS FARMER who will be in attendance.

In this issue of THE KANSAS FARMER will be found the advertisement of Thomas & Swank, Waterville, Kans., breeders of the big, smooth kind of Poland-Chinas that are becoming more popular. The sale will be held at the farm six miles south of Waterville and forty-five bred sows will be sold. Twenty are spring gilts that will go into the sale weighing easily 300 pounds each. They were sired by Expansive, he by Old Expansion. They will be bred to Old Hutch, one of the best-known sires of big, useful Poland-Chinas now owned in the State. Big Hutch, the great herd boar owned by Thompson Bros., and whose likeness appears on the first page of THE KANSAS FARMER this week, was sired by Old Hutch and there are several others that could be mentioned that do credit to the grand old hog. The sows that were not sired by Expansive will be bred to him. So this is truly an Expansive and Old Hutch offering of bred sows that should not be overlooked by the breeder who has decided to put a little more size into his herd. Plenty of quality will be found in this offering and you will be agreeably surprised when you note the quality combined with the extra good size which the offering contains. Remember the date, January 22, and arrange to be there. Send bids to J. W. Johnson of THE KANSAS FARMER in care of Thomas & Swank. Ask them for a catalogue today. A postal card will do the work.

In order to seek a climate more healthful if possible Mr. and Mrs. Nor-

ton have decided to dispose of their interests here. This means a dispersion sale of the famous Orchard Hill herd of Duroc-Jersey sows and the probable sale of the farm itself. The date chosen for the dispersion sale is February 13.—Clay Center Dispatch.

The Orchard Hill herd of Durocs is one of the oldest and best-known herds in the State. It has been kept abreast of the times in the way of up-to-date breeding by the old veteran in the business, Mr. R. F. Norton, known to about every Duroc breeder in the West. The dispersion of this great herd will occur on February 13 at the farm which adjoins town and will be held under cover. Mr. Norton will be glad to mail you his private catalogue at once if you will write him for it, and in this way you can become familiar with the offering. You are going to have the opportunity to buy on the above date at your price what Mr. Norton has spent years of hard work and lots of money to build up—the foundation of one of the most famous herds of Durocs in the country, which consists of tried sows that, were he continuing in the business, would never be offered for sale and two noted herd boars besides several dandy young fellows that are extra good and ready for service. Also a lot of fancy things in the way of bred spring gilts. Everything goes and will number around eighty head. See that you are on the mailing list for a catalogue. Watch THE KANSAS FARMER for display advertisement.

In this issue will be found the advertisement of Mullen & Shepherd's great combination sale at Abilene, Kans., January 20, at which time and place they will sell forty very select Duroc-Jersey bred sows. The offering is composed of a draft from each herd that would be a credit to any herd and they are selling together in order to accommodate the breeders and farmers who will want to attend. The sale will be held in the sale pavilion at the fair grounds in Abilene which will be made comfortable with steam heat. Mr. J. D. Shepherd and Mr. W. R. Mullen are both well-to-do residents of the vicinity of Abilene who are breeding purebred Duroc-Jerseys and this is their first bred-sow sale. They are making an extra effort to attract attention and believe that the surest and best way is to put up an offering that will compel the breeders and farmers to set up and take notice. In the Shepherd division of the offering will be found seven fall yearlings and spring gilts, three tried sows and three boars of June farrow. In the Mullen division will be found five tried sows and twenty-three spring gilts. In another place in this issue will be found a nice display advertisement in which a very complete description of what goes in the sale and the way it is bred will be found. Col. W. C. Curphey will conduct the sale and a card addressed to him or either Mr. Shepherd or Mr. Mullen will bring a catalogue by return mail. J. W. Johnson of THE KANSAS FARMER will be present and will handle bids for those who can not attend. Both Mr. Shepherd and Mr. Mullen will be in the market for bred sows and expect to attend some of the sales during February. Breeders from a distance should register at the Oriental Hotel in Abilene.

Jas. L. Cook's "first quality" sale of Duroc-Jersey bred sows at the farm four miles southwest of Marysville, Kans., on Tuesday, January 21, is the first in the Northeastern Kansas sale circuit in which Geo. Kerr, Sabetha; J. B. Davis, Fairview; and J. H. Mellenbruch, of Morrill, sell during that week and in the order named. Thirty-five head go in Mr. Cook's sale and while it is not going to be as big in point of numbers as some it is going to be a choice offering all the way through. This is his first sale and he is not going to allow an inferior animal to go through the sale ring on the above date. They have a fattening pen that is just yearling for the kind that are not choice and that is where they have gone and the thirty-five that have been selected for this sale would be credit to any breeder in the land. They are well grown and are splendid individuals. There might be two reasons given for calling it a "first quality" sale. To start with, it is a first quality offering because of the merit it contains but the probable reason it was so named was because of the great breeding boar, First Quality 50599, that stands at the head of the herd. First Quality was sired by W. L. A's Choice Goods, the great sire at the head of W. A. Addy's herd at Parnell, Mo. A goodly number of the sows in the sale were either sired by First Quality or are bred to him. Three are by Nebraska Wonder and bred to First Quality and six sired by Nebraska Wonder are bred to Model Topnotcher, six sired by Cook's Improver are bred to Crimmon Chief, and so on. The entire lot are choice sows and are bred with one or the other of these splendid sires and with a full knowledge of the best crosses to make. Mr. Cook is well and favorably known among breeders of Durocs as a young man of the best of judgment and strictest integrity. His herd of Durocs at Marysville, Kans., must be seen to be fully appreciated. The care they get has much to do with the high quality to be found there. The feeding and breeding is looked after personally by Mr. Cook and is done in an intelligent and up-to-date manner. Col. Jud McCowen and Col. L. R. Brady will conduct the sale for Mr. Cook. Bids may be sent to J. W. Johnson of THE KANSAS FARMER in Mr. Cook's care at Marysville, Kans.

The firm of Samuelson Bros., at Cleburne and Bala, as breeders of up-to-date Duroc-Jersey hogs is well known to all breeders of this popular hog in Kansas. The date of their coming bred-sow sale, which is advertised in this issue of THE KANSAS FARMER, is January 23 and is the day following E. H. Erickson's sale at his farm, which is about six miles from Cleburne and about the same distance from the Samuelson farm where their sale will be held. Free transportation will be furnished breeders from the Erickson sale to the Samuelson sale and arrangements have been made to sell under cover at both places. Samuelson Bros.

are making this sale at Cleburne and will sell forty-five head consisting of thirty spring gilts, nine tried sows, and six fall yearlings. By consulting their advertisement on another page you will see that the breeding afforded in this sale is of the very best and most popular. The firm have purchased from the best herds in the country for the last three winters and have bought the good ones to. They are holding their sale early and undoubtedly will be in the market again this winter for bred sows. If you are in the market for bred sows you will not miss it by securing their catalogue and arranging to attend their sale. Everything sold will be just as represented and bred and fed to the best interests of those who buy at their sale. Their sale is the day following the Jas. L. Cook sale at Marysville, Kans. They have employed Lafe Burger, Jas. T. McCulloch and Chas. Currie to do the selling and are placing in this sale an offering that will surely please the most exacting. Bids may be sent to either auctioneer or fieldmen. Such bids should be sent in the care of Samuelson Bros. at Cleburne, Kans. E. H. Erickson, whose postoffice is Olsburg but whose farm is near Cleburne, sells on the 22d and the Samuelson Bros. on the day following.

According to present arrangements, there will be "something doing" in Hereford circles in the Kansas City territory this spring. A Hereford breeders' association for mutual acquaintance and "institute" work is to be organized and a number of public sales will be held at Kansas City. Perhaps the most important of these sales will be the three-day auction under the management of C. A. Stannard, of Emporia, Kans., which will be held February 25, 26, and 27. About 200 head of selected cattle will be sold on this occasion, chosen from twenty of the most prominent herds in the neighboring territory. Guggell & Simpson, of Independence, Mo., have agreed to sell at least 25 head in this sale. They will put in their best young animals and they promise that their chief herd bull will be liberally represented. This bull is Beau President, who is regarded by his owners and practically every one who has visited this great herd recently, as the most influential sire ever used by them, not excepting his famous sire, Beau Brummel. Frank Rockefeller, of Belvidere, Kans., will consign fully 60 head and these will be up to the standard established by his previous consignments to the best combination sales. Ten head—both bulls and females—will be supplied by Steele Bros. of Richland, Kans., whose Princess families have been so prominent in the best show rings for the past three years. Jones Bros. of Comiskey, Kans., consign 12 head and Cargill & Price, 12 head. The character of these herds is too well known to need any comment. Among the other consignors who contribute from four to ten head each are R. T. Thornton, B. H. Downing, J. V. Brook, J. W. Lenox, Makin Bros., L. Pinet, T. P. Whittenburg, J. O. Bryant, J. J. Early, Walter B. Waddell, Fred Perkins, R. C. Wilson and R. T. Pence. Every effort will be made to make this offering the best collection of Herefords of like number ever offered the buying public in one sale. It will undoubtedly afford the greatest opportunity of the season for the selection of up-to-date Hereford breeding stock and we would urge our readers to bear the sale in mind. In later issues we hope to give full details of the offering.

One of the very best Duroc-Jersey bred-sow offerings to be made this winter is the one that J. B. Davis, of Fairview, Kans., is making on January 23. The sale will be held at the farm which adjoins town and under cover. It is the day following Mr. Geo. Kerr's splendid offering at his farm, which is about five miles from Sabetha and only about the same distance from Mr. Davis' farm at Fairview. Mr. Davis is one of the old landmarks in the Duroc-Jersey breeding business in the West and his herd at Fairview has always been among the top herds of the whole country. His herd has been kept abreast of the times and is at present as up to date as any in the country. The animals to be found there are not only well bred but have the individual merit as well. Of the forty sows that go in the sale of January 23, thirteen are big, smooth fall yearlings and are mostly by Crimmon Challenger, the great boar doing service in the herd and a grand son of Duroc Challenger on his sire's side and of old Crimmon Wonder on the side of the dam. A few of them are by a grand son of Ohio Chief. Twenty nice, smooth spring gilts or early farrow and mostly by Crimmon Challenger that will be sure to please you and nine tried sows in the prime of their usefulness complete the offering. Most everything will be bred to Fairview Chief, a splendid good son of the great Kant Be Beat. About seven are bred to Monarch, the Orion and Protection bred boar that has done so much for Mr. Davis' herd. Among the tried sows will be found a granddaughter of Old Protection. Many others trace to the great Shamrock that won first and championship at the American Royal in 1904. Also one or two by Crimmon Challenger. For one of Mr. Davis' catalogues, which are now ready to mail, address him at Fairview, Kans., and receive it by return mail. Bids intended for Mr. Davis' sale should be sent to J. W. Johnson in his care at Fairview. The day following Mr. Davis' sale Mr. J. H. Mellenbruch will sell bred sows at Hiawatha and free conveyance will be furnished from Fairview to Hiawatha that evening, which is a distance of only about eight miles. Geo. Kerr sells at Sabetha the day before.

On January 22, the day following Jas. L. Cook's Duroc-Jersey bred-sow sale at Marysville, Kans., Geo. Kerr will sell thirty-five head of bred Duroc-Jersey sows at his farm which is about five miles south of Sabetha, Kans. The sale will be held in the new sale pavilion which Mr. Kerr erected on his farm this season for the convenience of holding his public sales. The high quality of the Kerr herd has been heralded among Duroc breeders

HORSE OWNERS! USE

CAUSTIC BALSAM.



A safe, speedy and positive cure. The safest, best BLISTER ever used. Removes all bunches from horses. Impossible to produce scar or blemish. Send for circular. Special advice free.

THE LAWRENCE-WILLIAMS CO., Cleveland, Ohio.

\$90 A Month for Men to advertise and distribute our sample Mail Order Mds. Catalogue. Unity Supply Co. Chicago

FRUIT TREES CHEAP AS \$5 per 100 Freight Paid. Catalog Free RELIANCE NURSERY, Box 866, Geneva, New York

SEED CORN Reid's Yellow Dent, Boone County White, strictly select, pure-bred seed. Bred for purity and high yield. Send at once for circular giving methods of breeding, etc.

S. G. TRENT, Hiawatha, Kans. Member of Kansas Corn Breeders' Association.

AGENTS \$103.50 per month selling these wonderful seeds. V. C. Glebner, Columbus, O., sold 22 pairs in 3 hrs. made \$13; you can do it; we show how. Free Outfit. Thomas Mfg Co. Dayton, O Dept. K, 400 F. Street.

SEEDS

All the best novelties and standard sorts of Garden and Farm seeds. Send for handsome, illustrated catalogue of Seeds, Plants, Poultry Supplies, Nursery Stock, etc., and special Bargain List of Vegetable and Flower seeds at 2 cents per packet and upwards. Mailed to you, if you mention this paper.

IOWA SEED CO., Des Moines, Iowa.



The Great World's Fair Prize-Winning Corn

Send to the old reliable seed-corn breeder for your seed corn and other field seeds. John D. Ziller, Hiawatha, Kans. Also breeder of Poland-China hogs and Barred Plymouth Rocks. Send for catalog.

12 GRAPE-VINES 50c.

A GRAPE ARBOR

For 50c. cash with order (stamps will do) we will ship you, all charges paid, one dozen first-class grapevines as samples: 3 Concord, 2 Vines, 2 Catawba, 3 Niagara, 2 Moore's Early 1 Delaware.

If we get your order on or before Feb. 1, we will add free as a premium 1 Baby Rambler Rose (or your choice of roses).

IOWA NURSERY CO., DES MOINES, IOWA.

Reid's Yellow Dent

(MARTIN'S TYPE)

Winner of 1st prize at Product, County, State Fair and State Corn Show; also gold medal winner at St. Louis and Portland, and winner of 1st prize at the National Corn Show at Chicago, 1907, in class E, Nebraska, and 2d prize and sweepstakes at the Kansas Corn Show, 1908. Write for prices.

Ed Flaharty, R. 2, Seneca, Kans

\$200 PER MONTH

IN THE REAL ESTATE BUSINESS

I handle real estate on the co-operative plan and need you no matter where you are located. \$10. capital will start you. Experience unnecessary, as I prepare you by mail and appoint you my special representative. Write for my offer and free book

C. H. GRAY, Pres., 462 Century Bldg., Kansas City, Mo.



Worms All Over the Ground.

Drexel, Mo., Route 2, Jan. 24, 1907.

F. J. TAYLOR CO.

Bag of Tonic received and I put it in box as directed. My hogs eat it fine and I think it has done them good from the worms I see scattered over the feed-lot. I believe it is all right, especially for hogs. Will let you hear from me when it is all gone. I remain yours for a fair trial.

W. G. BINKLEY.



Taylor's Stock Tonic does more than drive out the worms. It puts your hogs, cattle and horses in the pink of condition, makes them grow faster and stronger, prevents cholera, black-leg and all diseases arising from imperfect digestion.

We want you to know all about our Stock Tonic so we will send you 50 lbs. on trial if you will send us this advertisement.

In 30 days you will send us \$2.00 for the tonic, or return the empty bag if it is not satisfactory, and there is no charge.

We are sending out thousands of bags on this basis and practically every one is paid for. It shows the merit of the goods and the honesty of the farmers. Cut out this ad today and send it to us.

F. J. TAYLOR CO.,

301 Live Stock Exchange, Kansas City, Mo.

for the past several years and those who keep posted on what is going on among the Duroc breeders know of the standing of this herd. These thirty-five bred sows that go in the sale January 22 are strictly first class in every particular and are probably the best ever offered at auction by Mr. Kerr. Eighteen spring gilts, eleven fall yearlings, and six tried sows is the schedule as it will be found in the catalogue which is now ready to mail. The fall gilts were sired by Leader, he by Tom Watson, and a few of them by Crimson Wonder 2d, he by old Crimson Wonder. Three of the fall yearlings sired by Leader are out of Nice I Be, are sisters to the barrows that Mr. Kerr won first on in the fat hog class at the American Royal last season. He also showed second in the same class. Fifteen sows are bred to Lincoln Chief, he by Ohio Chief, and twelve are bred to Golder, by Golden Rule and out of Cedarvale Queen 8th and the grand champion sow at the New York State Fair this last season. The balance are safe by Lincoln Chief and safe to Golder. Five of them were sired by Fairview Chief, he by Kant Be Beat. Two are by 2d Gold Finch and are safe in service to the barrows that Mr. Kerr's catalogue tells it all and you should have it by all means. This sale is in the Northeastern Kansas Duroc sale circuit and the day following Mr. Kerr's sale Mr. J. B. Davis, of Fairview, sells Duroc bred sows at his farm which adjoins town. Breeders will be taken to Mr. Davis's free of charge from Mr. Kerr's sale. The day following Mr. Davis's sale J. H. Mellenbruch will sell at Hiawatha, Kans., and breeders will be taken from Mr. Davis's sale free of charge. Arrange to attend this circuit. J. W. Johnson of THE KANSAS FARMER will attend all these sales and bids may be sent to him for either sale in care of the breeder for whose sale it is intended.

Mr. Erickson's Duroc Sale.

A Duroc-Jersey bred-sow offering of more than ordinary merit is the offering of forty head which Mr. E. H. Erickson at his farm four miles northwest of Olsburg, Kans., is putting up at auction at his farm four miles northwest of Olsburg and about six miles southeast of Cleburne, Kans., January 22. Samuelson Bros., of Bala and Cleburne, who own and operate a farm at both places, will sell a draft of bred sows mentioned elsewhere in THE KANSAS FARMER the day following and both sales can be attended for the same expense as arrangements will be made for transferring the breeders in attendance from Mr. Erickson's sale to the Samuelson farm, which is nearby.

Mr. Erickson has been a good buyer in the past and his herd contains some of as up-to-date breeding as will be found in the State. What the writer considers one of the greatest herd boars in the country round about there is Orion Jr. 31479, sired by Old Orion 5293. He will weigh in just good breeding condition 750 pounds. He is on the best of feet and has plenty of bone and is a wonderful brood sow producer. There are 14 sows and gilts in this sale sired by this great producer and 8 are bred to him.

E's Kant Be Beat sired by Red Raven and a granddaughter (on the dam's side) of old Kant Be Beat is another nice smooth fellow and a good producer. Twelve sows in the sale are bred to him and 6 were sired by him, 4 are by Ohio Chief 2d, 1 by Hunts Model, 1 by Improver 2d, and 4 by Crimson Chief, he by Crimson Wonder, and others by noted sires, and out of sows of Choice breeding.

Mr. Erickson is repairing to take good care of his guests on the above date and has made an especial effort to put nothing in this sale but what was strictly choice and that would go out and prove a lasting advertisement for his popular herd at Olsburg, Kans. Those who know Mr. Erickson know him as a quiet, unassuming young man who has made a decided success of the Duroc business and a success as well of farming and his farm is one of the best kept up farms in that part of the county. He stands back of all his dealings and is ready a all times to do the right thing. He is a buyer every winter of a few choice bred sows which is added to his herd and this will prove no exception to rule he has followed in the past. Look up his advertisement which appears in this issue and drop him a postal card for a catalogue. Those who can not attend can send bids to fieldmen or auctioneers.

Vick's Duroc-Jerseys.

In this issue will be found the advertisement of W. L. Vick, Junction City, Kans., a breeder of Duroc-Jerseys, probably as well known as any breeder in the West. All of the big circuits of Duroc-Jersey bred-sow sales for the past two or three years have been followed by Mr. Vick and he has been a good buyer at most all of the sales in all of the circuits attended. He has never held a public sale but has been very successful selling at private sale. His ambition has been to hold a public sale, when he did hold one that would be talked about all over the country, and it is his idea to make this sale that very kind of a sale.

His splendid farm of several hundred acres south of town is probably the best adapted to the hog business of any in the country and has an abundance of the best of running water, alfalfa and is equipped with a very modern hog house. This offering is the pick from 240 head and is surely going to be a select lot of bred sows. The offering numbers 40 head and represents nearly every popular family of Durocs. Two-thirds of the offering will be tried sows and the balance fall yearlings. The great herd boars to which they will be bred are the best of individuals and their breeding of the best or they would have no place in this up-to-date herd at Junction City. They are named: Vick's Improver, by Improver 2d, Diamond Dick, a grandson to old Kant Be Beat, Highland Chief, a grandson of Ohio Chief and Old Orion. The sows

that go in the sale are many of them granddaughters of Improver 2d, Orion, Shakespeare, Auction Boy 3d, Chief Orion and others of note. Mr. Vick is one of the best fellows in the world and has attended more sales of the other fellows than anybody and tells us that that is the reason he is holding his sale early, is because he wants to attend the boys sales as he is in the market for something good as usual.

He has lived in Geary County for thirty years and is one of the county's well-to-do farmers. He has a host of friends among the Duroc-Jersey breeders of the West and most of them are going to be at Junction City the 25th, which is the date of his sale. Nothing is going to be to good for them either. Drop him a card for a catalogue right now and make up your mind to attend his sale and you will be pleased that you did. J. W. Johnson, representing THE KANSAS FARMER will be in attendance and will handle bids for those who can not attend and care to intrust them to his care in care of Mr. Vick at Junction City, Kans.

W. H. Cottingham & Sons Sell Horses and Shorthorn Cattle February 4-5.

On Tuesday and Wednesday, February 4 and 5, W. H. Cottingham & Sons will hold their annual sale at their big farm one mile south of McPherson, Kans. On Tuesday, February 4, they will sell 50 head of young horses. This will be one of the best of their many good offerings and will consist of draft horses, brood mares, and single and double drivers. Among these are a number of matched teams, most of them well broken, they will be well fitted and in good condition for work on the farm or road.

Wednesday, the second day of the sale, they will sell a select draft of 45 head from their good herd of Shorthorns, which will consist of some of their best young cattle. Their offering will be made up of 25 cows and heifers, a number of the cows will have calves at foot by Scottish Secrete, a good son of the great breeding bull, Imp. Collynie; and all of breeding age will be in calf to him. There will be 6 bulls, 1 and 2 years old. Two of these are by Scottish Secrete, and 3 by Roan Boy; also 8 bull calves from 7 to 10 months old. These are all by the straight Scotch bull, Scottish Secrete, and are extra good ones, with plenty of bone and scale, and like all of Imp. Collynie's descendants they show excellent feeding and early-maturing qualities. The offering will also include a number of fine heifer calves.

The writer recently inspected Messrs. Cottingham's offering and is in a position to recommend it, and to state that we believe that it is one of the best that they have ever made.

Watch for further advertising which will appear in THE KANSAS FARMER, and get your name on the list for a catalogue, which will soon be ready. A more extended description of their offering will appear later.

S. W. Alfred & Son Sell Durocs February 18.

S. W. Alfred & Son, of Sharon, Kans., have claimed Tuesday, February 18, as the date of their annual bred-sow sale. Alfred & Son are known and recognized among breeders as producers of the very best in Duroc-Jerseys. At the Kansas State Fair this year they swept the platter, winning nine firsts and two grand championships on animals of their own raising. Their offering will consist of 50 females and 10 fancy spring boars. Twenty-five of the females are fall yearling gilts and tried sows. These are as fancy a lot as the writer has seen this year. They are all extra well developed with good coats, fancy head and ears, good backs, plenty of bone, and lots of finish. The most of these are by Sharon's Wonder, who won second in class at the Kansas State Fair, 1906, and went back and won first in 1907 against strong competition. Some of these will be bred to Proud Ohio Boy, he by Ohio Chief, and some to Silk Wonder 3d, a son of Silk Worm.

The spring gilts are good ones with plenty of bone and lots of finish. They are daughters of Sharon's Wonder and King Alfred and are out of some of the best herd sows. They will be bred to Buddy K's Bud, a good son of Buddy K. 4th and Comet, a grandson of the great Gold Finch and of Tip Top Notcher, the World's Fair champion. Comet's dam is by Oom Paul and she was the grand champion sow at the Kansas State Fair this year. Everything will be well fitted and in the best possible condition to make good in the hands of their purchasers.

A more extended notice of this sale, together with display advertising, will appear in the issues of THE KANSAS FARMER of February 6 and 13. Watch for these, and get your name on one list for a catalogue, and arrange to attend this sale.

The North Missouri Poland-China Sale Circuit.

A rare opportunity will be afforded the lovers of good Poland-Chinas to purchase brood sows of the most fashionable breeding and bred to as good boars as are in service in any country when the North Missouri Poland-China sale circuit open their guns in February next.

This circuit has been in existence for two or three years and have held several successful sales, and the high quality of the offerings and square business-like dealings of the men behind it have won for them a high place in the breeding world.

There herds favorably compare with the best in the business and the sows that are to be included in their offerings belong to the "elite" of the Poland-China aristocracy, and this does not only mean that they are the direct descendants of sires and dams that are in the "spot light" of public gaze and playing leading roles at fairs and exhibitions, but coupled with the rich blood of their parentage is an individual merit that is worthy the consideration of all who admire the "best in Poland-Chinas."

Dr. R. W. Thomas, of St. Joseph, Mo., opens the circuit on February 4, followed by Chas. E. Tennant, of New



TESTED SEED

THE KIND TO PLANT

OUR LARGE 1908 SEED CATALOG

Gives complete and accurate descriptions of OUR TESTED SEED. It is the most complete catalog we have ever issued, containing

OVER 1000 VARIETIES, 300 FINE ILLUSTRATIONS

Of Vegetable, Field and Flower Seed, Roses, Plants, Shrubs, Poultry and Bee Supplies. Our trade doubled last year. This book tells why. Write for it today—it is FREE.

ZIMMERMAN SEED CO., 623 Quincy St., Topeka, Kan.

PLANT

WESTERN QUALITY SEEDS

Clean Seeds—Fresh Seeds—Seeds of highest germination, are the only seeds worth planting. We have them. Consult our New Catalog, a fine book, with many illustrations from nature, and plenty of interesting novelties and reading matter. It is just published; no up-to-date planter should be without it. Write a postal card NOW. It is free! Valuable novelties of sterling merit given gratis as Premiums with orders.

THE BARTELDES SEED CO., Box 5, Lawrence, Kans.

Branch houses at:

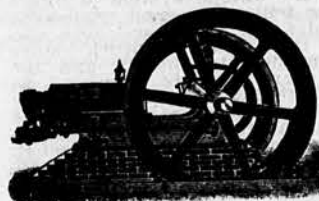
DENVER, COLO. and OKLAHOMA CITY, OKLA.

Acorn Brand

Stands for the seed quality that is a "little better than seems necessary." This quality will be maintained, and any seeds bearing Acorn Brand will prove satisfactory. Catalog and Special Offer for the asking.

ROSS BROTHERS SEED HOUSE, Wichita, Kans.

Our ALFALFA seed is Kansas grown, non-irrigated, has not been adulterated and is of the best quality obtainable. Ask for samples and prices.



WITTE GAS AND ENGINE

All styles and sizes, any fuel. Highest PERFECTION in ACCURACY and mechanical workmanship. All parts interchangeable and adjustable.

FIVE YEAR BOND GUARANTEE.

Exclusively BENSONIZED BRONZE bearings. EASY starting, SELF cleaning electric igniter. The result of 30 years' experience. Write for catalog K.

WITTE IRON WORKS CO., 527 W. 5th, KANSAS CITY, MO.



LIGHTNING POWER FEED MILLS

Small Mill with or without Base for Grinding shelled corn or small grain, 3 H. P. to 8 H. P. Large Mill for Grinding ear corn and small grain, 10 H. P. to 15 H. P. Guaranteed.

KANSAS CITY HAY PRESS CO.,

129 Mill St.,

Kansas City, Mo.

J. H. McCULLOUGH, Pres.
Solomon, Kans.
J. S. CANADA, Vice-Pres.
Minden, Neb.

BOTH PHONES
1949, West.

E. R. BRALL, Sec'y & Mgr.
Kansas City, Kansas.
F. W. GORREL, Treas.,
Kansas City, Kansas.

CAPITAL STOCK, \$50,000

The Farmers Terminal Grain Co.

Receivers and Shippers of
Grain and Mill Products

Board of Trade Building.

KANSAS CITY, KANSAS.

A Great Poland-China Sale

FREDONIA, KANS., JANUARY, 20, '08.

44—Head of the Best—44. Among the hogs offered in the sale will be the following:

SOWS.—Six by Meddler's Medal, brother in blood to Meddler 2d and his equal as a breeder. Five by Meddler 2d, the greatest of all sires. One by the \$8,000 Corrector 2d, the sire of the \$13,000 litter. One by Regulator, the champion. Fourteen by Minstrel, litter brother to Louise of Oakwood, and is the sire of the Kansas State Fair winners. One by Chief Sunshine 2d, the champion, and the greatest out-cross boar now living. One by Simply O. K., the champion, and the last king of the I. Knows. One by Proud Perfection, the champion, and the last king of the I. Knows. One by the \$610 gallant knight. Two by Mischief Junior, the show boar. One by E. L.'s Dude by Perfection E. L., the great sire of brood sows. Four by Meddler Boy, the coming boar by Meddler; the champion of the world. One by Harmonizer, by Ideal Sunshine.

BOARS.—Four by Meddler, the king of all sires. One by Minstrel, the best breeding son of Corrector 2d.

STRYKER BROS.,

Fredonia, Kans.

Auctioneers: Cols. J. W. Sparks, John D. Snyder, J. W. Sheets.

Hampton, Mo., on February 5; R. E. Maupin, Pattonsburg, Mo., February 6, and F. D. Fulkerson, Brimmon, Mo., February 7. All of these gentlemen are well known to the breeders of Poland-China and the announcement of this sale will no doubt elicit an interest in the choice things they will offer at that time.

More will be said in these columns from time to time as to the merits of these various offerings.

J. F. Staadt's Durocs.

In a field note published in THE KANSAS FARMER December 19, a mistake occurred in regard to Long Wonder. Mr. Staadt's herd boar as a prize winner. While we believe that if Long Wonder was fitted and given the opportunity he would do all that was claimed for him

In this article, Mr. Staadt refuses to claim any honors that does not belong to him. Long Wonder is making a wonderful reputation as a sire, and Mr. Staadt writes that he is having a phenomenal sale on spring males by him, and that a number of them have gone to head good herds.

Long Wonder 21867, is a grandson of Pilot Wonder, champion hog at the Chicago International 1903. He is a hog of great length, strong back, big bone, good feet and legs, heavy hams, smooth from end to end, a nice color, weighs close to 1,000 pounds in breeding condition, and is as active as a pig. He was a winner at the Nebraska State fair in 1906, and won first and grand sweepstakes over all breeds, at several leading Nebraska shows, winning over a number of State fair winners. His get have splendid style and

finish, together with immense size. He is considered one of the greatest brood sow getters living. Long Wonder attracted more attention than any other hog at the American Royal Live Stock Show 1906, and topped the breeder's sale held during the show; outselling the champion hog at the Missouri State fair 1905, and also the champion hog at the American Royal 1905.



Robt. W. Hazlett, Eldorado, Kans.
President American Hereford Breeders' Association and owner of Hazford Place Herefords.

The Value of an Education.

There was perhaps never a time in the history of our country when a greater premium was placed upon competency than now. The world is looking for young men and women who can do things well. It can use them. One of the greatest truisms that have been contributed to literature are the words of Emerson in which he says, "If a man can write a better book, preach a better sermon, or make a better mouse trap than his neighbor, though he build his house in the woods the world will make a beaten path to his door." The young man of metal aspires to make the most out of his life, to accomplish something for himself, and society and make the world better by his having lived in it, but in order to achieve success in any line of human activity we must first recognize the absolute necessity of a thorough preparation.

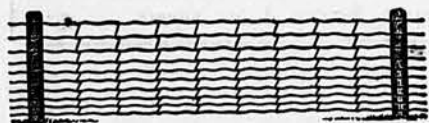
The world of commercialism to-day affords a wide field in which it is possible for the young man of cultivation to attain to the highest possible eminence of success, but in order to build this edifice, that we call success, we must remove the debris, dig deep into the earth and lay the foundation. This foundation calls for the expenditure of time, and arduous labor, but it is necessary to the future usefulness of the structure, and when the work is completed we look with pride upon the work of our hands.

College days are the days of foundation-laying or future usefulness. This is not a question for discussion for we are all agreed on this. The question is what school shall I attend? The Lawrence Business College, located at Lawrence, Kans., is one of the oldest and best equipped institutions of its kind in the West. It has stood the test of years, and can point with pride to many of her students that are now holding responsible and remunerative positions. The college authorities are continuously receiving applications from large and responsible firms for competent help. Their large illustrated catalogue is one of the most beautiful pieces of work of its kind that has come to our desk for some time, and the same will be mailed you upon application. Write to-day for one and arrange to attend this school.

Rickety Fences Depreciate Farm Property.

"The clothes don't make the man—but they help," says the old proverb. Good fences don't increase fertility, but they make the market prices higher. Take two farms—one properly fenced—the other with gaping holes for stock to rush through to the neighbors' fields; with tumble-down posts and dilapidated boards, half up, half down; which will you buy? Which will bring the most at a forced sale?

Wise farmers are looking at all these outward appearances. They are discarding the old, decaying, profitless wooden fence. They are replacing it with one that is strong and durable like the Brown fence. This is a fence that farmers say is at least one-fourth



heavier than most woven-wire fences; that it doesn't get "baggy or saggy"; that it is easily put up. One of the best things about a Brown fence is that it seldom needs repairs. It is so solid and strong—being made of high carbon, hard coiled steel spring wire—that they can resist all the varying changes of frost and sunshine. The uprights are the same size as the horizontal. When a Brown fence is up, it is up "to stay up."

Two more good things that the Brown Fence and Wire Company, Cleveland, Ohio, do for the farmer. First, they send a free sample of the fence so that every man can examine

it at his leisure. He can hammer it, file it, dip it in acid, heat it—test it any way he chooses. The sample will be no better than the actual wire sent him when he pays his money. Second, they pay the freight on all orders of forty rods and over. This is a great convenience. A man knows exactly what his fence will cost laid down at his home station. Prepaid freight usually is delivered sooner than the "bill to follow" kind. A 56-page catalogue gives a detailed explanation of 138 different styles of fences for poultry, hogs, horses, bulls, and stock of all kinds. It is sent free to any one.

Stock Tonic Necessary.

Farmers and cattle-raisers are coming more and more to see the great importance of a stock tonic.

Before our present day experimenters proved their point, no one thought it necessary to do anything to aid animal digestion, in fact no one thought such a thing could be done.

Now feeders of live stock, whether for beef or milk, never even attempt to "fit" a bunch of steers or produce a given quantity of milk without giving each animal in the herd a corrective in daily doses.

A few years ago farmers took sickness and loss as part of the business. Their profits were small because a few weeks' heavy feeding on an unbalanced ration, without assisting nature in any way, was sure to throw the animal "off its feed" and actually undo all that had been gained up to that point.

The amount of money lost to feeders in this way must have been something startling, and under our present laws of keen competition would have been simply ruinous.

All this uncertain and haphazard way of doing has given place—thanks to the few who have made a study of these things—to a scientific and certain way of reaching uniform results in the cattle trade. Men know a whole lot more than they did, but it's the stock tonic above all else that has given cattle-raising the reliability of an established business.

If the reader will think for a moment how much the animal system is like a machine, he will see a good reason for the tonic idea. If you over-load a machine—ask it to do double work—more power is needed to run it and the strain on every part is greater. So with the fattening steer or milk cow—heavy feed means great strain on the digestive apparatus, more nerve force to run it and more wear and tear on it.

Here is where the tonic gets in its work. Composed as it is of elements known to be beneficial, it gives just the proportion of added strength needed for each part and so the whole animal is carried over and beyond the danger point and enabled to make steady gain in weight. A stock tonic is certainly the one thing needed by the feeder if he is after the greatest profit in his business.

Our fathers got along without the "food tonic" because they didn't know it. To the farmers and feeders of these days the "food tonic" of known value, containing the bitter principles which aid digestion, iron for blood building and cleansing nitrates in proper proportion, is an absolute necessity.

GREGORY'S SEED CATALOGUE.

The New 1908 Edition Gives Expert Advice on the Raising of Various Vegetables and Describes the Best of the Old and New Varieties.

Gregory's new seed book is ready for free distribution. It is really one of the very few seed books published strictly in the interest of farmers and gardeners. Not only does it illustrate and describe the new and old varieties but it also helps make the planting a success, by giving expert advice on the raising of various vegetables. This book has been the means of turning many a failure into success. Every one interested in vegetables and flowers should have this book, and the only thing necessary to do to secure a copy free is to write J. H. Gregory & Son, Marblehead, Mass., with a request for one.

It doesn't pay to take any chances in buying seeds. To be on the safe side, plant Gregory's seeds. The largest gardeners and planters in the country sow them. They do so because they know they're pure, fresh, and reliable. Every year the firm of Gregory & Son make over 2,000 tests of the vitality of both vegetable and flower seeds, and thousands of dollars' worth are thrown away as not being up to their high standards.

This year Gregory offers besides

LOFTIS SYSTEM Diamonds on credit

A GOOD NEW YEAR RESOLUTION—USE THE LOFTIS SYSTEM. It enables you to buy beautiful and valuable articles, either for your own use or as gifts, without the outlay of much money. By giving credit and lowest prices, we make \$5 or \$10 do the work that \$50 does in a cash store. MAKE YOUR NEW YEAR SELECTIONS NOW from our New Year catalog and we will send them for your inspection. If you like them pay one-fifth on delivery; balance in 8 equal monthly amounts. Don't delay. Write today for our New Year Catalog.

LOFTIS Old Reliable, Original Diamond and Watch Credit House

Dept. A, 209, 82 State St., Chicago, Ill.

many new varieties, a potato that's a wonder. It's called "Big Crop," and it is claimed it will out-yield all the well-known varieties, is least affected by rot, and is deliciously mealy. It produced this season on their own farms at the rate of 836 bushels per acre. To learn more fully about this great potato, and the best methods of planting, write to-day for Gregory's Seed Book. Remember it's free.

The National Railway Training Association.

This institution was founded some two years ago by a number of business men and railroad officials with a view to preparing eligible young men for positions as locomotive firemen and train brakemen. The demand for trained men was so great that the railroads found it impossible to train their applicants in actual railroad service. It was, therefore, suggested that a school be established for the purpose of preparing men by correspondence for these positions, and the National Railway Training Association resulted.

This school has prepared and assisted to excellent positions a great many young men, most of them boys from farms and small towns; and even with the decided increase in business which has resulted as a natural consequence, they state that they are still unable to supply the demand for their graduates. They also state that their graduates are given preference by employing officers, and that one of their recent graduates earned \$125 within a month after accepting railroad employment.

We have no hesitation in stating that any young man who wishes to improve his earning capacity will do well to correspond with the National Railway Training Association in answer to their advertisement on page 39.

Free Garden Seeds.

Every one interested in gardening will be glad to know that Mr. Wm. F. Nichol, president and general manager of the St. Louis Seed Company, North Fourth St., St. Louis, Mo., has devised a unique plan for advertising his firm's famous "pure and sure seeds."



Mr. Wm. F. Nichol, the man who is giving away garden seeds.

Mr. Nichol is determined that every one shall try his wonderful vegetable offerings and has therefore decided to send by return mail, postpaid, to any one who sends him their address an assortment of seeds such as radish, lettuce, cabbage, onions, beets, cucumber, etc. He figures that instead of spending enormous sums in newspaper advertising, sample lots of seeds will bring his firm more new customers

PANAMA SKIRTS \$3.95

Stylish skirts of good black Panama made with 27 deeply laid pleats all around, and one fold at foot. These skirts are well made throughout and hang well. You can order a skirt to-day for \$3.95. Do not delay. State waist measure and skirt length in ordering. We will send the skirt by mail or express at our expense, and you can return the garment for refund if not satisfactory.

KANSAS MAIL ORDER SERVICE

The Mills Co., Topeka.

FURS, HIDES, JUNK

To be sure of a Square Deal Ship to B. S. BARNARD, Iola, Kans.

If prefer selling large lots at home advise accordingly, will call, don't delay. Write today for price lists and shipping tags.

HENRY W. ROBY, M. D. SURGEON.

730 Kansas Ave. Topeka, Kans.

than any other method. When you write him mention this paper and he will also send you a copy of their New Garden Guide free. It is a beauty. Write to-day.

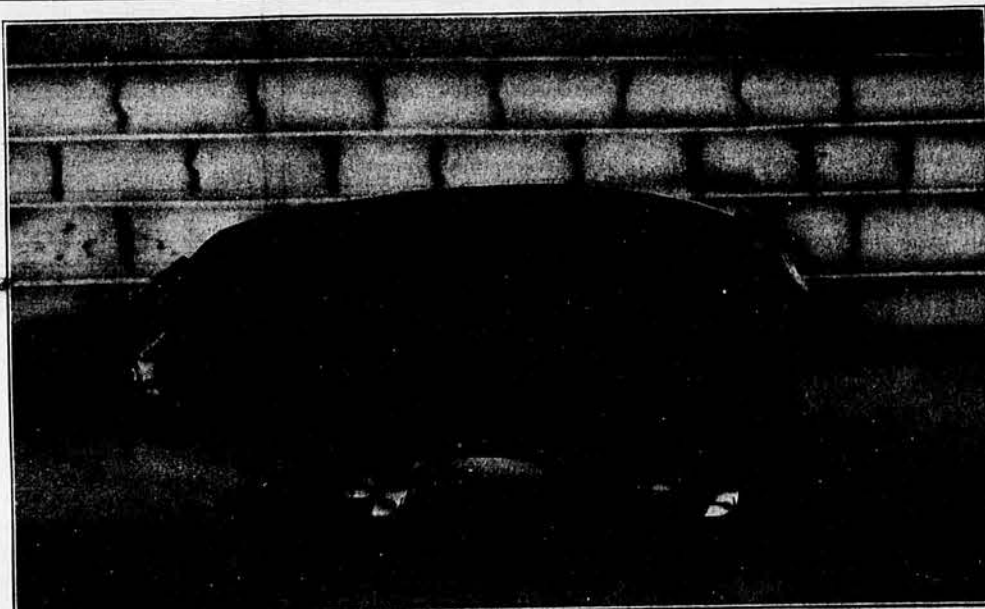
Real Estate Men Make Money.

It is a well-known fact that no class of business men have made more money during the last ten years than real estate men. It is no unusual thing for real estate firms even in small towns, to make from \$10,000 to \$25,000 in one year. Some have made much more. The immense growth of the real estate business, and the fact that it requires practically no capital, has attracted thousands of ambitious men to this field and caused a demand for a school to train men for the business. C. H. Gray, one of the most successful real estate men in the United States, has established the Gray School of Real Estate in Kansas City and is making a wonderful success of teaching the business by mail. Any of our readers who are interested in this line of work will be sent full particulars free by addressing C. H. Gray, president, 462 Century Bldg., Kansas City, Mo.

Telephone Supplies.

The Western Electric Company has just published a 167-page illustrated catalogue of "Telephone Apparatus and Supplies." Persons who are interested in the installation of new telephone systems or in the improvement of systems now in use should obtain copies of this catalogue. It shows the best of about everything needed. This company has branches in many of the leading cities. The Kansas City branch takes care of the surrounding territory. Write the Western Electric Company for such information and supplies as you need, mentioning THE KANSAS FARMER.

An association of real estate dealers of the Central States has been formed during the past few months. It has had a wonderful growth and promises to be very strong. The central office is located at Topeka. It is known as the Central Real Estate Dealers' Association and has a representation in almost every locality who is a reliable dealer. Farmers and others desiring to purchase property may write to the central office at Topeka and obtain, free of charge, prices on land, and may get into communication with reliable real estate men in localities in which the inquirers may be interested.



Leader by Meddler 24, the great breeding boar that will be included in the brood sow sale of C. E. Hedge, Garden City, Mo., at Harrisonville, Mo., on January 14, 1908.

Agriculture

Corn for Upland.

My farm is level upland. Can you tell me the best variety of corn to plant on upland? I noticed in a Kansas farm paper that corn which is adapted to bottom-land should not be planted on upland and vice versa. If you can tell me the best variety to plant on upland for best results will be very thankful for the information, also tell me where I can secure the seed that you suggest and think the most suitable for Oklahoma.

S. A. TESTERMAN,
Noble County, Okla.

It seems to be true that corn grown on fertile bottom-land is not so well adapted for growing on upland which may be poorer in fertility and not so well supplied with moisture as the bottom-land, however, the same variety of corn may produce well either on upland or bottom-land, provided it has been adapted by several years growing to this certain condition of soil and environment. Corn grown on fertile, well-watered, bottom-land is not trained to "hustle for a living" like the corn which is grown under less favorable conditions on upland; thus changing seed from bottom-land to upland does not usually give good results however, the reverse is often true when the seed is changed from upland to bottom-land, providing the corn is of a good variety and well selected, because when corn, grown under adverse conditions, is planted in better soil it responds to the favorable conditions in a greater degree even than the seed which is grown under those conditions.

All of the seed corn which we have for sale at this station is grown on upland, however, some of the varieties are doubtless better adapted for growing on bottom-land than on upland. This is especially true of the Hildreth, Roseland White, and, perhaps, also of the McAuley and Reid's Yellow Dent. In fact any well-bred, good-producing corn will give comparatively better results on the same fertile land; however several varieties, as Kansas Sunflower and Boone County White have a more general adaptation and may produce comparatively good crops on any good corn land. Generally speaking, the varieties of corn which produce medium stalks and rather small ears are better adapted for growing on upland than corn which produces coarse stalks and large ears. For more detailed information on this subject I have mailed you Bulletin 147, a report of our experiments with corn at this station, and circular No. 12, giving information regarding the seed corn which we have for sale. The Hickory King corn, which we do not grow for seed, has the reputation of being well adapted for growing on upland in Oklahoma and Texas. I advise you to write to your Experiment Station at Stillwater for further information regarding varieties better adapted for growing in Oklahoma.

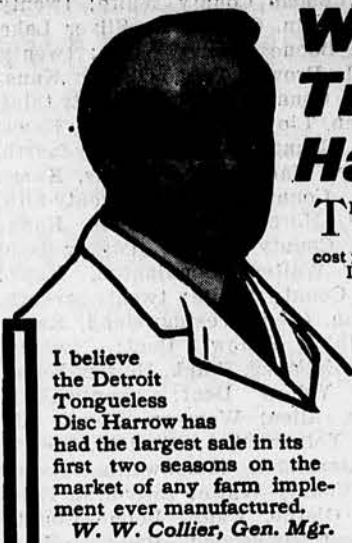
A. M. TENEYOK.

Iowa Corn Seed for Franklin County, Kansas.

Would corn do well taken from Southwestern Iowa to Franklin County, Kansas? I expect to move there in February and would like to know.

Cass County, Iowa. W. S. MILLER.

It will depend somewhat upon the variety of corn; a rather late-maturing variety of well-bred corn grown in Western Iowa may give good results when planted in Franklin County, Kansas. It will depend on the season. As shown by the experiments at this station, imported seed gives much better results some seasons than others. As a rule, however, you may expect home-grown seed of well-bred varieties to give better results than imported seed. If you have some good seed of well-bred corn it would be advisable for you to bring some of it and plant it on your Franklin County farm, but you will be more sure of a good crop by planting well-bred, home-grown seed of varieties which are



I believe the Detroit Tongueless Disc Harrow has had the largest sale in its first two seasons on the market of any farm implement ever manufactured.
W. W. Collier, Gen. Mgr.

CAUTION:

Beware of imitations. They say "imitation is the sincerest flattery" and our Detroit Tongueless Disc Harrow is being very much flattered. There are several cheap imitations of our Harrow being offered for sale through dealers. Don't buy one of them believing that you are getting a genuine Detroit—because you are not. The Detroit Tongueless Disc is not for sale by any dealer anywhere. We sell it direct from our factory—and you keep all the dealers' profits in your own pocket.

W. W. Collier, Gen. Mgr., AMERICAN HARROW CO., 1019 Hastings St., DETROIT, MICH.
NOTE:—Full line of Detroit Tongueless Discs are carried at our branch houses in all leading trade centers, enabling us to make prompt shipment to all points. To be sure of getting a Detroit Tongueless just when you want it, better get your order in early.

Why Not Accept My Offer and Try a Detroit Tongueless Disc Harrow Free for a Month?

THAT'S my proposition—I mean every word of it. You can use one of these Discs on your farm—for a full month—without cost. At the end of that time—if you don't want it—return it to us. We'll allow the freight—thus the test won't cost you one penny. That test is only a part of our liberal selling plan. It's just our way of assuring every one of our customers that they are going to get what they want and what they will be pleased with when they buy a Detroit Tongueless Disc Harrow.

We're anxious to send a Detroit Tongueless Disc Harrow to any responsible farmer—without deposit—and without advance payment—to make the test. It must be a good Disc—and one that will please you—or we could not go on making this proposition year after year.

We're sending out thousands upon thousands of these Discs all over the country on this plan. Surely we could not afford to do this if the Disc were not all we claim it to be.

The principle of the Detroit Tongueless Disc Harrow is right. The Forward Truck does away with all of the annoyance on the team of the old "tongue." It does away with all jamming—end thrust—and whipping of the horses, that frets them and puts them out of commission just at the time you need them most. See the two wheels back of the Disc Blades in the picture?

Those wheels are a part of the Detroit Tongueless TRANSPORT TRUCK, upon which you can raise the Disc Blades off the ground, making them rest on the front and back Trucks—so that you can drive the Harrow over stony ground, rough and sandy roads, bridges, etc., without dulling the blades or cutting up the surface. A good invention—that Transport Truck—most worth its weight in gold the way it saves Disc Blades that have to be transported from one field to another or from house to field.

Year before last we had over 1600 orders for this Disc that we couldn't fill—had to send them back. Last year we made twice as many as the previous year—and still we couldn't fill all our orders.

This year we've increased our factory facilities, and hope to be able to fill every single order on the Detroit Tongueless. It has had a wonderful sale—and has given universal satisfaction.

WE SELL YOU A DETROIT TONGUELESS DISC HARROW—ON TIME—ON TRIAL—FREIGHT ALLOWED

Anyway, we invite you to drop us a line on a postal card, giving us your name and address, and letting us send you our new 1907-08 Disc catalogue. This Book tells you more about the famous Detroit Tongueless Disc Harrow than we can tell you here—gives you our Selling Plan and quotes prices on a Detroit delivered at your railroad station. You can buy the genuine Detroit Tongueless Disc only through us direct. We advise you of this that you may not be imposed upon by some unscrupulous dealer who will represent to you that he has a Detroit Tongueless Disc Harrow for sale—or one as good. He can't have a genuine Detroit Tongueless—and he can't have one "just as good."



Write Today for Book and Prices

Sold on Time

adapted for growing in that section of the State.

For further information on this subject I have mailed you bulletin No. 147 on Indian corn, and circular No. 12, giving information on seed corn which we have for sale at this station.

A. M. TENEYOK.

Flax with Alfalfa.

I have just moved here and I find the people sow their alfalfa with flax in the spring. What do you think of that, and have you tried it?

Marion County. W. R. MACKLIN.

We have not tried seeding alfalfa with a nurse crop of any kind. Better results will be obtained, nine times out of ten, by seeding alfalfa on clean ground in a well-prepared seed-bed. If the alfalfa is sown in the spring on weedy ground it may be advisable to use a nurse crop. However, it is not advisable to sow alfalfa in the spring on foul land. If weedy land must be seeded to alfalfa, I would prefer to sow early in the fall without a nurse crop, after carefully preparing the seed-bed.

For further information regarding the seeding of alfalfa, I have mailed you a copy of circular No. 10.

A. M. TENEYOK.

Clover-Hay Worm (Pyralis costalis).

EDITOR KANSAS FARMER:—The clover-hay worm has become quite abundant over Kansas wherever alfalfa is grown. This worm attacks alfalfa, clover, and timothy hay, both in the mow and in the stack, cutting up the leaves into chaffy pieces and webbing the mass together by an abundance of silken thread, which it is the habit of the worm to spin at all times. Hay so infested looks moldy and matted, and the abundance of silken threads mingled with the excrement of the worms, renders the hay distasteful and even unfit for stock.

The worms are usually noticed towards the bottom of the stack. However, in hay kept over the second year, they may be all through the stack. The worms when young are of a dirty white color; as the grow older they become brown. When mature they measure about three quarters of an inch in length. The worms work in the hay all through the fall, winter, and the early part of spring.

The pupal stage is passed in a thin silk cocoon spun near where the larval life is passed. The adult moth, which appears from the middle of May or through June and July, is a little insect with wings spreading about four-fifths of an inch. The color is lilac brown with two bands of lighter shade

each starting from a yellow spot on the front of the wing.

The insect is always more abundant where old hay remains over summer, and in stack bottoms rebuilt in the same places year after year of the waste hay remaining over. The moths may often be seen resting on the walls and timbers within barns where alfalfa or clover hay has been stored. The abundance of the moths in such places should warn the owner to clean out the mow thoroughly before storing the new crop.

Remedies.—Never stack alfalfa, clover, or timothy hay on old bottom and tops left over in the stacking places. Burn all the old bottoms and tops. Clean out the mow thoroughly before storing the new crop. Never put new hay on the top of old, whether in the stack or in the mow. GEO. A. DEAN, Kansas State Experiment Station, Manhattan, Kans.

Flax in Kansas.

SECRETARY F. D. COBURN.

Among the countries of the world the United States takes second place in flaxseed production, and of the States and Territories Kansas for many years ranked fourth and now is fifth in its output. As a State crop flax is, however, of lesser note than formerly, as indicated by the value of the crop of 1906, which ranked as the thirteenth most important in Kansas' agriculture. Notwithstanding the State's important relation to the industry it seems that flax-growing in Kansas, like that of castor-beans and broomcorn, is decreasing, because of the more profitable wheat, corn, alfalfa, and other crops, and the area (45,572 acres) reported in flax for 1907 was less than for any year since 1878. In fact, in 1874 the State's flax area was larger than in 1907. From these early years to 1902 the areas, yields, and values of the annual flax crops maintained a more or less uniform record, although surprising increases and decreases in areas followed in successive years, probably largely due respectively to favorable and unfavorable conditions either for the prosperity of the preceding or prospective crops, as well as to the fluctuating prices. The acreage between 1880 and 1902, both inclusive, averaged 178,132 acres per year, and only in one year of the period, 1886, was it below 100,000 acres. In only one year of the past five has the area been above 100,000, and the average annual area for these five years has been less than 71,000 acres.

The largest area ever devoted to flax in Kansas was 388,184 acres in

1891, and this is the only time the annual area exceeded 300,000 acres. The crop of 1890, however, from a smaller area (228,839 acres) was the largest in the State's history and worth the most, the 2,173,800 bushels produced being valued at \$2,717,263. The high prices that year received was what probably induced the extraordinary area of 1891, for the flax of 1890 sold for an average of \$1.25 per bushel. In 1891, however, the average price paid was but 80 cents per bushel. This slump in price evidently had a depressing effect on the enthusiasm of flax-growers, for in the following year, 1892, the area was less by 55 per cent. The average price per bushel of flax in Kansas for the past quarter of a century has been 95 cents.

In 1890, the State's banner flax year, every county, except nine, had greater or less area in flax, and in 1907 but 51 of the 105 counties had acreages reported. Although in earlier years nearly every county was reported as having flax, most of the total acreage and nearly if not the whole of the commercial output were in the eastern counties. To be more exact, the counties of the eastern third of the State have raised the bulk of the annual crops. In later years the area has become even more restricted, and in 1907 nearly 90 per cent of the area sown was in thirteen counties in the eastern three tiers, south of the Kansas river. In fact it is the southeastern counties that have continuously, although in a diminishing degree, raised flax from the early seventies until the present time, and it was from this portion of the State that a large part of the flaxseed of commerce was supplied. The crop was never grown in Kansas for any other purpose than for its seed, from which is made linseed oil, largely used in paints and varnishes, and in the manufacture of linoleum, oilcloth, printers ink, soap, the various other commodities. After extracting the oil the residue, known as oil cake, ground into meal, makes a valuable cattle feed, and large quantities are exported, being it seems more highly prized by European stock-raisers than by our own.

One reason perhaps for its popularity in the early days was its quick-producing quality, enabling growers to realize results in a comparatively short time, in fact, within three months after sowing. Not having been in pressing need of funds for some years, except occasionally to help out the would-be financiers of Wall Street, and with a steady stream of money, amounting to a plethora, coming in the year 'round from their corn, wheat, alfalfa, and live stock,

the early-income feature of flax it seems no longer so strongly appeals to the Kansas farmers, although the soil and climate of southeastern Kansas seem so especially adapted to its growing that some few there can not resist the habit, long since formed, of making money quickly and easily through the medium of a flax crop.

Cost of an Acre of Corn in Illinois?

ARTHUR J. BILL AT ILLINOIS FARMER'S INSTITUTE.

One of the things that Illinois farmers know the least about in definite terms is any carefully considered method for determining the items of cost in the production of any crop, yet as in any other business, an accurate knowledge of such cost is very necessary to economic production and safety and success in the undertaking. Mr. Joseph R. Fulkerson of Hazel Dell Stock Farm, Jerseyville, Ill., has figured out for three different years the cost of producing an acre of corn, and he told about it as follows in addressing the Grout Farm Encampment, near Winchester:

"It is not always the man who knows the most who makes the greatest success, but the man who thinks. It is necessary to read, and as a rule the one who reads the most thinks the most. The day of haphazard farming by plenty of brawn and no brains has gone by. No two farms are exactly alike. Every farm is a separate and distinct problem to be worked out by itself. So much depends upon the man.

"LUMBER DEALER KNEW EVERY ITEM OF COST.

"A man said the other day, 'lumber is high,' but a lumber dealer replied that lumber had been two low and now simply had advanced along with pork, corn, and wheat. He was able to tell to a penny the cost of the timber, the labor, and freight rates; that it cost him to haul and skid the logs, to put them over the saw, to stack and load the lumber, and to deliver it to the market; and what per cent of culls had to be reckoned upon. That was a man who thinks. He knew exactly what it costs to produce the lumber he was selling.

"I wonder if a boy here knows what it cost per acre for seed corn last year; what it cost to plow the ground, to work it down, to cultivate it; and what, from a previous record, will be the probable cost to husk and deliver this corn? It is necessary that the farmer keep accounts and know the cost of production, that he may be able to figure out methods of cheaper production. The man who finds that there is 'no money in farming' and says, 'I'm going to quit,' doesn't think, or he doesn't keep accounts.

"FINDING THE COST PER DAY OF MAN AND TEAM.

"We will first study what a man and team are worth per day. There are four Sundays in a month and probably two other days on which the man will not work. It took me three years to figure out the cost of a horse's work. I found that the average price of farm horses was \$125, and figured that they were good for ten years' work, and worth \$50 when 15 years old. You know what corn, oats, and hay you feed the horses. I gave them the usual amount of hay and then took it out of the mangers and weighed it. A certain amount must be counted for the horses' feed in the stalk-field or pasture. In Massachusetts or Pennsylvania the cost of the horse is figured at 40 to 50 cents a day. Here the horse costs about one-half that, as horses' feed, and pasture are cheaper. The horse includes the use of the harness, and the repair bills. I found that it cost 22 cents a day to keep a horse, and figured the man at \$1.35, \$1.80 per day for man and team. That is the cost to us. It may cost more or less upon other farms and under other conditions. It is almost impossible to get the exact cost but if we make an effort to do so we will soon come a great deal nearer to it than by guessing.

"By running over the work book at the end of the season, we can easily get the number of days spent in work-

ing each field, and with the price per man and per horse, can figure the cost of the crop grown in that field. There is certain labor on the farm which must be charged to the place as general expense and not per acre to any crop; for instance, a forty-acre field of corn may have four sides fenced; this fence is not for the benefit of the corn, but for the purpose of keeping live stock, and it should be charged to the live stock. We found it was more expensive to rake and burn stalks than it was to disk the land.

COST OF PRODUCING ONE ACRE OF CORN.

"We have found by careful figuring of every item, the average cost for three years of growing an acre of corn, as follows:

Work with the stalks.....	\$0.12
Plowing.....	.80
Working the ground.....	.60
Planting.....	.18
Seed.....	.15
Cultivating.....	1.07
Husking.....	1.72
Wear and repair.....	.40

Total.....	\$5.04
Credit to stalk-field.....	.60
Net cost of one acre of corn.....	\$4.44

"These accounts, kept similarly, will vary in different sections of the State as the cost of labor varies, the average being higher in the northern and lower in the southern part.

"Similar figures for a crop of wheat are as follows:

Plowing.....	\$0.78
Working the ground.....	.94
Seed.....	.87
Drilling.....	.19
Harvesting.....	.77
Wear and repair.....	.34
Thrashing.....	2.48

Total.....	\$6.37
Credit the stubble-field.....	.25
Net cost of one acre of wheat.....	\$6.12

Prize-Winners at the Kansas State Corn Show.

The annual meeting of the Kansas Corn-Breeders' Association and the Boys' Corn-Contest Association, held at the Kansas State Agricultural College, Manhattan, Kans., from December 30 to January 1 was the largest in the history of these organizations. These meetings were preceded by practical work in corn- and stock-judging, which began on December 26. Three hundred and eighty-four men and boys enrolled in classes for the work.

In connection with these meetings a large exhibit of corn was shown. In all, 217 exhibits were entered: 162 boys' exhibits, 28 yellow corn exhibits for men, 22 white corn exhibits for men. The corn exhibited by the men was sold to help defray the expenses of the association, while the corn exhibited by the boys was returned to those exhibiting the corn for planting for next season's crop.

The following is a list of prize-winners:

BOYS' CONTEST.

For Best Ear.—Cunningham, R. M., Hiawatha, Kans. Prize, \$50 painting.
For Best Ten Ears.—First, Snyder, Oaklan, Hiawatha, Kans., Reid's Yellow Dent; second, Cunningham, R. M., Hiawatha, Kans., Reid's Yellow Dent; third, Olson, Lloyd, Lyndon, Kans., Boone County White; fourth, Gilman, Ralph, Leavenworth, Kans., Boone County White; fifth, Allen, Harry, Manhattan, Kans., Hildreth's Yellow Dent; sixth, Gilman, Paul, Leavenworth, Kans., Boone County White; seventh, Coffman, Franklin, Manhattan, Kans., Hildreth's Yellow Dent; eighth, Shannon, John, Hiawatha, Kans., Reid's Yellow Dent; ninth, Moser, Carl, Hiawatha, Kans., Boone County White; tenth, Reitz, Aaron, Olathe, Kans., Boone County White; eleventh, Tregenza, Will, Overbrook, Kans., Boone County White; twelfth, Kelsey, Myron, North Topeka, Kans., Reid's Yellow Dent; thirteenth, Kelsey, A. L., North Topeka, Kans., Boone County White; fourteenth, Moffit, Clyde, Wilder, Kans., Boone County White; fifteenth, Richter, Lewis, Holton, Kans., Boone County White; sixteenth, Coffman, Will, Manhattan, Kans., Hildreth's Yellow Dent; seventeenth, Carman, Howard, Pomona, Kans., Boone County White; eighteenth, Kimball, Ray, North Topeka, Kans.; nineteenth, Carmen, Bengil, Pomona, Kans., Boone County White; twentieth, McCullough, Ray, Ottawa,

Kans., Boone County White; twenty-first, Martin, Charles B., Silver Lake, Kans., Boone County White; twenty-second, Brown, Paul, Olathe, Kans., Boone County White; twenty-third, Cochran, Lloyd, North Topeka, Kans., Boone County White; twenty-fourth, Strange, Walter, Blue Rapids, Kans., Boone County White; twenty-fifth, Wright, Herbert, Tonganoxie, Kans., Boone County White; twenty-sixth, Quinn, Walter, Bennington, Kans., Boone County White; twenty-seventh, Huffman, Glen, Westmoreland, Kans., Hildreth's Yellow Dent; twenty-eighth, Eubanks, Frank, Holton, Kans., Reid's Yellow Dent; twenty-ninth, Fulmer, Allen, Wamego, Kans., Hildreth's Yellow Dent; thirtieth, Creighton, Alexander, Morrowville, Kans., Boone County White; thirty-first, Reid, Lewis, Olathe, Kans., Boone County White; thirty-second, Badger, Fred, Yates Center, Kans., Hildreth's Yellow Dent; thirty-third, Willis, Earl, Manhattan, Kans., Boone County White; thirty-fourth, McIntire, Max, Pomona, Kans., Boone County White; thirty-fifth, Willis, Homer, Manhattan, Kans., Boone County White.

MEN'S CONTEST.

Yellow Corn.—First, Trent, S. G., Hiawatha, Kans., Reid's Yellow Dent; second, Flaherty, Ed., Seneca, Kans., Reid's Yellow Dent; third, Haney, J. G., Oswego, Kans., Hildreth's Yellow Dent; fourth, Lind, John, Saffordville, Kans., Hildreth's Yellow Dent; fifth, Rogers, N., Seneca, Kans., Reid's Yellow Dent.

White Corn.—First, Flaherty, Ed., Seneca, Kans., Boone County White; second, Gilman, J. M., Leavenworth, Kans., Boone County White; third, Rea, Herman, Haddam, Kans., Rea's Snowflake; fourth, Trent, S. G., Hiawatha, Kans., Boone County White; fifth, Sanford, L. V., Onelda, Kans., Sanford's Improved.

Mixed Corn.—First, Wilson, E., Lawrence, Kans., Bloody Butcher; second, Coffman, E. B., Manhattan, Kans., Bloody Butcher.

Sweepstakes.—First, Trent, S. G., Hiawatha, Kans., Reid's Yellow Dent; second, Flaherty, Ed., Seneca, Kans., Reid's Yellow Dent; third, Haney, J. G., Oswego, Kans., Hildreth's Yellow Dent; fourth, Flaherty, Ed., Seneca, Kans., Boone County White; fifth, Gilman, J. N., Leavenworth, Kans., Boone County White.

PURCHASERS OF PRIZE CORN.

Yellow Corn.—First premium, Trent, S. G., Hiawatha, Kans., Reid's Yellow Dent, \$18; second, Kelsey, Mr. North Topeka, Kans., Reid's Yellow Dent, \$20; third, TenEyck, A. M., Manhattan, Kans., Hildreth's Yellow Dent, \$9; fourth, Lind, John, Saffordville, Kans., Hildreth's Yellow Dent, \$6; fifth, Hamm, M. G., Holton, Kans., Reid's Yellow Dent, \$8.

White Corn.—First, Martin, J. T., Hanover, Kans., Boone County White, \$13; second, Gilman, J. M., Leavenworth, Kans., Boone County White, \$8; third, Bayer, Henry, Toronto, Kans., Rea's Snowflake, \$1; fourth, McCray, J. M., Manhattan, Kans., Boone County White, \$2; fifth, Sanford, L. V., Onelda, Kans., Sanford's Improved, \$1.

Mixed Corn.—First, Martin, Arnold, Dubois, Neb., Bloody Butcher, \$5; second, Coffman, E. B., Manhattan, Kans., Bloody Butcher, \$1.

Some twenty-five or thirty samples were also sold at auction and private sale, ranging in price from 50 cents to \$3 per sample of ten ears. The total sale of exhibition corn was \$121.

PRIZES AND DONORS.

BOYS' CONTEST.

Special Prize for Best Ear of Corn.—\$50 farm painting, Alfred Montgomery, \$50.

BEST TEN EARS CORN.

1. Two-row cultivator, Midland Implement Co., Tarkio, Mo. \$55.
2. Brome grass seed, F. Barteldes & Co., Lawrence, Kans.; \$10 in cash, \$37.
3. Plush lap-robe, Bardwell Implement Co., Manhattan, Kans.; one bushel choice alfalfa seed, Ross Bros., Wichita, Kans.; \$10 in cash, \$28.
4. Gold-handled umbrella, John L. Coons, Manhattan, Kans.; one bushel alfalfa seed, Ross Bros., Wichita, Kans.; \$10 in cash, \$25.
5. Stetson hat, W. S. Elliott, Manhattan, Kans.; \$15 in cash, \$20.
6. \$5 in gents' furnishings at E. L. Knostman's, Manhattan, Kans.; \$10 in cash, \$15.
7. One pair \$4 shoes, Moore Bros. & Co., Manhattan, Kans.; \$6 in cash, \$10.
8. \$5 worth of Hildreth seed-corn, J.

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THE Galloway has the best improvements—all patented so you can't get them on other spreaders. The Galloway is
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The ONLY Spreader with MALLEABLE and STEEL for ALL Parts that break and wear out in other spreaders.

Fits the wagon gears you already have.

M. McCray, Manhattan, Kans.; three-years' subscription to The Kansas Farmer, \$8.
9. Two bushels first-grade seed-corn, agronomy department, Kansas State Agricultural College, \$6.
10. Five-years' subscription to Farm and Stock, \$5.
11. Three years' subscription to Breeders' Special, \$3.
12. Three years' subscription to Farm and Stock, \$3.
13. Two years' subscription to The Kansas Farmer, \$2.
14. Two years' subscription to Breeders' Special, \$2.
15. One year's subscription to Wallace's Farmer, \$1.
16. One year's subscription to Wallace's Farmer, \$1.
17. One year's subscription to Farmers' Advocate, \$1.
18. One year's subscription to Farm and Stock, \$1.
19. One year's subscription to Farm and Stock, \$1.
20. One year's subscription to Farm and Stock, \$1.
21. One year's subscription to Farm and Stock, \$1.
22. One year's subscription to Breeders' Special, \$1.
23. One year's subscription to Breeders' Special, \$1.
24. One year's subscription to Breeders' Special, \$1.
25. One year's subscription to Breeders' Special, \$1.
For each of the next ten best ten ears of corn, one year's subscription to the Farmers' Advocate.

MEN'S CONTEST.

Class A.—Largest Yield of Corn Per Acre.

1. Pair of Humane Horse Collars, Humane Horse Collar Co., Omaha, Neb.; three years' subscription to Farmer and Stockman, \$18.
2. Boss Corn Grader, Kingman-Moore Implement Co., Kansas City, Mo.; three years' subscription to Farmer and Stockman, \$12.
3. Barrel Iowa Hog Powder, J. R. McKean, Manhattan, Kans., \$13.

Class B.—Best Ten Ears Yellow Corn.

1. Black Hawk Corn Planter, M. D. Sechler Carriage Co., Moline, Ill.; \$5 in advertising in The Kansas Farmer, \$47.
2. Selected seed-corn and seed-potatoes, Geo. T. Fielding & Sons, Manhattan, Kans.; five years' subscription to The Kansas Farmer, \$30.
3. Double-barrel shot gun, E. B. Purcell Trading Co., Manhattan, Kans.; five years' subscription to Farm and Stock, \$17.50.
4. Single buggy harness, Brady Harness Co., Manhattan, Kans.; one year's subscription to Farmers' Advocate, \$11.
5. One barrel of flour, Manhattan Milling Co., Manhattan, Kans.; one year's subscription to Wallace's Farmer, \$6.

Class C.—White Corn.

1. 160 pounds alfalfa seed, J. G. Peppard Seed Co., Kansas City, Mo.; End-gate Seeder, C. E. Hildreth, Altamont, Kans.; \$5 in advertising in The Kansas Farmer, \$40.
2. Selected Boone County White seed-corn, J. M. Gilman, Leavenworth, Kans.; five years' subscription to Farm and Stock, \$30.
3. Single harness, J. B. Anderson, Manhattan, Kans.; five years' subscription to Breeders' Special, \$17.
4. Selected Silvermine seed-corn, E. W. Young, Lawrence, Kans.; two years' subscription to Farmers' Review, \$9.50.
5. \$5 in groceries at the Star Grocery, Manhattan, Kans.; one year's subscription to Wallace's Farmer, \$6.

Class D.—Mixed.

1. Keystone Hand Sheller, International Harvester Co., Chicago, Ill., \$10.
2. Set knives and forks, E. L. Eskren, Manhattan, Kans.; one year's subscription to Wallace's Farmer, \$6.

Sweepstakes.

1. 50-pound can lard, Schultz Bros., Manhattan, Kans.; \$10 in cash, \$15.
2. Ham, Allingham & Beattie, Manhattan, Kans.; \$10 in cash, \$13.
3. Sterling silver teaspoons, J. Q. A. Sheldon, Manhattan, Kans.; one year's subscription to Topeka Capital, \$10.
4. Ladies' fur, Spot Cash, Manhattan, Kans.; three years' subscription to Farmer and Stockman, \$8.
5. \$5 in merchandise at E. A. Wharton's, Manhattan, Kans., \$5.

CASH DONORS.

J. T. Martin, Hanover, Kans., \$15; Ernest W. Young, Lawrence, Kans., \$5; First National Bank, Manhattan, Kans., \$10; Union National Bank, Manhattan, Kans., \$10; W. R. Hildreth, Altamont, Kans., \$5; M. L. Hull & Son, Manhattan, Kans., \$5; Ramey Bros., Manhattan, Kans., \$5; Manhattan Ice, Light,

and Power Co., Manhattan, Kans., \$5; Manhattan State Bank, Manhattan, Kans., \$5; C. A. Haulenbeck Lumber Co., Manhattan, Kans., \$5; Paine Furniture Co., Manhattan, Kans., \$2; Wm. M. Stingley & Co., Manhattan, Kans., \$2; J. J. Paddock & Son, Manhattan, Kans., \$2; The Star Cafe, Manhattan, Kans., \$2; H. H. Bates, Manhattan, Kans., \$2; S. N. Higinbotham, Manhattan, Kans., \$2.

Farm Notes.

N. J. SHEPHERD, ELDON, MO.

To breed a grade to a grade is a step backwards.

It is the plant food and beneficial bacteria contained in the manure that makes it valuable.

A pig that is always full will not take the exercise that it should.

The larger the animal grows the more food is required for a pound of growth.

Manure is the most important adjunct of success for farming, yet it is most freely wasted.

The market size is only a secondary consideration provided only the animal is fat, smooth, and trim.

Implements not kept in their right places will not and can not be kept in condition for good work.

All stock will thrive better and develop faster without being compelled to carry a heavy load of fat.

Food costs too much nowadays to use a great deal of it in outdoor feeding in winter.

There must be a difference in individual worth, and so long as this exists the best should be selected for breeders.

The only way to make the farm most profitable is to keep the land and animals in a healthy, vigorous condition.

Firmness, kindness, and patience are three of the essential elements in the make-up of any one who is successful in handling horses.

With wheat and grass seed it is important that it will germinate but also have sufficient vitality to send up a good, strong, thrifty plants.

The animals which are selected for breeding purposes should be fed and cared for in such a way as to induce the most thrifty habits.

A poor farm may be made much better by farming it with teams that are able to cultivate the crops in the best possible manner.

Excessive feeding does not increase the power of assimilation, and assimilation is the only true measure of value in feeding. What is not assimilated is practically wasted.

No matter what the quality of the rations the conditions under which it is fed have much to do with the quality of the pork.

Not only does it cost less to make a pound of young flesh than it does a pound of mature flesh but the former is worth more in the market.

A poor appetite in any farm animal is greatly against its doing its best no matter where it is working, whether in the dairy or before the plow.

Good digestion is the result of feeding enough to sustain the animal but not enough to keep the stomach in an overloaded condition all of the time.

A variety of foods often gives better returns than the chemical analysis of the foods would indicate, showing that it is well to have practical knowledge coupled with the theoretical.

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Our plowing engine will do the work of 18 to 20 horses, and at two-thirds the expense. Equally suitable for seeding and harrowing, harvesting, threshing, grinding, or operating irrigating pumps. Gets rid of the fuel and water problem entirely, hence the most economical engine for a dry country. Runs just as well in winter as in summer, because it is Oil-Cooled. Absolutely free from danger by fire or explosions. It is no experiment,—hundreds in successful operation. It will pay you to investigate. Write today for illustrated catalog.

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Providing for a record of exact information about every item of transaction or event on the farm for five years. It is divided into two divisions, Diary in one and Accounts in the other. In the Diary there is space for five years. Here it shows you the occupation of the day; here are any special incidents that you wish to remember the date of.
Bound in Leather and Cloth, and delivered to your express office, including a year's subscription to THE KANSAS FARMER and one copy of Twentieth Century Homes.

The Kansas Farmer Co., Topeka, Kans.
Gentlemen:—Herewith find \$2.50 for which please send me, prepaid, The Farmers' Account Book bound in Leather and Cloth; THE KANSAS FARMER for one year and Twentieth Century Homes.

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Horticulture

Spraying.

BY ALBERT DICKENS AND ROBERT E. EASTMAN IN KANSAS EXPERIMENT STATION BULLETIN 145.

The work done by the horticultural department of the Kansas State Agricultural College Experiment Station in testing spraying machinery and materials has extended over a number of years. Since the first experiments in 1887 the bearing orchards and vineyards have been regularly sprayed. Results have varied somewhat in different seasons and with different mixtures, but it is gratifying to state that the later operations have been more uniformly successful than earlier ones.

Nearly all fruit plants are subject to insect attack and injury from fungus. A combination spray is desirable and is practicable, but in many cases only one or the other is necessary and advisable.

MATERIALS.

For insecticides, Paris green, London purple and arsenate of lead have been most used. Paris green has been found to be somewhat variable in composition, and liable to cause injury by burning the foliage and fruit. From eight to twelve ounces to one hundred gallons of water has been found to be effective, the larger amount used when canker-worms have attained considerable size before spraying. Four pounds of quicklime, well slaked, added to one hundred gallons of water has greatly decreased the danger of "spray burn."

Paris green has sometimes been found to be adulterated, in which case it is of no value.

London purple has been less uniform in composition and more liable to cause "spray burn." It is usually stronger in arsenic, and six ounces to one hundred gallons is about the maximum used.

Arsenate of lead has been the most satisfactory insecticide. It has been less liable to cause injury, and has adhered to foliage and fruit very much longer. It is rather more expensive than Paris green, but it has been well worth the difference in price. The commercial brands of arsenate of lead sold as "Disparene" and "Target Brand" have proved satisfactory. The cheapest and at the same time a very satisfactory form of arsenate of lead was largely used at Hutchinson during the season of 1906, and was made by combining acetate of lead with arsenate of soda in the proportions of three pounds of arsenate of soda to seven pounds of acetate of lead. This mixture was satisfactory in every way.

The most satisfactory fungicide is the Bordeaux mixture, composed of sulfate of copper (blue stone, blue vitriol) and lime. Various proportions have been used, but the formula five pounds sulfate of copper and five pounds of quicklime of fifty gallons of water has been most used in late years.

Copper sulfate varies somewhat in composition and Bordeaux mixture should be tested before using in order that any excess of copper, which is liable to cause injury, may be detected and neutralized with more lime. Blue litmus paper has been used to make the test. If it remains unchanged it is safe. If it turns red, more lime should be added. Ferrocyanide of potassium is one of the most satisfactory tests. After the mixture has been thoroughly mixed, a sample is taken from the tank and a few drops of the ferrocyanide added. If a reddish brown precipitate appears the mixture has an excess of copper, and lime should be added until the drops of ferrocyanide remain unchanged.

The most satisfactory combination of insecticide and fungicide is the Bordeaux mixture and arsenate of lead. No ill effects have been noted in this combination.

PUMP AND POWER.

A good spray pump must have sufficient force to cover the plant treated with a very fine mist. The pump must have force, and a good nozzle

must be used. There are several good forms of nozzles. The Vermorel, Demorel, and Mistry have all given good service and satisfaction.

The number of nozzles used, and consequently the rate of spraying, depends upon the power. Any good hand pump operated by a strong man should furnish power for a double nozzle upon a single lead of hose. The hand pump is a good spray machine for the small grower. It should be a good one, with working parts (plunger, valve, air-chamber and cylinder) of brass. A pump of this kind has been used ten years with entire satisfaction. About the cheapest arrangement is that of mounting the pump upon a barrel and placing this with other barrels containing water and chemicals in a wagon, but where trees are low-headed it is often difficult to get the wagon in the best position for spraying.

The department has for many years used a copper-lined tank fourteen inches wide, three feet deep, and three feet long, mounted upon low wheels with shafts. It is so balanced that a man's weight upon the small platform projecting from the rear takes the weight from the horse's back. This has proved very useful in the vineyard, small fruit plantations, gardens, and orchards of small trees.

With a barrel pump and wagon two men should spray from seven to fifteen trees per hour, depending upon the size of trees and the convenience of water supply.

A spray pump operated by air pressure, secured by a sprocket attached to the hind wheels of a wagon, which operates an air pump which compresses air in a storage chamber, has been used by the department during two seasons' work. It requires a drive of some little distance, usually several hundred yards, to secure pressure for spraying. We have tried to keep the pressure about eighty pounds, and have set the safety valve at one hundred twenty pounds. In spraying very large trees we have found it necessary to spray alternate trees in order to maintain pressure. Care must be taken to keep all valves and points tight, but any man of ordinary acquaintance with machinery should be able to keep the machine in good order. The variation in pressure and the occasional necessity of spraying alternate trees, which causes a loss of time, are the only objections noted.

A form of sprayer operated by liquid carbonic gas has proved satisfactory in operation. The acid is obtained in fifty-pound drums, and has been obtained from manufacturers of chemicals. The cost has been five cents per pound. A pound of the liquid is sufficient power to spray an average of eighteen gallons of spray mixture, sufficient for nine average-sized fifteen-year-old trees. The apparatus is fairly simple, and the only difficulty noted has been the leaking of gas from a poorly soldered tube or a poor valve. It is easy to operate, and with good valve well tightened is convenient when operations are not continuous. The use of power which must be obtained at distant points has some obvious disadvantages.

For extensive operations a pump operated by a gasoline engine has been most satisfactory when everything is considered. The gasoline engine is a rather delicate machine, and some delays have been occasioned by failure of the engines to work. This department has used this engine four seasons, and with some repairs it will evidently be useful for many more. It is essential that the engine be covered in some way to protect it from the spray materials. In one instance an unprotected engine gave serious trouble before it had been in use one season. The chemicals used in spraying had so seriously corroded some parts of the dynamo used for a "sparker" that they had to be replaced. It is perhaps needless to say that any spraying machinery should be thoroughly cleaned before it is stored after each spraying, and especially so after the season's work is completed.

Preparations for spraying should be made sufficiently early in the year to insure the obtaining of materials in

sufficient quantity and of guaranteed quality, and the perfect condition of machinery. It is economy to provide extra nozzles, leads of hose, rods, and parts that are most liable to injury.

Convenient arrangements for dissolving and mixing materials should be made. An elevated platform is a great help where large operations are undertaken. Upon this should be placed tanks or barrels for dissolving materials and for holding stock solutions.

The chemicals used are most readily dissolved by suspending them in the upper part of the water in the tank or barrel. Clean cotton sacks have been found best. Burlap sheds some fiber. The use of one pound of the chemical to one gallon of water makes a solution that is convenient when computing the proportions of mixtures. Stock solutions should always be well stirred before using, and all materials should be carefully strained between the dissolving barrel and the stock tank and the tank of the sprayer.

It is best to use all materials directly after their preparation. Bordeaux mixture that has been prepared for some days has caused spray burn that could not be accounted for in any other way than that the mixture had changed during the time it was standing. Thorough mixing of all materials is essential. Some method of stirring is an essential part of spray machinery.

Apples have been sprayed especially for canker-worm (*Paleocrita vernata*), codling-moth (*Carpocapsa pomonella*), scab (*Venturia inaequalis*), and bitter rot (*Glomerella ruformaculans*).

Only once have the canker-worms been present in the college orchard in sufficient numbers to cause injury. They were noticed just as the blossoms' buds were swelling, and a thorough spraying was given. The later spray, just as the blossoms fell, answered for both canker-worm and codling-moth.

In an orchard near the college the canker-worms were not noticed until they had caused partial defoliation. The department's help was solicited and several sprays were tested. Arsenate of lead in form of disparene, three pounds to fifty gallons of water, was the most effective, but eight ounces of Paris green to one hundred gallons of water was fairly satisfactory.

SPRAYING FOR CODLING-MOTH.

Spraying for codling-moth is begun when the petals are fallen, and should be given as soon as possible after that stage. The calyx leaves are well open and are uppermost, and it is essential that poison be deposited there as the greater number of the early brood enter the small apple at the calyx.

The small apple grows rapidly and the second spraying should follow the first in at least ten days. The larvae that escape the first spraying will be mature insects within a short time after the first apples drop, and a spray should be given to protect the fruit from the second brood. At intervals of about two or three weeks, spraying for later broods has proved profitable.

For bitter rot or scab, Bordeaux mixture applied before the buds open destroy spores upon the bark and twigs. It should be combined with the second and fourth sprays for codling-moth, and if the disease has been very serious one or more later spraying will be profitable. Other insects and diseases have not been noted as serious where spraying for codling-moth and bitter rot have been applied.

In some instances a single spraying has secured a very great increase in the quantity of sound fruit, but in most cases a single spray has not been successful in proportion to repeated sprayings. The proportion of sound fruit on sprayed trees as compared with unsprayed trees has varied in different seasons, but an average for the past six years is nearly fifty per cent number one fruit from sprayed trees, and less than ten per cent from unsprayed trees. The per cent of marketable fruit, including the second grade, has shown slightly greater differences in favor of sprayed trees.

The cumulative effect of spraying has been noted in the greater freedom from insects and diseases of the experiment station orchards and vine-

TREES THAT GROW

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yards compared with neighboring plantations which have not been sprayed. The orchards have suffered no injury from canker worm, leaf-crumpler or tent-caterpillar, which have been very numerous in neighboring orchards during several seasons. The protection from fungus has been fully as valuable. During the seasons 1905-1906 practically no loss has been occasioned by bitter rot, scab, or rust, while unsprayed orchards in this locality have suffered seriously.

SPRAYING PEACH TREES.

In spraying peach trees to prevent brown rot and leaf curl the first spray should be applied before the leaf buds open. The foliage of the peach is much more easily injured than is that of the apple, and after the trees are in leaf the Bordeaux mixture should be reduced to half strength.

As the fruit reaches maturity the use of Bordeaux is liable to discolor the fruit. The colorless ammoniacal solution of copper carbonate has been used during ripening, but has been less effective than Bordeaux.

The plum varieties differ considerably in their liability to spray burn, but as a rule the Bordeaux should be diluted to half strength for plums.

The spraying of the vineyard to prevent mildew (*Plasmopara viticola*) has been uniformly successful. The crops from unsprayed vines have in several seasons been almost total failures when the sprayed vines have given fair crops.

VARIOUS EXPERIMENTS.

In the spring of 1906 the Experiment Station assisted in an advisory way in some very extensive spraying operations carried on by the apple growers at Hutchinson, Kan. Interest in spraying there was aroused by the very serious injury to the crop of 1905 by the codling-moth. Notes from the work there follow:

The orchards of Mr. Hadley and Mr. Wm. Newlin were visited the entire day, May 22, 1906. Mr. Hadley has an orchard of eighty acres—4,800 trees, ten, eleven, and twelve years old. Mr. Newlin has thirty-five acres. The varieties in the two orchards were practically the same—about one-third each of Ben Davis, Missouri Pippin, and Winesap. Jonathan. Mr. Hadley also has one hundred Jonathan, seventy-five Maiden Blush, one hundred and fifty Red Romanite. The ground is uniformly level, comparatively smooth, a good, fertile soil, though somewhat sandy. The trees are, as a rule, remarkably thrifty. This is especially true of Winesap and Ben Davis.

Very little blight was present in these orchards. Very little evidence of curculio was seen. The egg and larvae of the codling-moth were frequently seen. This is especially true of Missouri Pippin and Winesap. All larvae seen were very small, and all entered through the side of the apple. The codling-moth seemed to be a very unevenly distributed, some trees having many while others apparently had none.

These orchards were never sprayed before the year 1906. They were sprayed, first, before the buds opened, with Bordeaux mixture and arsenate of lead; second, after or at time of going out of bloom, with lead; third, beginning May 22, with Bordeaux and lead. The five pounds copper sulfate, five pounds lime and fifty gallons water formula for Bordeaux was used. The lime and copper sulfate were weighed and water measured. The arsenate of lead was made by dissolving: 15 lbs. arsenate of soda in 15 gal. water. 35 lbs. lead acetate in 35 gal. water.

Two pounds of this arsenate of lead was used for fifty gallons of water.

Mr. Newlin has a new and well-equipped Deming spray outfit, consisting of a one and one-half horsepower Perkins gasoline engine, a 200-gallon half-round tank, all mounted on a broad-tired wagon. The engine occupies the back part of the outfit, the tank in front. A tower about eight feet high is built over the engine, a cover three feet from the top makes a floor for the men to stand on and a cover for the engine. For further protection the engine is enclosed on the sides by heavy

black oil-cloth. These side covers are fastened by buttons to the frame and are easily removed or rolled up. Two canes of four Demorel nozzles each are used at 140-pound pressure. Both men stand in the tower. Four horses are used to pull the machine, driving very slowly, to six trees per minute and never stopping. As but one side is sprayed it is equal to three trees per minute.

Mr. Newlin has a very good mixing platform with the necessary tanks and barrels. The main platform is ten feet wide, ten feet high, and about fourteen feet long. To support this platform there are three rows of cottonwood and catalpa posts set about five feet apart each way. On or against one side of this main platform is a smaller one, a bench five feet high, five feet wide, and as long as the first. On the higher and larger platform are placed the lime stock solution tank, water tank, and copper sulfate stock solution tanks (barrels in this case). On the smaller lower side of the platform are placed the dilution tanks for lime and copper sulfate and also the insecticide tanks or barrels. The water tank is two and one-half feet deep, four feet wide, twelve feet long; the lime tank is two and one-half feet deep, three feet wide, and ten feet long. The dilution tanks are large casks, each holding over 250 gallons. The lime is slaked on the upper platform in a special slaking box. The slaked lime is run through a finely screened gate into the stock lime tank. The stock lime tank is filled with a given number of pounds of lime and the same number of gallons of water. When used to make Bordeaux it is stirred up and a given number of gallons are taken. This required amount of the concentrated copper sulfate solution is put directly into the copper sulfate dilution tank and the required amount of water, 100 or 200 gallons, is then run in from the water-tank. The lime dilution tank is similarly filled with lime and water. In the dilution tanks stand graduated sticks that indicate the number of gallons. When the two dilution tanks are thus filled, the contents of the two are run into the spray tank through a two-inch rubber hose. Both run at the same time, and both are equally diluted, so the best possible mixture for Bordeaux is made. After the Bordeaux is thus made the poison is added. In all cases of transference of liquids they are strained. Each of the stock solutions are strained again as they enter their respective dilution tanks. The water is pumped from a well by hand to the water-tanks. One or two men are kept at the mixing tanks, pumping water and mixing, getting ready for the spray wagon.

STATEMENT MADE BY MR. NEWLIN.

In December, 1906, Mr. Newlin made the following statement in answer to inquiries made by the department: "In 1905 the older trees were infected with scab and bitter rot and full of codling-moth; so badly infected that we practically lost the 1905 crop. All of the 110 acres was sprayed in 1906. Part we sprayed twice, part three times, and part four times. Blue vitriol and lime (Bordeaux mixture) for the scab and bitter rot, and arsenate of lead for the codling-moth. We sprayed the old orchard three times, part of the balance four times, and part only twice. The effect of the late sprayings has been to double the amount of good apples, with but little bad effect noticeable to the foliage of the trees. However, I would say that the spraying done in exceedingly hot weather does cause the foliage of the trees to drop, especially on the Ben Davis and Jonathan varieties. I would like to make this fact plain: that where we sprayed four times we picked twice as many No. 1 apples as where we sprayed twice, and they were freer from fungus. Our spraying cost us about three cents per tree per application. That portion of the orchard

which was sprayed four times about seventy-five per cent of No. 1 apples, and in a nearby adjoining orchard where no spraying was done we have noticed that there were very few sound apples picked in 1906."

MR. MYERS' ORCHARD.

The orchard of Mr. Homer Myers, situated about six miles southeast of Hutchinson, in Lincoln township, was visited Friday, May 18, 1906. The orchard consists of 3,000 trees, set in 1890. Most of the trees are Missouri Pippin, Ben Davis, and Jonathan, with about 125 Winesap. The orchard is uniformly level, being a few feet higher at the northwest.

From evidence given by a great quantity of mummy apples beneath the trees on the ground, and the description of Mr. Myers regarding those mummy apples, it appears that bitter rot is very bad in this orchard. No extensive search was made for canker spots, from which the disease might spread.

Mr. Myers has never sprayed until this spring. He now has a new Deming one and one-half horse-power "Bonanza" gasoline sprayer, having a 200-gallon home-made tank, all mounted on a wagon truck. The engine, with hose, nozzles, canes, and necessary fixtures, without tank, cost \$176. He runs two canes, of two nozzles each, running at 120 pounds pressure. The engine runs remarkably well and is thoroughly effective, and I think wholly satisfactory. The engine is not covered. The tank is a half round, long, and occupies the front end of the wagon. One man sprays from off the ground, the other from the tank. The double "Demorel" nozzle, with cap having larger aperture, is used. Mr. Myers had sprayed this orchard twice this season, the first time just before or as the buds were opening, with Bordeaux. A part of the orchard was sprayed at this time, using one pound of arsenate of lead to fifty gallons of Bordeaux. The orchard was sprayed again just before and after April 31, using arsenate of lead at the rate of one and one-half to two pounds per fifty gallons water. Mr. Myers makes his own lead, using three parts sodium arsenate to seven

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parts lead acetate. The arsenate costs twelve and one-half cents per pound, the acetate ten and one-half cents. The required quantities of lead acetate and sodium arsenate for his tank are each dissolved separately in a small quantity of water and then poured into the spray tank, which was filled before with water.

In looking over the orchard no great evidence of previous spraying was shown, although it could be seen that the trees had been sprayed. He put on approximately two gallons per tree. No evidence of burn could be detected. Mr. Myers estimated that it required four days to spray his orchard.

The set of fruit in this orchard was not much above medium—not as large as it should be.

In making Bordeaux, Mr. Myers put the lime solution in the tank before he put in the copper sulfate. He weighs all his materials, lime as well as the copper, and does not use a test.

STATEMENT MADE BY MR. MYERS.

In December, 1906, Mr. Myers made the following statements in answer to inquiries made by the department:

"In 1905 apples nearly all fell off on account of worms. Some scab on Missouri Pippins. In 1906 we sprayed the whole forty acres. Used Bordeaux mixture and arsenate of lead, six pounds acetate of lead, two pounds arsenate of soda, 200 gallons water. The lead was mixed in buckets. For Bordeaux we used high tank and barrels with gravity system. We used the Deming gasoline engine and pump and sprayed three times—the first as the buds came out, the second after the petals fell, the third when the fruit was the size of marbles. It cost us \$12 for the lead and \$17 for Bordeaux for each application for 2,400 trees, and the cost of labor was \$30. The last spraying we used both mixtures.

"I will acknowledge that I fell down on the spraying. I should have sprayed twice more later in the season. I intended to go over them about July 10, but could find no worms or any indication of them and, being very busy with other work, let it go. In sorting they made 60 per cent No. 1, 20 per cent No. 2, and 20 per cent culls. It is my intention to be more thorough this year and see if it will have better results."

YAGGY BROTHERS' PLANTATION.

The Yaggy plantation was visited Wednesday, May 23. Only a hurried inspection of a small part of the orchard was made. In the brief time considerable evidence of codling-moth and some curculio was found. Most of the larvae entered from the side. One cluster of apples bore five eggs on the smaller leaves, the largest number I had yet seen. The orchard had been sprayed once when going out of bloom. The leaves showed some evidence of the spray, but, as we would expect, the apples showed none.

The Yaggy Brothers are now spraying the second time, using Bordeaux and arsenate of lead. They have five of the Perkins gasoline spray engines. All have towers, 200-gallon tanks, using eight nozzles, 140-pound pressure. They have one man spray from the tower and one from the ground.

The Yaggy Plantation Company's plans differ from the others in that they mix the dissolved chemicals in the wagon tank of the sprayers. The water is supplied from wells conveniently located in the different orchards. A centrifugal pump is used, which throws the water with considerable force into the wagon tank. The copper sulfate solution is emptied into the tank as it fills, and when nearly full the lime is added. This adds the lime to a dilute solution of copper, and no serious curdling was noticed. A mechanically operated agitator, worked by the gasoline engine, is kept in motion all the time. Every tank is tested with the ferrocyanide of potassium solution. This orchard was carefully observed in August, and little evidence of any spray burn was noticed.

STATEMENT MADE BY MR. YAGGY.

In December, 1906, Mr. Yaggy made the following statements in answer to inquiries made by the department:

"The 1906 crop of apples showed little or no fungous injury. About fifty

per cent wormy (codling-moth). We sprayed 700 acres. About fifty acres of scattering trees. First application, arsenate of lead, ten pounds to 200 gallons water. Second application, arsenate of lead with Bordeaux mixture. Third application, arsenate of lead. We used Deming engine outfits and Duplex hand pumps—five engines and three hand pumps—and made three sprayings, all after the blossoms fell. We believe late sprayings to be very efficacious against codling-moth. The cost of spraying is roughly estimated at two cents per gallon. Sprayed orchards produced above eighty per cent sound apples, except where hail struck the orchard. Unsprayed orchards in this vicinity produced so small a quantity of sound apples as to be of no factor at all in the apple market.

"The arsenate of lead referred to above was prepared by ourselves. It did not cost above eleven cents per pound f. o. b. Hutchinson, Kan., and was absolutely free from the adulterants found in ordinary brands of arsenate of lead. It proved to be adhesive beyond our wildest hopes, adhering to the foliage after the heaviest of rains. We believe the arsenate of lead to be far superior to Paris green or any other form of arsenic yet offered."

OPERATIONS OF MR. UNDERWOOD.

The operations of Mr. W. H. Underwood were the largest of any undertaken. Four hundred acres were sprayed and fifty acres were unsprayed. His report is as follows:

"In 1905 the crop was very bad, worms in almost every apple. In 1906 we sprayed four hundred acres, leaving fifty unsprayed.

"We used Bordeaux mixture and arsenate of lead. We take thirty pounds arsenate of soda and suspend it in a linen or cotton sack (so that no fibre will come off) in thirty gallons of water. We then suspend seventy pounds of acetate of lead in another sack in seventy gallons of water. When these are dissolved we run them together into a tank holding one hundred gallons set lower than the two stock tanks so it will run in by gravity. When these two colorless liquids come together they made a chemical combination which looks like milk or lime. We then stir thoroughly, and have it stand at least two hours before using. It precipitates very little, but before using we stir thoroughly and then take out from six to eight gallons of this mixture, which is a pound to the gallon, to put into our 200-gallon spraying tank, giving six to eight pounds of the poison to 200 gallons of water. The government chemist tells us that our mixture is some twenty per cent to twenty-five per cent stronger than the commercial brands of arsenate of lead on the market, and we can mix it cheaper than we can buy the trade arsenates, and have a stronger article. I think we must have been right, because we secured such excellent results, having changed our crop of year before last of all wormy to about ten per cent wormy this year.

"I can not answer the question as to what it costs to spray. We have had all in one lot Bordeaux, poison, labor, machinery, wagons, tanks and our whole spraying operation has been charged against the crop this year so as to get it out of the way and forget about it. Even by doing that we made three times the money this year that we ever did before, and I believe the spraying did it. This year from the unsprayed orchard no apples were picked or even sold from the ground. From the sprayed orchard we packed forty per cent to fifty per cent extra fancy, twenty-five per cent No. 1, balance No. 2 and culls."

Taken at His Word.

Master Walter, aged 5, had eaten the soft portions of his toast at breakfast, and piled the crusts on his plate.

"When I was a little boy," remarked his father, who sat opposite him, "I always ate the crusts of my toast."

"Did you like them?" inquired his offspring, cheerfully.

"Yes," replied the parent.

"You may have these," said Master Walter, pushing his plate across the table.—Harper's Weekly.

Miscellany

Insure Deposits.

EDITOR KANSAS FARMER:—Having noticed in the columns of your paper the urgent pleadings of different ones to your Governor for an extra session of your Legislature (for the purpose of passing a banking insurance law, similar to the one we have) I am constrained to offer a plan which, after consideration ever since the money panic began, I think will be better and farther-reaching than anything yet suggested. I have been slow to speak of the plan referred to, for fear of criticism, but it would seem that one ought to be safe now, in the light of some that have been offered. I am going to speak more especially in connection with State banks, and here is the plan:

Require every banking institution to give bond for the safe-keeping of the people's money. Or in other words, require just the same as we do after our money becomes a public fund. The State can then declare them public depositories and stand behind them. Then require the people to keep their money in these banks where those who need it can come in contact with it. Put a penalty on the hoarding and hiding of cash, in proportion to the amount. This will take away no privilege we now enjoy, except the one to hide, and this must be taken, or we will never be free from money panics. We have been given a medium of exchange for a purpose, and that purpose is, for the transaction of business. The principle of man being allowed to own this medium is wrong. What I mean is, to the extent of being allowed to hide or destroy, if he sees fit. I have in mind a man who had one and one-half million dollars in a bank when the present money trouble began. He is a real estate dealer. He withdrew the money and had it locked up in a safety vault, not because he was afraid, but because he wanted to help make things worse. He reasoned that if money were withdrawn that property would shrink 40 to 50 per cent. He would then step out and buy twice as much as before the trouble began. We can see the folly of allowing such things to take place. The plan given will not keep any one from loaning or using his means as he saw fit, but will keep the money busy as it should be. It is not the money but what it will buy that we want, hence we would not lose a single privilege which we should have.

Now in regard to the law that our new State has enacted. While it will no doubt have the effect of satisfying the depositor, yet I look at it as being a very shortsighted law. Under the old order of things, if a bank broke, the man with money, or the depositor, lost. But under the new law the poor man (as usual) will have it to pay, because the source of income of all banks is the borrower. Hence, the law will require him to set aside an enormous fund for the benefit of the man of means. No doubt some will say that the banks will have this to pay. But let me tell you, it will be just like the merchant, who must make 50 cents on every sack of sugar in order to live. If his sugar costs him \$4.50 per sack, he will have to sell it for \$5. But if it costs him \$5 per sack he will have to sell for \$5.50. Who pays the bill, the merchant or the consumer? No! I tell you the policy is wrong. It is hoarding a lot of money which will do no one any good. No doubt the plan I have offered will put some banks out of business on account of not being able to give the proper bond. But this is just what we need to do, wherever these conditions are present. What would you think of letting a man act as county or State treasurer who could not give bond for safe-keeping of the public funds? Under our new plan we would have strong institutions, and the money of the people would be safe

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and also be where we could get to it for use—the purpose for which it was created.

J. R. ROBERTS.

Grant County, Okla.

Manhattan Needs a Lantern.

EDITOR KANSAS FARMER:—Manhattan is a great place, with a great school there, great buildings, and there were great "doings" there last week. There was the State Dairy Association, Kansas Corn-Breeders' Association; Cattle Breeders', Swine Breeders', and the boys, the young corn-growers of Kansas.

Manhattan is all right. There is nothing the matter with Manhattan, till,

"Night, sable goddess, from her ebon throne,
In rayless majesty stretches forth
Her leaden scepter, o'er the college grounds,
Darkness, how profound!"

And I had forgotten my lantern. No, I hadn't forgotten it. I didn't know I would need to take one. I thought they would have a lantern I could use.

When some one comes to our house, and wants to go to the different buildings at night, I have a lantern for him. Over a thousand men in Manhattan, and "nary" one had a lantern.

The Dairy Association appointed a legislative committee, and I would suggest that this committee ask—no, they needn't mind. When Governor Hoch reads this—of course the Governor reads THE KANSAS FARMER—he can recommend that the Legislature appropriate enough money to buy two hundred lanterns for Manhattan—they need at least that many.

Clay County. D. M. PORTER.

Farm Notes.

N. J. SHEPHERD, ELDON, MO.

To feed economically balance the rations.

Sell stock early when in good condition.

Right planning saves both time and labor.

Decaying organic matter in the soil adds to its warmth.

Comfort the year round should be the rule in keeping animals.

There is the most profit in the growth of young stock.

By keeping roughness on the farm the fertility of the farm is increased.

Farming, like any other industry, to be profitable must be done well.

Health, strength, and efficiency are each and all very largely dependent upon digestion.

The older stock becomes, before marketing, the more it costs to feed and fatten.

The profit in stock-growing comes after the food of support has been paid for.

Giving the animals good care will lay the foundation of future growth and development.

Keep the stables clean, haul the manure direct to the fields, and scatter

where needed. This will save both time and labor.

The fertilizing materials in the soil need to be balanced as well as the food for the stock.

The value of good breeding is intensified when it is carried along the same line for a considerable time.

When an animal is cold and exposed more food is required to keep animal heat instead of putting on flesh.

To make farming a success a man must have a system; he must rotate his crops and avoid growing two straw crops on the same land in succession.

An apple- or cherry-tree is much more valuable if it shoots out low. Trim from the top as this will cause the lower branches to grow out.

All young growing stock will be the better for daily exercise. A safe rule is to turn them out every day that the weather will permit during the winter.

One of the best ways of increasing the manure supply is by using plenty of bedding and in doing this the comfort of the stock is increased.

False Weights and Measures.

Some time ago the Massachusetts Legislature abolished the use of spring balanced scales, which show both the weight of the article sold and also compute the selling price. It is well nigh time that some of our other States were following the example of the Old Bay State. It has been estimated that there are no less than sixty thousand dishonest scales in the country, and that their annual aggregate fraud amounts to from eighteen to twenty million dollars a year. It does not seem like a very large amount, these installments of two or three cents for half ounces and ounces which are never delivered, but in the aggregate it is something which every farmer feels if he knows it, and a wrong which he is entitled to have righted. Such scales can be made to give honest weights and prices if the grocers and butchers using them are straight and the public insistent. In short, it is another case of eternal vigilance as being the price of common honesty. This is another case where our farmers should rise up in their power and demand legislation which will abolish the use of all scales which afford such ample opportunities for defrauding the public.—Practical Farmer.

Cutting It Short.

De Witt—You can bet if I were nominated for president I wouldn't fool away my time writing a long letter of acceptance that nobody reads.

De Hitt—What would you say?

De Witt—Thanks, I'll run.

THE KANSAS FARMER needs more representatives. Here is your chance. Good wages for any man or woman, boy or girl, either for full or part time. Write us about this.

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By W. R. Beattie. A practical guide for beginners and a standard reference of great interest to persons already engaged in celery growing. It contains many illustrations giving a clear conception of the practical side of celery culture. The work is complete in every detail, from sowing a few seeds in a window-box in the house for early plants, to the handling and marketing of celery in carload lots. Fully illustrated. 150 pages. 5x7 inches. Cloth.....\$0.50

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By Will W. Tracy. The author has rounded up in this book the most complete account of tomato culture in all its phases that has ever been gotten together. It is no second-hand work of reference, but a complete story of the practical experiences of the best posted expert on tomatoes in the world. No gardener or farmer can afford to be without the book. Whether grown for home use or commercial purposes, the reader has here suggestions and information nowhere else available. Illustrated. 150 pages. 5x7 inches. Cloth.....\$0.50



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Beautiful Sea.

Beautiful, beautiful billowy sea,
Rolling and dancing and tumbling in
glee,
Breaking in bubbles as white as the
snow;
Washing to shore with thy ebb and thy
flow;
Rumbling and roaring in cadence so
grand;
Leaving thy footprints along the white
sand;
Beautiful, billowy sea.

Beautiful, beautiful, billowy sea,
Some questions I'll ask; wilt thou an-
swer me?
Who created thy waves with their del-
icate hue?
Who gave thy proud breakers their
beautiful blue?
Who formed, who created thee, beauti-
ful sea?
Hush thy commotion and answer to
me—
Beautiful, billowy sea.

Beautiful, beautiful, billowy sea,
Loudly, yes loudly, thou'rt speaking to
me,
Speaking of One who once walked the
blue wave,
"Strong to deliver" and "mighty to
save."
Wild was the night upon dark Galilee;
High was the tempest and angry the
sea—
Turbulent, boisterous sea.

Tossed with the waves in the midst of
the sea—
Disciples were sailing o'er dark Galilee.
Walking triumphantly over the wave,
"Strong to deliver" and "mighty to
save."
Jesus draws near them; "A spirit" they
cry,
He sweetly assures them—"Fear not;
it is I"—
Maker of earth and of sea.

Exceedingly joyful they take Him on
board,
While awed and subdued at the voice
of the Lord
The tempest is stilled and the billows
grow calm.
Methinks the disciples were singing a
Psalm
As morning light dawned over blue
Galilee,
And sunbeams came kissing the waves
of the sea;
Beautiful, billowy sea.

Sinner, now drifting o'er life's troubled
sea,
Pause for one moment and listen to me.
Dangers surround thee; the tempest is
high,
Falls is thy barque, and thy doom
draweth nigh,
Christ the Redeemer still walketh the
wave
"Strong to deliver" and "mighty to
save."
Take Him, O take Him on board!
—Belle Staples.

The Vision of Life.

To have a vision of life makes it
seem much more interesting to be
here doing day by day the daily round
of duties. Sometimes it seems mono-
tonous and we soliloquize on the vanity
of life as old Solomon did and we
wonder if it really is worth while. In
this existence here we toil to get
enough to keep this body nourished
and clothed for a term of years and
then leave it to return to earth. The
trouble is, we have a wrong and nar-
row view. Let us enlarge our vision
and take in the world. Let us look
up and out beyond the little tasks and
think of our work as a part of the
world's great work. "What share can
I have in the world's great work?"
asks the busy mother, whose round
of toil consists in cooking, sweeping,
dishwashing, and caring for and train-
ing the little ones. Ask Abraham Lin-
coln what part his faithful stepmother
had in freeing the slaves in America.
Ask Washington and Jefferson and
Adams what their mothers did to
establish this grand republic. Ask
Edison and the modern inventors, who
shares in the wonderful achievements
and advancements of civilized life?

The fireman in the engine on the
railroad train with face and hands
black and grimy works hard and some-
times long shovelling in the coal that
creates the power that moves the en-
gines. It is possible for him to see a
vision—that will take away from him
the thought of drudgery in the work
and make even the money compensa-
tion received seem of minor import-
ance. He is a part and a very essen-
tial part in the great system of trans-
portation that carries commodities
from one part of the country to an-
other, making it possible to exchange
one product for another, carrying let-
ters from friend to friend, and convey-
ing man from one quarter of the coun-

try to another in a very short time.
He sets off the motive power and with-
out his work things would come to a
standstill. He is an important factor
in the world's work. And so, in what-
ever calling may be ours, no matter
how humble it may be, if it be some-
thing that helps in the world's work,
we may have a vision that will take
away the thought of plodding drudg-
ery, and lift us out of the narrow
boundaries of our lives.

Some of the old cathedrals that were
built centuries ago and are still stand-
ing, were built by the monks, each one
having a certain part to perform in
creating the structure. Each did his
part so well that the walls, where the
several parts came together fit to-
gether and made a perfect whole. Let
no one despise his calling, but elevate
it, glorify it and see to it that it is
well done, and that no part of the
world's work will suffer because he
failed in his part.

When Honor Walks Abroad.

People are too apt to believe every
one dishonest until they prove them-
selves otherwise. The confidence dis-
played in the little incident quoted be-
low is a rare thing. It is taken from
an article on "The Golden Rule in
Real Life," by Brand Whitlock in The
Circle for December.

One evening at dusk, as Mayor
Jones and I were going home, a ne-
gro tramp, unkempt and sinister,
asked him for the price of a lodging.
He had no change, but he handed the
tramp a five-dollar bill, telling him to
get it changed and he could have his
alms. We waited; the Mayor talked
of other things; I, with far less faith
than he, in some dubious expectation.
But after a while the tramp came
back, and into the Mayor's hand
poured out the change in silver. The
Mayor, humanly complaining of the
heavy silver which the Treasury De-
partment sends to us in the West so
that New York may have all the crisp
dollar bills, dropt the money in his
pocket.

"Ain't you going to count it?" asked
the tramp.

"Did you count it?" asked the May-
or.

"Yes."

"Was it all right?"

"Yes."

"Well, then, there's no need for my
counting it, is there? Did you take
out what you wanted?"

"No."

"Here then."

The Mayor gave the tramp a coin
and we went on.

There was no possible ostentation
about this; Mayor Jones had no need
in the dark to do anything to impress
me, his friend. I should not, indeed,
stoop even to explain so much. But
how much good did such confidence do
that wandering outcast? How much
good did it do me or others with whom
he might come in contact? By the
same law, possibly, my own lack of
faith in the tramp would have led him
to treat me differently.

When one understands this higher
law as Mayor Jones understood it,
every act of one's life, no matter how
trifling or insignificant it may seem,
becomes really of monumental import-
ance, and the hasty word, the un-
kind glance, the very spirit, no matter
how deeply hidden, in which a thing
is said or done, are seen to have an
effect which may reach further than
imagination can go, an effect not only
on one's own life and character, but
also on the lives and characters of
all those about one.

To Preserve a Husband.

"Select with care, the very young
and green varieties, takes longer to
prepare, but are often excellent when
done; those too crusty take a long
time to cook tender. One neither hard
nor yet soft will give the best satis-

faction. Do not keep him in a pickle,
nor in hot water for even a little while,
as this toughens the fibre, retards the
cooking, and often spoils the result.
Never prick to test for tenderness, this
leaves a mark, and they are never so
smooth afterwards. Even the poorer
varieties may be made sweet and ten-
der by the following method; wrap in
a mantle of charity and keep over a
steady fire of loving domestic devo-
tion; garnish with patience, well
sweetened with smiles, and flavor with
kisses to taste. Serve with peaches
and cream. When thus prepared they
will keep for years."—California.

The Child's Desire.

The ideal life—the life of full completion—haunts
us all. We feel the thing we ought to be beating be-
neath the thing we are. —Phillips Brooks.

A young girl read these words at
the head of a favorite story one day.
The truth of them took hold of her in-
stantly. For what normal youth is not
filled with yearnings to be good and
great? Some years afterwards, when
she read the words again, she felt con-
strained to say, in the light of her ex-
perience, that it is not only true of
aspiring youth, but also of children of
all ages.

In other words, the child wants to
be good. From its actions we might
imagine that its heart was set on mis-
chief continually. But if we have the
skill and patience to get at the young
child's heart, we shall find that it re-
ally wants to be good. Every mother or
teacher can tell things illustrating the
child's response when this desire is
touched. When you read children a
story of a great or heroic deed, if they
do not say in words that they would
like to do something similar, their
comments show that that is what is
in the mind.

One mother said that she found it
profitable to tell her little ones the
story of the Pearl Princess often. This
is one of the truths of life masquerad-
ing in fairy lore. You will remember
that the child who was loving and kind
had pearls and roses dropping from
her lips whenever she spoke, while the
selfish, bad child dropped toads and
vipers. The mother says that, after
hearing this story, the children are
doubly careful to be gentle in speech
and kind. Not that they expect to
meet a fairy who will convert their
words into literal pearls, but they have
had vividly pictured the loveliness of
such conduct, and their own secret de-
sire has been touched. We ought to
seek out this desire oftener. The love
that thinketh no evil is a great thing
in training children.

School-teachers sometimes see the
pathos of the condition of those chil-
dren who are called bad. When one
of these school torments falls into the
hands of a teacher who loves boys well
enough to understand them, she mere-
ly lets him know that he is no longer
under ban, and she expects him to be
good. The response is sometimes won-
derful, and the result is always an im-
provement.

But mothers rarely make the griev-
ous error of believing their children
altogether bad. They may ascribe
wrong motives occasionally, but in gen-
eral they may be trusted to see the
best in the child.—Zella Margaret Wal-
ters, in The Mother's Magazine.

Kubelik is the Son of a Peasant.

HIS EDUCATION WAS PAID BY MARKET-
GARDENING.

Kubelik, the famous violinist, is a
living proof that even in Europe merit
may carry a man from a peasant's hut
into exclusive society, says the The
Delineator for January.

Twenty-seven years ago the poor Bo-
hemian market-gardener Kubelik, to
whom a son had been born, would
have called insane anybody who pre-
dicted that the baby would live to mar-
ry into the most exclusive aristocracy
in Europe. In this part of the world
music is the supreme art, and it
seemed natural that the king of
modern violinists should wed Countess
Marianne Czaky, daughter of one of
those ancient Bohemian houses that
trace their origin farther back than
any other aristocracy in Europe. Ku-
belik was but twenty-three years old
at the time of his marriage, and the

The Badge of Honesty

Is on every wrapper of Doctor Pierce's
Golden Medical Discovery because a full
list of the ingredients composing it is
printed there in plain English. Forty
years of experience has proven its superior
worth as a blood purifier and invigorat-
ing tonic for the cure of stomach disorders
and all liver ills. It builds up the run-
down system as no other tonic can in
which alcohol is used. The active medi-
cinal principles of native roots such as
Golden Seal and Queen's root, Stone and
Mandrake root, Bloodroot and Black
Cherrybark are extracted and preserved
by the use of chemically pure, triple-
refined glycerine. Send to Dr. R. V. Pierce
at Buffalo, N. Y., for free booklet which
quotes extracts from well-recognized med-
ical authorities such as Drs. Bartholow,
King, Scudder, Coe, Ellingwood and a
host of others, showing that these roots
can be depended upon for their curative
action in all weak states of the stomach,
accompanied by indigestion or dyspepsia,
as well as in all bilious or liver complaints
and in all "wasting diseases" where there
is loss of flesh and gradual running down
of the strength and system.

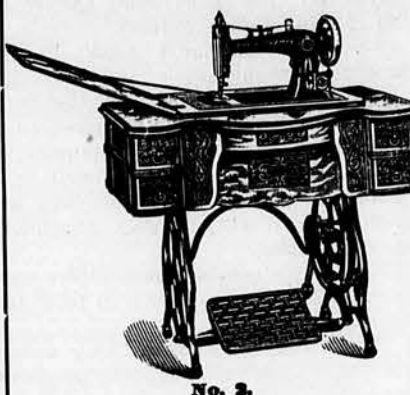
The "Golden Medical Discovery" makes
rich, pure blood and so invigorates and
regulates the stomach, liver and bowels,
and through them, the whole system.
Thus all skin affections, blotches, pimples
and eruptions as well as scrofulous swell-
ings and old open running sores or ulcers
are cured and healed. In treating old
running sores, or ulcers, it is well to in-
sure their healing to apply to them Dr.
Pierce's All-Healing Salve. If your drug-
gist don't happen to have this Salve in
stock, send fifty-four cents in postage
stamps to Dr. R. V. Pierce, Invalids' Hotel
and Surgical Institute, Buffalo, N. Y., and
a large box of the "All-Healing Salve"
will reach you by return post.

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trum as a substitute for this non-alcoholic,
medicine of known composition, not
even though the urgent dealer may
thereby make a little bigger profit.

Dr. Pierce's Pleasant Pellets regulate
and invigorate stomach, liver and bowels.
Sugar-coated, tiny granules, easy to take
as candy.

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packed in a neat, velvet-lined box,
are complete in every detail, and
with them one can produce any and
all kinds of fancy work. A full
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foot, feller, quilter, four hemmers of
varying widths, cloth guide and
screw, six bobbins, twelve needles,
filled oil can, two screw drivers and
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A LARGE INCOME FOR LIFE is the desire of
all. If you have money to invest or can make small
monthly payments, write us for information. Man-
hattan Investment Co., 69 West 23d Street, New York
City.

little countess was even younger. They live at Kolin, Bohemia, where the famous violinist has bought a castle, and there they divide their time between music and the care of their twin daughters. If there is anything in the adage that a good son makes a good husband, Mrs. Kubelik should be very happy, for her husband is devoted to his old peasant mother and deeply reveres the memory of his father, who made every sacrifice for his son's musical education. The first money Jan earned by playing he spent in buying a wreath for his father's grave.

Kubelik is making a concert tour in America this winter, and his wife accompanies him.

"Leprosy Not so Bad," says Jack London.

"If it were given me to choose between being compelled to live in Molokai for the rest of my life, or in the East End of London, the East Side of New York, or the Stock Yards of Chicago, I would select Molokai without debate."

Thus writes Jack London in the Woman's Home Companion of his visit to the Hawaiian leper colony of Molokai.

"In Molokai the people are happy. I shall never forget the celebration of the Fourth of July I witnessed there. At six o'clock in the morning the 'horribles' were out, dressed fantastically, astride horses, mules and donkeys (their own property), and cutting capers all over the settlement. Two brass bands were out as well. Then there were the pa-u riders, thirty or forty of them, Hawaiian women all, superb horsewomen, dressed gorgeously in the old, native riding costume, and dashing about in twos and threes and groups. In the afternoon Mrs. London and I stood in the judges' stand and awarded the prizes for horsemanship and costume to the pa-u riders. All about were the hundreds of lepers, with wreaths of flowers on heads and necks and shoulders, looking on and making merry. And always, over the brows of hills and across the grassy level stretches, appearing and disappearing, were the groups of men and women, gaily dressed, on galloping horses, horses and riders flower bedecked and flower garlanded, singing and laughing and riding like the wind. And as I stood in the judges stand and looked at all this, there came to my recollection the lazar house of Havana, where I had once beheld some two hundred lepers, prisoners inside four restricted walls until they died. No, there are a few thousand places I wot of in this world over which I would select Molokai as a place of permanent resident."

The Ex-President.

Ex-President Grover Cleveland has written a remarkable article on "Our People and Their Ex-Presidents" for The Youth's Companion of January 2. In it Mr. Cleveland says:

"As I am the only man now living who could at this time profit by the ideas I have advocated, I hope my sincerity will not be questioned when I say that I have dealt with the subject without the least thought of personal interest or desire for personal advantage. I am not in need of aid from the public Treasury. I hope and believe that I have provided for myself and those dependent upon me a comfortable maintenance, within the limits of accustomed prudence and economy, and that those to whom I owe the highest earthly duty will not want when I am gone. These conditions have permitted me to treat with the utmost freedom a topic which involves no personal considerations and only has to do in my mind with conditions that may arise in the future, but are not attached to the ex-President of to-day; and I am sure that I am actuated only by an ever-present desire that the fairness and sense of justice characteristic of true Americanism shall either fall nor be obscured."

THE KANSAS FARMER needs more representatives. Here is your chance. Good wages for any man or woman, boy or girl, either for full or part time. Write us about this.

The Young Folks

To-morrow.

Lord, what am I, that, with unceasing care,
Thou didst seek after me, that thou didst wait,
Wet with unhealthy dews, before my gate,
And pass the gloomy nights of winter there?
Oh, strange delusion, that I did not greet
The blest approach! and oh, to heaven how lost,
If my ingratitude's unkindly frost
Has chilled the bleeding wounds upon thy feet!
How oft my guardian angel gently cried,
"Soul, from thy casement look, and thou shalt see
How he persists to knock and wait for thee!"
And oh! how often to that voice of sorrow,
"To-morrow we will open," I replied,
And when the morrow came, I answered still, "To-morrow."
—Translation from the Spanish poet, Lope Felix De Vega Carpio, by Henry Wadsworth Longfellow.

A Message From the Muses.

Opportunity, oh mystic power,
That doth each life visit,
And they who well your value know,
Your patronage solicit.

To those who entertain you best
A rich reward you give;
Oh pray to me the secret tell
That I may better live.

Oh life that longs for unseen power,
By opportunity wrought,
To you a message I would give,
Of how that power is brought.

'Tis this: Do well the common tasks
That round about you lie,
Ask God to help you do them right,
And set your ideals high.

Be patient in what's your duty,
And do your best always,
And soon there will arise for you
And opportunity.

Perhaps 'twill be some trivial task,
And you would never guess
That it will be the first rung on
The ladder of success.

If you would find my mystic power
Afar you need not roam,
For when I come I'll visit you
In the common tasks at home.

—G. A. Dodge.

The Whole Truth.

ANNA DEMING GRAY.

"Well, I'm not deceitful, anyway," said a young girl in a group of girls who stood near me at a railway station, waiting for their train.

They seemed to be on their way back to college in a neighboring city.

"I always say right out just what I think."

"But isn't that rather rude, sometimes, Kate, and unkind?" asked a shy looking girl in the crowd.

"Well, I wouldn't say right out all the silly things I think—not for a fortune," said another. "Somebody would be stirred up, or hurt most of the time."

"No," said the one they called Kate, "I'm positive girls, that if everybody would be perfectly frank and outspoken, it would save a lot of trouble. If you honestly think one thing, why say something else?"

"We have just fifteen minutes before our train comes," said a girl with laughing brown eyes. "Suppose we try this notion of Kates. Lets say just what we think for ten minutes."

"Now everybody be honest, and don't smooth up a thing, just out with it, in the lovely, frank, honest way Kate likes!"

There was much laughter, and a little begging off at this, but they finally all agreed, quite unconscious of the amused and interested listener in the seat next.

After that, no one spoke for a minute, and then Brown Eyes asked: "By the way girls, how do you like my new fall hat?"

"Fine," said one.

Kate blushed, but said firmly, "It makes your nose look more tipped up than ever, and you have such a funny nose anyway."

There was a laugh in which the owner of the funny nose joined.

"It doesn't look so badly as that bright red hat you had last winter, Kate, with your red hair, that hat was simply awful."

Kate flushed, but laughed with the others.

"Well anyway Kate's hair is always fixed becomingly," said another, "and is looks better than the mop of a pom-

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padour Bess wears down to her eyes." "Good land girls—! If we keep this up, we won't be on speaking terms at the end of ten minutes," said Brown Eyes. "Isn't it too lovely and pleasant to be quite frank, Kate, and say just what one thinks? Or will you own up, that it wouldn't do in civilized society?"

"My grandfather used to say, 'Always tell the truth, but don't always tell all the truth,'" said Bess.

"And to be as frank as that, would only be rude and unkind." And Kate was obliged to admit that the others were right.

"For you see," said Brown Eyes, "There's so much good in the worst of us, And so much bad in the best of us, That it doesn't behoove any of us, To speak ill of the rest of us."

Town and Country Boys.

A country boy's lack of opportunity is his best equipment for the serious struggle of life. This sounds paradoxical, but it is true. It is just as true as the opposite proposition, that the greatest hindrance a city boy has to contend with are the opportunities which beset him when young and pursue him till he begins the real business of life—a business which each individual must carry on for himself. For the city boy everything is made as easy as possible. Even pleasure becomes to him an old story before he is out of his teens. Brought up in the feverish rush of a place where great things are happening day by day, he sees the world with a cynic's eyes and despises the small things which, like the bricks in a house, go to the upbuilding of characters and careers. He believes in using large markets in the game of life; for pennies and small units of value he has little taste and scant regard.

The conditions surrounding the country boy are as different as possible. There is a great deal of regular work that every country boy must do, and this regularity of employment, mostly out of doors, inculcates industrious habits, while it contributes to a physical development which in after years is just as valuable as any athletic training that can be had. He can not run as fast, perhaps, as those trained by a system; he may not be able to jump as high or so far, or excel in any of the sports upon which we bestow so much time and from which we get so much pleasure, but his development enables him to buckle down to hard work in which hours are consumed and from which very little or no immediate pleasure is extracted. His strength may be something like that of the cart horse, but the cart horse is to be preferred when a long and steady pull is re-

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quired. The thoroughbred race horse has a fine flight for speed and canters with delightful lightness and grace along the park bridle paths, but the heavy work is the work most in demand, and for that we want the draft animals every time.

Enthusiasm is the spur to endeavor, and at the same time it is the savor of life. The country boy whose ambition has taken him to town comes filled with enthusiasm. Even the little things are novelties to him, and as he accomplishes this and that he feels that he is doing something not only interesting but valuable. His simple tastes have not been spoiled by a multiplicity of gratifications, and so he is glad of everything good that comes his way. At thirty, if he leads a clean life, he has more of the boy in him than his city cousin has left at fifteen. He does what is before him because it is his duty, while the other is too apt cynically to question the value of doing anything and ask, "What is the use?"

Of the men who have achieved great prominence and high influence in our affairs of state the country boys are at least twenty to one over the city lads. Nowadays, indeed, our cynical city lads look upon men who take an active interest in public affairs as rather low fellows and quite beneath their association and notice. But the country boys are at the top in other lines of endeavor. In finance, they are preeminent, and the great bank presidents to-day in the great cities nearly all learned to read and cipher in the country schools where birch and ferule had not succumbed to the civilizing influences of scientific pedagogy. Our great railways were in the main built by them, and to-day the administrators of these great companies are in great measure from farms and country villages, from places where work began in early infancy, and a sense of duty developed while still the lisp of childhood lingered.

Some city boys, however, are of such sturdy stuff, and endowed with such natural gifts, that they succeed by reason of their inherent superiority; others succeed abundantly because they have used their opportunities wisely, and in real life have pursued the same course which enables so many country boys to win fame and fortune. The more honor to them for having survived their too great opportunities. But the country boy when he comes to town reaches out for the high places; though not all find seats of the mighty, nearly all of the exalted stations are filled in the end by men of country birth and country rearing, for they usually start out with the sound theory that what is worth having is worth striving for.—John Gilmore Speed, in Brandur Magazine.

The January American Boy.

Stirring stories, interesting information, valuable instruction, and encouragement along lines of right living and high endeavor make the January American Boy a noteworthy issue. The front cover page picture speaks eloquently of "Breaking Home Ties." Dr. Owen's pirate story is continued two chapters, as is also That Dillingham Boy. Mr. Trowbridge's serial, The Boy and the Beast, is concluded, and Mr. Tomlinson's serial, Four Boys on the Mississippi, is begun, and promises to sustain the splendid reputation of the author as a writer for boys. A notable article is Canal and Jungle, the Boy's Own Story of the Big Ditch at Panama, written by Hugh C. Weir, who was specially sent by The American Boy to Panama to write up the true conditions for its readers, and the boys will enjoy the snap and vim of the story. Of the many short stories there are. The Water Boy's Test, telling of the heroism of a boy; A Sea Tale, showing the perils of the ocean; The Decision of the Judges, a fine story of a school debate; Chico, an animal story. Captain Haverly's Code, a first-rate football story, and A Newsboy's New Year, telling of the good fortune that came to one little "merchant of the street." Some of the larger articles are: The

Father of Nobody's Children, telling something of the great work of the late Dr. Barnardo, of London, England; The Story of the Flags; A Detroit Boy and His Pets; The Best Way to Cure Round Shoulders; A List of Days for Patriotic Remembrance; How to Make Bark Whistles; A Boy Aeronaut, and many others. Three serials under the titles, Some Secrets of Cleverness, Destroyers of Boys, and Talks by the Doctor, are begun in this number; they will prove beneficial to all who follow the rules laid down. Popular Science Department begins with the new year. It is edited by Professor A. H. Verrill, a noted scientist. All the regular departments devoted to boy hobbies are filled with the matter in which boys delight. 64 illustrations. \$1 a year. The Sprague Publishing Co., Detroit, Mich.

A Candle Fish.

A curious candle is made by the Indians on the Pacific coast of British Columbia.

It is a little fish called "enlachon" or "candle fish." In length it is no longer than one inch and looks like a smelt. In fatty material it is the richest of all fishes, and for this reason it is an excellent substitute for candles.

The Indians dry it, and then it will burn with a bright flame. Sometimes they light it simply at the tail, but often they run a wick of woody threads through the body of the fish.

Dried and smoked, this fish makes a delicious food for winter use—at least, the Indians say so—and the oil is used in place of butter by them.

The Little Ones

Misfit Spectacles.

I've wondered why the spectacles that help grandpa to read. Should make things when I wear them look very queer indeed; Good reason why his spectacles for me would never do, For, don't you see, my eyes are brown while grandpapa's are blue.

—Selected.

A Proficient Reminder.

Phoebe was mama's reminder. When there was cake in the oven she always remembered and called out, "Isn't it time to look at the cake, mama?" every little while. Mama said as much praise was due to her when the loaf came out "done to a turn," as was due to the one who stirred it up in the yellow nappy.

Mama was absent-minded, she said, or maybe she forgot because she had so many things to do at one and the same time. Anyway, she needed a little reminder very much and very often.

One day mama made golden cake for tea and set it into the hot oven and shut the door. There was company coming and it must bake just right. But mama had blanc mange to remember, too, and salad dressing.

"Phoebe," she said, "came and be my reminder. I know I shall forget the cake without you." Then she thought of the tea-cannister with only a stray tea-leaf or two left in it. "O, dear! No, you must run down to the store," she said, "and get some tea. Whatever shall I do for a reminder?"

"I know!" Phoebe cried, after thinking hard a minute. "I'll get a—a—what are those things that begin with 'sub,' mama? Dick is one in college when they play ball—don't you know he told us?"

"Substitute?" smiled mama.

"Yes, that's it. I'll get a substitute. I'll leave Queen Dido for reminder."

Queen Dido was a great cloth doll almost as big as Phoebe. She was fat and limp and stared at people impolitely. Phoebe got her and sat her down directly in mama's way.

"Remember, your majesty, you are a reminder. Don't you let that cake burn!" Phoebe said. Then she herself hurried away to get the tea.

Mama worked away very fast. Soon she had forgotten all about the golden cake in the oven. But as she hurried about the kitchen she ran against

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The Kansas Farmer has just bought a number of the Busy Man's Friend for its subscribers. This is a book of 250 pages of things that every one should know. It is a compendium of Legal and Business Forms. A Fund of Practical Information for Every-day Life. It contains the Busy Man's Code; The Hows of Business; Points of Law and Legal Forms; Digest of Laws; Practical Information for Busy Men; The Busy Man's Digest of Facts; Computations at Sight. The book is illustrated and bound in cloth. Any old subscriber who will send us \$2 for two new subscriptions will receive this book, postpaid, as a present. This offer is good as long as the books last. Order early and get "The Busy Man's Friend" absolutely free.

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Queen Dido and upset her. Bump went her majesty's nose on the hard floor! up flew her arms!

"Dear, dear!" scolded mama, gently, "what in the world are you right under my feet for? What was Phoebe thinking—"

Suddenly mama thought! She hurried to the stove and opened the oven door. Queen Dido had reminded her. The cake was browning a lovely brown but it was not quite done.

"You'll have to remind me again, your majesty," she said, picking the big doll up gently and setting her down again where she would be the most in the way. There almost seemed to be a smile of pride on the cloth face of Queen Dido, as if she thought being a reminder was a thing to be proud of.

Once more busy, hurrying mama forgot, and once more, just in time, she tripped over the great doll on the floor. This time it reminded her instantly. The cake was "done to a turn," but in a very little time more it would have burned. Another triumph for her majesty!

"Didn't she make a beautiful reminder?" Phoebe said when she came home. "I thought she would."

"Yes," mama laughed, "she really ought to have a piece of the golden cake!"—Annie Hamilton Donnell, in Congregationalist and Christian World.

Club Department

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Program.

- I. Responses.
- II. Home Sanitation.
- III. How to Simplify Housework.
- I. Household conveniences.
- II. The subject of maintaining the health of the family is important. A discussion of this subject with suggestions as to the best ways and means will mean much to the comfort and happiness of the families represented.
- III. The problem of the housewife of finding time for rest and recreation will have to be solved by cutting out some things in the daily routine and making everything as convenient and simple as possible. What to eliminate, how to simplify without destroying the comfort and happiness of the family is the question.
- IV. Perhaps you think you know how to rest but the trouble is to have a good chance. But most of us will have to make our own chance for it, and there are scores of women who will not rest when they have a chance. I quote the words of Miss Van Rensselaer which are suggestive: "We are not asking for less work, but for more strength to do what we have to do. We should learn how to make the most of opportunities for rest, by learning the correct use of the muscles, and how to relax their tension. The correct position of the body when at work is to stand on the

balls of the feet, with not too much weight on the heels, the chest well forward, and the shoulders and hips back. Make the most of opportunities for rest by assuming a position of repose, relax all tension on the muscles if lying down or sitting. Drive out from the mind all thoughts of work or worry. If you have a hard task to do, get ready for it, not by working or doing it over in mind, but by relaxing the tension on mind and body. Yawning, stretching, and laughing relax the tension and strain, and rest us. Do not try to meet troubles and tasks before they come. Prepare for them by not worrying and you will have strength for them when you have to meet them. If you are to go for a drive, and you begin to worry about not getting there on time, or something else, you get more tired than the horse does. So in all our work we fear that it will not be all done, or done on time, and we never rest. Learn to take the right mental attitude about work, and make your work play as much as possible. To sum up in a word, hitch your chest to a star, that is, keep it up and forward, and breathe deeply, stand on the balls of the feet, and often rise on the toes, and you can work easier. Take the position of health, have some quiet place where you can go alone every day and rest, and when resting, wherever you are, let all thought of work go, take up some cheerful and inspiring thoughts and let the body rest naturally with no tension on it."

The Automobile for the Farmer.

The time is coming when the automobile will be no more of a curiosity on the farm than a gasoline engine was a few years ago. It is not altogether a rival of the horse. It fills a distinct



place, traveling long distances without food or water and without fatigue. A horseman must ever be merciful to his beast. On a hot day he lets it take its own pace.

The automobile saves time and money. To save time lengthens life, and often when the farmer wants the doctor in a hurry it saves life; when he breaks a part of the mower or reaper he cranks up the machine and away he goes. It is not always convenient or practical to keep a team of roadsters and its costs money to go to town with the work team. They move slowly, and ought to be at work anyway.

The motor buggy is filling a long felt want. The machine shown above costs from \$375 to \$450 and weighs about 690 pounds. It is a practical machine. The wheels are 38 inches high, fitted with or without solid rubber tires. Therefore, it is adapted to rough country roads as well as city streets.

It costs less to maintain it than a horse. It consumes fuel only when in actual use. If you do not use it for a week you do not have to exercise; feed or care for it.

It will run from 20 to 30 miles on a gallon of gasoline at a speed of from 2 to 25 miles per hour. In making long hurried trips and there is no danger of the machine tiring out like a horse. There is no danger of its overheating. When you reach your destination you don't have to stop to hitch or blanket it. It is so simple in construction that a woman can run it.

It is fitted with a 10 horse power engine with double opposed cylinders. It is mechanically air cooled; therefore, no water to freeze.

The machine has two speeds forward and one reverse. It is driven by two chains from the countershaft with a differential. The machine is oiled by four sight feed oilers; has jump spark vibrator coils and six dry cell batteries.

The engine and all of the working parts as well as the running gear are made as strong and substantial, compared to the weight the machine carries, as the big expensive automobiles. The frame, which is the part that carries the engine is made of angle steel which is fastened on either end on top of two elliptic springs.

Mr. Black, president of the Black Manufacturing Co., 124-126 East Ohio Street, Chicago, Ill., manufacturer of the Chicago Motor Buggy reports that they sold 163 machines at the Chicago Auto Show. About one-half were sold to farmers. The balance were about equally divided between doctors, traveling men, and other classes of people who have a lot of driving to do.

This substantiates the belief that the time has come when the farmer is going to ride in a motor driven buggy. The above company issues a catalogue which gives full information in regard to this particular vehicle and three or four other styles that they manufacture. Full information can be had by addressing Mr. Black of his company.

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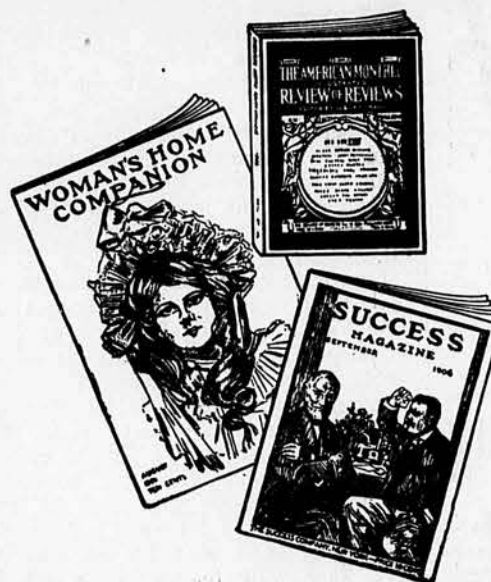
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That is about what happens each year for the man who owns five cows and does not use a Tubular cream separator. He loses in cream more than the price of a good cow. The more cows he owns the greater the loss. This is a fact on which Agricultural Colleges, Dairy Experts and the best Dairymen all agree, and so do you if you use a Tubular. If not, it's high time you



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Even the best cows can't make big profits for the dairyman who persists in using pans or crocks or a poor skimming separator. Cream is cash, and if yours is just an "average" herd, then how much more necessary to skim out every drop! Why not help the cows boost your profits by skimming their milk with a reliable UNITED STATES SEPARATOR



A cream separator is an acknowledged necessity to profitable dairying, but before you buy why not look very carefully into the matter and buy the best one at the start? It's cheapest in the long run. We'll gladly send you, FREE, an illustrated book, telling what a separator can and ought to do. Please write us today "Send your book No. 91." VERMONT FARM MACHINE CO. (491) Bellows Falls, Vermont

HIDES, FURS, JUNK

A. GOLDBERG, Iola, Kans.

References: Allen Co. State Bank, Iola State Bank. If you wish to sell large lots at home, write me and I will call. Write today for price lists and shipping tags.

Dairy Interests

Market Milk Standards.

PROF. D. M. WILSON IN THE INDUSTRIALIST.

For many years cities and States have been framing and putting into effect certain laws governing the sale of milk. Milk is extremely variable in quality, or rather in percentage of fat, and is easily adulterated. For a good, unadulterated product, the consumer must rely very largely upon the honesty of the one who sells it. Our cities especially have realized this, and to prevent discriminations by unscrupulous persons have in various ways sought to regulate the sale of milk. The chief method used is that of setting arbitrary standards regulating the minimum per cent of fat and solids not fat the milk should contain. The fat is the most variable and valuable of the constituents of milk, so milk is ordinarily conceded to be valuable for human food in proportion to the amount of fat it contains. Where milk is used in large quantities as food it may contain two much fat, or it may be too low in fat to be easily assimilated. Milk, to be an ideal food for the great mass of people, should contain about four per cent of fat. If consumed in large quantities, and the fat very much exceeds this per cent, milk does not digest readily. On the other hand, if the fat is three per cent or under, the casein and other solids are in excess of the fat, and the milk is rendered less digestible. The removal of fat does not affect the other solids more than to increase their percentage. Such milk is just as valuable as a food, except that the shortage of fat must be supplied in some other form of food.

The object of the writer is to outline clearly the weakness of the standards now in force, such as are established by many cities, and to show how best the milk supply may be controlled with equal justice to all. The standard of milk is placed upon the fat, which is a very changeable constituent, in fact the most changeable constituent of milk. It varies not only in different breeds of animals, but in individual animals. It also varies according to the period of lactation and the amount of milk given. It is influenced by the nervous conditions of the cow caused by freight or sexual excitement. If the fat is so changeable and varied in not only different breeds, but in individual animals, how then can we use it as a standard?

Some cities have set the standard as low as 2.5 per cent fat, with a total per cent of solids 12, while the average standards require 3 per cent of fat and 12 per cent total solids. The total solids is found by first testing the milk for fat and then adding the fat to the amount of solids not fat, which is found by the specific gravity, or the lactometer test. The solids not fat in pure milk seldom, if ever, are less than 8.25 per cent or more than 9.25 per cent. It is generally taken from the average of all tests which have been conducted by the various experts and experiment stations. Pure milk contains 87.5 per cent of water and 12.5 per cent total solids; or, in other words, an average of 3 to 4 per cent of fat and 8.25 to 9.25 per cent of solids not fat. Therefore, less than 8.25 per cent of solids not fat shows evidence of adulteration by water, or milk showing more than 9.25 per cent of solids not fat justifies suspicion of being adulterated by the removal of fat.

I wish at this point to make clear that it is upon the constituents of milk known as the solids not fat that we base our test as to purity, as these solids are the least changeable. Let us compare some of the standards. For instance, take the standard of 2.5 per cent of fat and 12 per cent of solids not fat. If we subtract the fat from the total solids we will have 9.5 per cent of solids not fat, or a lactometer reading of 34.60, with 2.5 per cent of fat. Such milk tested by an expert would be considered as skimmed. Yet

SPECIAL ANNOUNCEMENT TO COW OWNERS

It is with more than ordinary enthusiasm that we beg to call the attention of cow-owners and dairy farmers to the new 1908 line of the improved De Laval Cream Separators, consisting of ten machines, ranging in capacity from 135 pounds to 1,350 pounds of milk per hour.

Although for a number of years De Laval machines have seemed as nearly perfect as separators could be, thousands of dollars have been are being spent annually in the effort to improve them. The past two years of experiments and tests have been unusually productive of new ideas and big improvements in separator construction. Even the highest hopes of the De Laval experimental force and mechanical experts themselves have been exceeded.

The principal De Laval improvements are greater simplicity of construction, ease of cleaning and replacement of parts, less cost of repairs when necessary, easier hand operation, more complete separation under hard conditions, greater capacity and a material reduction of prices in proportion to capacity.

The line includes several new styles and capacities of machines never offered heretofore. No matter how small or how large the dairy the new De Laval line has a machine exactly suited for it.

If you intend buying a separator do not fail to examine the new De Laval styles before you make your selection, as otherwise you must surely regret it later on. A handsome new 1908 De Laval catalogue can be had for the asking.

THE DE LAVAL SEPARATOR CO.

Randolph & Canal Sts.,
CHICAGO.
1213-1215 Filbert Street,
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General Offices:
74 CORTLANDT STREET,
NEW YORK.

173-177 William Street,
MONTREAL
14 & 16 Princess Street,
WINNIPEG.
107 First Street,
PORTLAND, ORE.

the law justifies the sale of same. Then take the average standard, which is 3 per cent fat and 9 per cent of solids not fat. Supposing a dairyman is delivering milk from a herd that is producing milk with a lactometer reading of 32.5 and a fat test of 4 per cent, the milk has 12.92 per cent of total solids and a fat content over the standard of 25 per cent. He may remove, then, 25 per cent and still have the milk contain 3 per cent of fat, and by removing the fat he increases the lactometer reading .8 per cent, which gives him 9.12 per cent of solids not fat, or 12.12 per cent of total solids. I leave it to all fair-minded persons to consider whether the standard is just to all.

The yearly average of fat produced by the cows of the United States is taken as 3.5 per cent, yet our cities declare three per cent as the standard. I trust I have shown clearly the weakness of the standard laws as we now have them. I am in favor with the practise of furnishing the consumer with a perfectly pure article of food placed upon the market and sold according to its quality. This will permit and encourage the breeding of cows that will produce a high class of milk at an increased price. It will also permit of breeding and developing cows that will produce a large quantity of milk of a lower per cent of fat, which can be furnished to the poor of our cities at a lower price. To overcome any danger of fraud the herds should be the standard. If any producer be found delivering milk containing less fat or total solids than is given by the herd he should be considered as a criminal and prosecuted as such. Thus it is true that this would necessitate the employment of some competent person to test the milk that is delivered by the producer or the dealer, and where the product is of questionable purity the herd should be milked and the milk tested for fat.

The bulk of the milk purchased for domestic use is consumed by the children, and it forms the greater part of their sustenance. Hence the health of our future generation will depend largely upon the sanitary conditions of the milk supply. The reports and tests made by the United States Experiment Station have proved that tuberculosis is most prevalent among cattle. Hence, in the interest of the State cattle and hog industry they au-

"Hello, Neighbor!"



"Mornin', Smith!"
"Say, Bill, how many cows you milkin'?"
"Oh, 'bout 8 or 10."
"Want to sell any?"
"Guess not. Why, want to buy?"
"Yes, I've got only 4 cows, an' I bought one o' them 'Great Western Separators,' 'cause they are made best an' get all the cream. They're ball-bearin' an' run so easy, it's like playin'; an' the tank is low down an' easy to fill, an' the oilin's the best, an' a wide base to catch the spillin's to keep 'em off the floor. Well, the kids run it, an' say, Bill, we've got from 1/4 to 1/2 more cream an' butter, an' my ol' customers offered me 5 cents a pound more for the extra amount 'cause they say the butter is so much better. I'm goin' to buy more cows, an' Jake's goin' to stay home from Tonopah 'cause we've found more gold 'an they've got out there, an' no 'resk.'"
"Where d'you get your machine, Smith?"
"Why, over to Smith's Hardware Store up town, but say, you come over an' see mine, an' bring Libb along an' talk to Mandy; but first you write to the Smith Mfg. Co., 158 E. Harrison St., Chicago, Ill. Like this:—Send me your Thrift Talks by a farmer, and book No. 2292.—they will send it free. It's sort of a history of cattle an' tells all about how careful the Great Western Separator is made. Go in, an' write right now, Bill, so as to go off as soon as the mail carrier comes along. Just a card'll do. Say, who's got any cows to sell, Bill?"

thorize that the skim-milk of the creameries be pasteurized before feeding. Doctor Rogers, of the Kansas State Agricultural College, has made this very clear in a paper read at Manhattan recently, in which he points out the danger of tuberculosis from the milk supply. Why, then, should not the herds supplying milk, especially for town and city trade, be tested for tuberculosis, and producers prohibited from supplying milk unless their herds have been tested and found healthy?

Again, other diseases have been traced to the milk supply. The writer has in mind two instances where typhoid epidemic was traced to the milk supply by an individual producer having washed his milk utensils with water which was badly infected with the typhoid bacillus. Doctor Santee, of Washington, fully realized this when he devoted his time so energetically to the dairy herd scoring project, which has had much to do with the betterment of the milk supply for cities. I trust this good work

MY "Knodig" Cream Separator is the ONLY Cream Separator GOOD Enough to Send to Your Home at My One "Factory to Farm" Price on 30 Days Free Trial Before I Get Your Money

MY PLAN is to prove satisfaction to YOU before I get a dollar of your money and without my 30 Days' Free Trial proposition costing you a penny. Also let you prove, by making more money out of your cream for a month FREE,—prove by the extra dollars that even a month's trial will put in your own pocket—what a better, more satisfactory, all-round lifetime, durable Cream Separator my **KNODIG Cream Separator** really is.

Just write me now—today—your name and address on the coupon below or a postal for my Free Knodig "Cream Profits" Book. I'll send it and write you personally and then you can decide to take my proposition or not—just as you like after you hear from me.

Jump This and Read About

The **KNODIG** Cream Separator

YOU ought to be the first in your neighborhood to start trying one of my **Knodig Cream Separators** Free.

Because you—like every progressive man or woman—will take pride in showing that you had the appreciation of my good fair and square personal offer to you and took it up—and got a better deal and a better cream separator at from \$30 to \$50 less cost (if you decide in 30 days to keep and buy the **Knodig Cream Separator** I'll send you)—Yes, \$30 to \$50 less cost than any one of your neighbors has had to pay in advance for any high-grade Separator made—and I don't care what the name of theirs is or who made it. You'll say so yourself when you get my **Knodig Cream Separator** right direct from the factory—at the wholesale factory price—to USE on your place 30 days free to PROVE it.

I give you my personal word now that you'll be glad you tried my **Knodig Cream Separator**.—I'll risk the high standing and reputation of my Company—The National Pitless Scale Company of Kansas City, makers

Skims most butter fat. Is easiest to run and keep clean. Only 39 in. high. No lifting to "break backs."

also of the famous **Knodig Pitless Scale** and the celebrated **Knodig Manure Spreader** which I'll also send you on the same liberal plan if you write to me and want me to.

And when you get my Free **Knodig "Cream Profits"** Book, and my letter and decide to take my proposition, I'll send you my personally signed, legal binding Guarantee, backed also by all the capital of my Company, that you'll always find the **Knodig Cream Separator** I'll send you, or any "**KNODIG**"—Cream Separator, Manure Spreader or Pitless Scale—Just Exactly as Represented—or you can get every dollar you've paid out for it right straight back again from me and my Company.

Now don't delay writing me. Because you'll find that the quicker you decide now and get to using one of my **Knodig Cream Separators** free, the sooner you'll—
—make more cream profits
—save more time to do other work or rest
—get back the low price you'll pay (when you are satisfied)
—easily make extra money separating neighbors' cream if you want to
—please yourself and your family
—save the wasted butter-fat profits you now waste or feed to the calves or hogs if you skim your milk by hand.

Ball Bearing—but simplest and most durable construction. Easy to fill. All ready to use.

No matter whether you've got 5 cows or 50 cows or any number of cows you ought to have one of my **Knodig Cream Separators**. My Free Book accurately illustrates and accurately describes each part of all sizes including—

Gumbel

Cut or Tear This Out—Fill in Your Name and Address and Mail to me so I can write to you personally



Save \$50.00

On Cost—But That Isn't All—Read the Rest from Me Below

Knodigs of 350 pounds capacity per hour—450 pounds capacity per hour and 600 pounds capacity per hour.

No matter what capacity Cream Separator you need—and I'll advise you if you'll just say how many cows you've got—you'll find that my **Knodig Cream Separator** turns and runs the easiest of any cream separator made—on ball bearings that make it run easy like a bicycle so that any woman or boy or girl can run it.

No high lifting of milk, as the supply tank is only 39 inches high—only three and one-fourth feet.

No trouble to keep clean as the bowl is simple—few parts—easily and quickly cleaned. And the supply tank washes like a china bowl, because it is round stamped from sheet steel with no cracks, or joints, or square corners that are hard to get at like others which get sour and sticky.

No trouble adjusting on the floor, like others on "legs," as the **Knodig** stands firm and flat on its square base and is just as solid and substantial as it looks.

All working parts are simple and easily adjusted and cost less for repairs for this reason, as well as because every part is made of the most expensive material for its purpose by expert workmen and every part is exactly alike as it's made in the factory.

The crank, of easiest turning height, runs smoothly, turning the roller chain drive, which entirely does away with "extras" and "expensive gears" to watch and repair or get out of order as in other separators.

Ball bearings support the bowl and drive shaft. Only one oil cup to fill. Sprocket wheels are stamped from steel plates and last a lifetime and run most smoothly. Only one Clutch on the "worm wheel"—turned by your thumb and finger—releases all parts when crank stops and while the crank and chain drive remain idle all wear on half the working parts is reduced. In fact my **Knodig Cream Separator** is just as easy and simple to operate as my plan of sending it to you on 30 days' free trial is easy to understand and take advantage of.

Don't think of buying ANY other Cream Separator until you do write to me. Let my PROVE-TO-YOU plan save you \$30 to \$50 by first writing to me. Let me give you the benefit of my personal advice by letter—take it for what my practical experience is worth to you—by just writing to me—now—today. Write your postal or envelope with Free Book Coupon filled out as below, enclosed—address like this

My Legal Binding Guarantee to you on every Knodig Separator, Knodig Spreader, Knodig Pitless Scale.

Knodig Manure Spreader

I'll send you for 30 Days' Free Field Test my most practical, most durable—and all-round lifetime, lasting and satisfactory **Knodig Manure Spreader** on just exactly the same liberal plan as the above if you'll just say you want to get and **Free Book** read my Free **Knodig Manure Spreader** Book and write me as below.

H. C. GUMBEL,

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Just say to me that you'd like to read and know about my **Knodig Pitless Scale**—one of the Greatest Farm Money Makers—and I'll send you my Free Book, write you personally all about it and send you one on **Free Book** just the same liberal plan as above—30 Days Free—At Factory Price. Address me as below.

H. C. GUMBEL,

H. C. Gumbel, Gen'l Mgr., National Pitless Scale Co.
2063 Wyandotte St.
Kansas City, Mo.

The Knodig Man

Use This Free Cream Book Coupon

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2063 Wyandotte St., Kansas City, Mo.
Dear Sir:—Without obligating myself in any way please send me your Free **Knodig Cream Separator** Catalog which tells about "Cream Profits" and write me your advice personally.

Name.....
City or Town..... State.....

may continue until the sanitary conditions of our milk supply will be unquestionable.

Dehorning Cows.

I have three Jersey cows that have horns. Can I have them dehorned and keep them up on their milk with proper care?

Please give the amount of corn it takes to balance a ration with alfalfa for a cow.

D. A. TAYLOR.

Wilson County.

When dairy cows are dehorned, even

when given good attention, they usually drop off in milk yield, temporarily. If the work is carefully done, and no bad effects develop, and there should be no danger at this season of the year, they will soon return to their normal flow of milk.

It would require about 8 pounds of corn, to approximately balance up an alfalfa ration, for a dairy cow, yielding about 22 pounds of milk, provided the animal consumed about 20 pounds of alfalfa hay. Such a ration would be deficient in dry matter. A more

satisfactory ration could be made up, by supplementing the alfalfa with some other form of roughage, such as corn stover, and feeding a mixed grain ration, cutting down the amount of corn, and replacing it with bran, oil-meal or cottonseed-meal.

J. C. KENDALL.

The man who stands on his own soil, who feels that, by the law of the land in which he lives, he is the rightful and exclusive owner of the land which he tills feels more strongly than

another character of a man as the lord of an inanimate world. Of this great and wonderful sphere, which, fashioned by the hand of God, and upheld by His power, is rolling through the heavens, a part is his from the center to the sky. It is the space on which the generation before moved in its round of duties, and he feels himself connected by a visible link with those who follow him and to whom he is to transmit a home.—Edward Everett.

PLYMOUTH ROCKS.

BARRED PLYMOUTH ROCKS—High-scoring stock for sale at living prices. Score cards with birds. Mrs. Chas. Osborn, Eureka, Kans.

FOR SALE—An extra fine lot of B. P. Rock cockerels at \$1 each. D. N. Hill, Lyons, Kans.

WHITE PLYMOUTH ROCKS exclusively Cockerels for sale \$1.00 up. H. F. Markham, Sylvanmead Farm, 1 1/2 miles north of Reform School, P. O. Elmont, Kansas, R. R. 9.

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CHOICE BARRED PLYMOUTH ROCKS a specialty. Also several other varieties. Write your wants. Circulars free. A. H. Duff, Larned, Kans.

WHITE PLYMOUTH ROCKS exclusively; young and old. Stock for sale. J. C. Bestwick, Hoyt, Kans.

Miller's Famous Barred Plymouth Rocks

If you want a fine cockerel from my prize-winning strain write me at once. I have a fine lot and they won't last long. Prices \$1.50 up. Satisfaction guaranteed. A. H. Miller, Bern, Kans.

White Plymouth Rocks EXCLUSIVELY

Good for Eggs. Good to Eat. Good to Look at.

W. P. Rocks hold the record for egg-laying over every other variety of fowls; eight pullets averaging 200 eggs each in one year. I have bred them exclusively for twelve years and have them scoring 94 to 98%, and as good as can be found anywhere. Eggs only \$3 per 15; \$5 per 45, and I prepay expressage to any express office in the United States. Yards at residence, adjoining Washburn College. Address

THOMAS OWEN, Sta. B. Topeka, Kans.

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FOR SALE—A limited number of cockerels for sale of the Brown Leghorns, Model Anconas and Rhode Island Reds, all single combed. These are pure-bred and from prize winners. Prices reasonable. A. J. Vaughn, Oak Street Poultry Yards, Garnett, Kans.

ROSE COMB BROWN LEGHORNS, exclusively. Cockerels and hens, each \$1.00; six \$5.00; twelve \$10.00. B. F. Evans, Wilsey, Kans.

50 FINE COCKERELS, S. C. B. Leghorns. Suitable for farm stock; \$1 each. S. McHarg, Wakita, Ok.

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ROSE COMB BROWN LEGHORN cockerels \$1. If not satisfactory return at my expense. Frank Dunable, Clay Center, Kans.

Grand cockerels from prize winners of the Famous Witman strain of S. C. Brown Leghorns. Prices from \$1.50 to \$5.00 each. Special prices on doz. lots. L. H. Hastings, Quincy, Kans.

STANDARD-BRED SINGLE COMB BUFF LEGHORNS—Headed by first prize pen, Chicago show 1905 and took six first prizes and first pen at Newton, 1904. Eggs, \$3 for 15. S. Perkins, 801 East First Street, Newton, Kans.

WYANDOTTES.

SILVER LACED WYANDOTTES from my prize-winners at reasonable prices. Cockerels scored by Atherton. J. H. Becker, Route 7, Newton, Kans.

WHITE WYANDOTTE hens and pullets 75 cents each. White Holland toms \$2.50, hens \$2. Cockerels all sold. Mrs. E. F. Ney, Bonner Springs, Kans.

FOR SALE—Golden Wyandotte cockerels; also a few M. B. turkeys. Cockerels \$1 and \$1.50. Eggs in season. A. B. Grant, R. 9, Emporia, Kans.

BROWN'S WHITE WYANDOTTES—Ahead of everything; stock for sale; eggs in season. I have the English Fox Terrier dogs. Write me for prices and particulars. J. H. Brown, Clay Center, Kans.

AT PANIC PRICES—50 white Wyandotte cockerels, 10 pairs white Guinea, 1 pair W. H. Turkeys, 1 yearling Tom, 10 Indian Runner Ducks, 50 Poland-China hogs. Mrs. L. D. Arnold, Enterprise, Kans.

BUFF COCHINS.

BUFF COCHIN cockerels, hens, pullets. Good enough for the show room. \$2 to \$5. Good Bros., Cimarron, Kans.

BLACK SPANISH.

FOR SALE—Whitefaced Black Spanish. Hens \$2 each. Cockerels \$2 each. pullets \$1.50 each. Chas. Hobbie, Tipton, Kans.

BUFF ORPINGTONS.

LARGE BUFF ORPINGTONS—The great winter layers. Cockerels for sale, eggs in season, prices reasonable. Mrs. Frank Henning, Route 1, Garnett, Ka.

ORPINGTONS—1,000 to sell to make room. Catalogue free. W. H. Maxwell, 1906 McVicar Avenue, Topeka, Kans.

CHOICE Buff Orpington and B. P. Rock cockerels. Cullie pups and bred bitches. Send for circular. W. B. Williams, Stella, Neb.

BRAHMAS.

LIGHT BRAHMAS—None better east or west. Pens of 4 hens, 1 cockerel, average better than 90 points. \$10 per. Cockerels to head your flocks. Write J. T. Edson, Schaller, Iowa.

Light Brahma Chickens

Choose pure-bred cockerels for sale. Write or call on

Chas. Foster & Son, Eldorado, Kans. Route 4

CORNISH INDIANS.

FOR SALE—Jumbo strain Cornish Indian. A few cockerels. Eggs in season. L. C. Horst, Newton, Ka.

FOR SALE—A lot of high-scoring Cornish Indian Games. Apply to J. S. Sexton, Rochesport, Boone County, Mo.

HAMBURG.

SILVER SPANGLED HAMBURGS, B. P. Rocks fine cockerels. Good Bros., Cimarron, Kans.

The Poultry Yard

CONDUCTED BY THOMAS OWEN.

Overcrowding of Chicks.

EDITOR KANSAS FARMER:—At this season of the year it is an easy matter to overcrowd the coops and poultry houses and thus cause severe colds which, if left to run, develop in bad cases of roup among chickens.

I find on cold, fall evenings the most serious battle is against cold and roup. Cull and thin your birds out until all the poor, scrubby stock are marketed and only the best are left for future use and for breeders the following year. If all poultry-raisers of fancy poultry would have a good judge cull their flocks in the fall the general run of fancy poultry would be made to be above the standard. But as a rule the flocks are allowed to run down.

One great detriment to poultrydom is that of vermin, which in spring is as disastrous to flocks as roup in fall. If there is any industry which does not have drawbacks and discouraging features I have failed to find it. Most any line of business can be figured out on paper to show profit in the course of a few years, but in actual experience such does not prove to be the case without much work and perseverance.

Were it not for vermin and disease, there would be few, if any, lines of business which could be made more profitable than the chicken industry. Now is the proper time and all through the winter is the time to fight lice and mites. When there seems to be none is the time to entirely rid the place. Give the poultry house a thorough cleaning and whitewashing and get a gallon of good lice-killer, such as that made by George Lee, of Nebraska, and go at it as though you were sure of having a battle with millions of mites to destroy. This destroying should be done at least twice through the winter if you have had mites the previous summer. If not, once is sufficient. It is a great deal easier to get them all routed when they are not multiplying than after they get a fresh start in the spring.

I believe to-day the greatest obstacle poultrymen have to contend with is lice and mites, which weaken the birds and make them susceptible to so many diseases. My motto is, "An ounce of prevention is worth a pound of cure." With this ever before me it is an easy matter to fight the little pests. I find the wire hens' nests a great advantage over old boxes as nests, as there is no place for vermin to hide. Fill these wire nests each month with clean, fresh hay with a handful of sulfur thrown in each and burn all old nest straw, as it is sure to be full of vermin. It is also a good plan to get a good insect powder and dust each bird separately, being sure to get well under the feathers. If these rules are closely followed in a very short time there will be no vermin of any kind about the place and next year will insure a better success.

Mrs. LIZZIE B. GRIFFITH.

Emporia, Kans.

West Virginia Experiment Station Experiment.

An experiment conducted by the West Virginia Experiment Station shows how White Leghorns compared with mongrels for egg production.

In the summer of 1904 fifty young pullets, which were typical of the common mixed stock of the country, were bought from farmers living in the vicinity of Morgantown. A few of them showed traces of Barred Plymouth Rock and Light Brahma blood. Two or three resembled Barred Plymouth Rocks in color but were provided with a crest, and the rest of them were of various colors. They were allowed to run at large until fall. Then they were divided into two lots and placed in the laying houses provided for them. (For a description of these houses see bulletin No. 71.) Fifty Single Comb White Leghorn pullets of approximately the same age as

CHICKS THAT LIVE

get strong and healthy—lay the most eggs—best for market—are chicks hatched in **RELIABLE INCUBATORS**—the one non-moisture incubator. Best by 25 years' test. Sold under money-back guarantee. Our New Free Book tells all. Write Today. Reliable Incubator & Breeder Co., Box 866, Quincy, Ill.

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the mongrels were selected and placed in two similar houses.

The experiment began November 14, 1904, and this report gives the results for the first year of the test. The general plan of conducting the experiment was as follows: The feed was carefully weighed for each lot and placed in covered boxes in the houses. The actual feeding of the fowls was entrusted to a little colored boy, who, it is believed, gave the fowls at least as careful attention as they would have received on the average farm. He was instructed to feed only what the fowls seemed to require, but as he was naturally a liberal feeder it is probable that a portion of the time the fowls were somewhat too fat for best results. They were fed whole grain scattered in litter in the morning and results. They were fed whole grain consisted of equal parts by weight of corn and oats. No wheat was fed, owing to its high price. The ground feed consisted principally of cornmeal, ground oats, and wheat middlings to which was added about 10 per cent of beef-meal. During the first eleven months of the year the ground grain was moistened with skim-milk, the rest of the time with water.

The average weight of the mongrels at the beginning of the test was 3.41 pounds, and at the end of the first year 4.61 pounds, while the Leghorns weighed 3.14 pounds at the beginning and 3.35 pounds at the end of the test. Consequently the mongrels gained considerably more in weight than the Leghorns.

The following tables show the kind, amount, and cost of food consumed, per head, by the mongrels and Leghorns during the year.

MONGRELS.			
	Per cwt.	lbs.	
Cornmeal.....	\$1.25	7.3	\$0.091
Wheat bran.....	1.20	1.7	.020
Ground oats.....	1.40	6.5	.091
Gluten feed.....	1.275	3.4	.043
Beef meal.....	1.80	2.9	.070
Middlings.....	1.20	5.6	.067
Corn.....	1.05	19.8	.207
Oats.....	1.25	18.6	.232
	Per qt.	qts.	
Milk.....	0.005	20	.100
Total cost.....			\$0.921

WHITE LEGHORNS.			
	Per cwt.	lbs.	
Cornmeal.....	\$1.25	7.2	\$0.090
Wheat bran.....	1.20	1.6	.019
Ground oats.....	1.40	6.4	.089
Gluten feed.....	1.275	3.4	.043
Beef meal.....	1.80	3.08	.068
Middlings.....	1.20	5.6	.067
Corn.....	1.05	17.1	.179
Oats.....	1.25	15.9	.198
	Per qt.	qts.	
Milk.....	0.005	20	.100
Total cost.....			\$0.853

The total amount of food consumed by the mongrels per head, without taking into consideration the skim-milk, was 66.8 pounds, and for the Leghorns 61 pounds, and the total cost of food at the prices given in the table was \$0.921 and \$0.853 for the mongrels and Leghorns respectively.

The mongrels produced eggs to the value of \$1.78 and the Leghorns to the value of \$2.25. If we deduct, in each case, the cost of food from the value of the eggs there remain balances of \$0.86 and \$1.39 for the mongrels and Leghorns respectively. If we take into consideration only the cost of the food consumed and the value of the eggs produced then the Leghorns gave 53 cents per head more profit than the mongrels. The mongrels gained in weight one pound per head more than the Leghorns. Valuing this at 13 cents per pound then the Leghorns gave 40 cents more net profit per hen than the mongrels.

Geese, Ducks, and Guinea.

Many farmers seem to think that geese, ducks, turkeys, and guineas are a nuisance to have about. We have raised geese for the past ten years and find them very profitable. We first started out with the common geese, but soon learned that we could raise a full-blooded Toulouse goose, that will weigh from 20 to 25 pounds, as cheap as he could the common ones that weigh only 8 to 10 pounds. Where one has pasture or marshy land geese will nearly make their own living, but of course if one wishes to make the most of them it is advisable to give them a liberal amount of grain. Our practise has always been to hatch the eggs under large chicken hens, 5 or 6 eggs to a hen, as we find the geese

too large and heavy and they are liable to break the eggs.

We never like to have geese hatched before the grass gets started in the spring, as the first thing they will eat is the young tender grass. The first few feeds we use bread dipped in sweet milk and squeezed dry. After they get started we feed one-third cornmeal and two-thirds wheat bran with a sprinkling of fine chick grit of coarse sand. After about ten days we begin to add a good grade of beef scraps to the cornmeal and bran; make meal into crumbly mash with milk or water and feed three times a day until they are full feathered and one can nearly see them grow. We always keep water before them to drink, but it is not necessary that they should have it to swim in, in fact we think them better off without it, especially before they are well feathered.

METHODS WITH DUCKS.

As to the raising of ducks my first experience with them dates back to when I was a boy at home on my father's farm. I always took a fancy to them, more so than any other stock on the farm. As with geese we started out with the common little ones, but soon learned that the best is what a man wants in all kinds of live stock, so we bought a trio of Mammoth Pekins direct from James Rankin's duck farm, and have raised hundreds of them that were larger than the common geese we used to raise. Have had them to weigh 8½ to 9 pounds at ten weeks old, but when we want them for breeding we do not crowd them quite so fast, as they will make better breeders.

We have found the Colored Muscovy ducks very profitable to raise, as they get to be a good size and are very hardy, more so than any other kind we have raised. They are very pretty; their glossy greenish-black and white plumage and their red faces make a very odd bird. They are great foragers and will nearly make their own living when allowed to go at large. They are great lovers of home and will always come back home to sleep. The old are excellent mothers and if allowed to hatch will take their own little ones from the nest and take the very best care of them. We have had several this year that were allowed to hatch that hatched every egg and raised all of them and just went where they pleased, but always at night we would find them just where they were hatched. Any one who wants a duck that is not so noisy as the Pekin or other kinds should try the Muscovy, as they never quack. I think they will be well pleased with them after they have learned their habits.

As to turkeys we have raised nearly all kinds, and the White Holland suits us better than any, as they get quite large and are very tame. When dressed for market they make a nice appearance.

GUINEAS MOST PROFITABLE.

As to guineas we think them the most profitable of all farm fowls, as they are very easy to raise. If the old are allowed to raise their young they will take the best of care of them and pick up about all of their living, and there is always a market for all one can raise at a very good price, as they are used in the large cities in place of wild game. We have the white and the pearl, and do not see that there is much difference in them except the color. They are excellent to have around when one is troubled with crows or hawks, as they will give the war cry whenever there is anything wrong. We find geese, ducks, turkeys and guineas are very profitable for the farmer to raise and have raised thousands and have never had more than we could find a good market for—B. F. Kahler in National Stockman and Farmer.

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Look over the past season's work and see where the mistakes have been made and try to avoid them in the future. Much may be learned by our failures as well as by our successes.

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How do you manage your poultry business? Are you content to gather a moderate supply of eggs in springtime when prices are low, or do you aim to get your greatest number during the winter months when prices are up and "eggs are eggs?" The way to succeed with hens is to do what others *don't* do. When your neighbors' hens are on strike, then see that yours "get busy."

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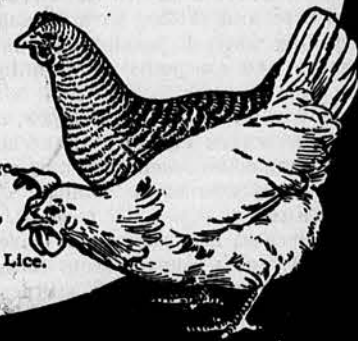
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The Veterinarian

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

Poor Water Causes Trouble for Calves.—I would like to know through the columns of your paper in regard to the ailment of some last year's spring calves. I have twenty head of Shorthorn and Hereford calves. I had them on clover and timothy pasture with free access to the hay. They commenced passing blood and some scouring, so I put them on oat hay, timothy hay, and corn and yet they pass blood. What can be the trouble? What is the cause and a remedy?

Nevada, Mo.

I. A. M.

Answer.—It is probably an infection in drinking water. Take dried sulfate of iron 8 ounces, sulfur 2 pounds, mix and divide into 24 powders and give one powder twice a day to the twenty head in bran and shelled corn. Change the drinking water if possible, and see that there are no pools of standing water.

Lock-Jaw or Tetanus.—Is lock-jaw, or tetanus, in horses curable, and what remedy should be used? What are the first symptoms of an attack?

Udall, Kans.

I. H. B.

Answer.—Yes, in a good many cases horses and mules recover from tetanus. The first symptoms are stiffness in ears, the tail is elevated, and the membrane in the eye will draw back partly over the eye. Place animal in a good, quiet place and in sling. Give 1 ounce each of potassium bromide and hyposulfite of soda in drinking water three or four times a day.

Faulty Teeth.—I have had trouble with my pigs when they were quite young. They seem to have teeth foreign to their nature and bite the sow, causing her to kill many of them. What would be advisable to do in this case?

D. A. T.

Benedict, Kans.

Answer.—If their front teeth are too sharp take a file and file them off a little. Then apply a little carbolyzed vaseline to the sow's teats occasionally. We would think it more of the sow's fault than the pigs'.

Jack Has Trouble in Legs.—I have a young jack, 2 years old, 16½ hands high, that has the back cords of his front legs drawn and he has knuckled on his front ankles twice since March. I have used a brace until the ankles are better but the back tendons are drawn and he can hardly stand without standing with his front feet way ahead. What will help him?

Chandler, Okla.

E. S. O.

Answer.—Apply soap liniment to the legs with good hand rubbing once daily and wrap the legs from the hoofs to the knees with cotton and bandage over it, using good muslin bandages four inches wide and eighteen feet long. If he doesn't improve with this treatment have a qualified veterinarian cut the back tendons, on one leg at a time, and put them in plaster paris casts in the proper extension and keep them there for some time, so they can not contract again.

Horse With Sore Shoulder.—I have a horse, about 7 years old, on whose shoulder there came, about six weeks ago, an enlargement about half the size of a goose egg. At first it was soft, but by my own treatment I have reduced it to about half the size of a hen egg and have caused it to become hard. The only cause of the enlargement that I can find is the wearing of a collar that was too large, under which there was a good pad.

Alva, Okla.

N. A. B.

Answer.—If possible have a qualified veterinarian dissect it, and this shoulder will be the smoothest when healed up. Do not work the horse too soon afterwards. If you can not do this cut the lump open freely and fill with pulverized sulfate of copper and repeat again in five days.

Mule Has Discharge from Nostrils.—I have a 7-year-old mule that has a whitish discharge from the nostrils. The mule has been this way for some time. The discharge doesn't seem noticeable except after being worked or driven and when unreigned and allowed to get his head down, then it is profuse for a short spell. The mule is in good condition and has a good appetite.

C. O. S.

St. John, Kans.

Answer.—Get 1 pint of Fowler's Solution and give 2 teaspoonfuls of feed twice a day, to start on, and gradually increase the dose for five days to 1 tablespoonful twice a day until all is given, then wait two weeks and report.

Vesicular Exanthema.—[For description see article in this number headed, "Selling Diseased Animals."]

Answer.—You have an infectious disease called vesicular exanthema which may be communicated by coition. It would be best to keep the buck away and treat him and all the ewes that have it, using a piece of hose and a funnel and wash out with antiseptic tablets dissolved in warm water, two thousand parts of warm water and one part antiseptic tablets. Then wash out with a 2 per cent solution of sulfate of copper.

Never Drench Cattle.

DR. DAVID ROBERTS, WISCONSIN STATE VETERINARIAN.

Perhaps the best way of demonstrating the danger of drenching cattle is to advise the reader to throw back his head as far as possible and attempt to swallow. This you will find to be a difficult task and you will find it more difficult and almost impossible to swallow with the mouth open. It is for this reason that drenching cattle is a dangerous practice. However, if a cow's head be raised as high as possible and her mouth kept open by the drenching bottle or horn, a portion of the liquid is very apt to pass down the windpipe into the lungs, sometimes causing instant death by smothering, at other times causing death to follow in a few days from congestion or inflammation of the lungs.

Give all cattle their medicine hypodermically or in feed; if they refuse feed give it dry on the tongue.

The proper method of giving a cow medicine is to stand on the right side of the cow, placing the left arm around the nose, and at the same time opening her mouth, and with a spoon in the right hand place the medicine, which should be in powdered form, back on the tongue; she can then swallow with safety.

Originality.

If all the birds sang the same songs, if all the flowers gave forth the same perfume, how monotonous it would seem. Sometimes when watching and listening to a group of girls and hearing the same exclamations and expressions it is wearisome and we wish they each would be her own sweet self and say something different.

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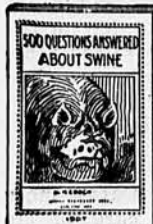
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THE KANSAS FARMER COMPANY, Topeka, Kans.

FARMERS' WEEK AT THE STATE AGRICULTURAL COLLEGE.

(Continued from page 29.)

came one of handling hand separator cream exclusively. It must be kept in mind that individuals and companies had invested their means in creamery buildings and equipment and they had sufficient faith in their ability and the future of the business to spend their time and money in the development of the business. Every creameryman handled his business to the best possible advantage in order that he might pay every fraction of a cent he could afford for butter-fat. In this he recognized that milking cows had to be made profitable to the farmer if he should be induced to sell cream. It was a case where the creameryman's business had to pay the farmer if he engaged in it. The creameryman's investment was at stake and the farmers' cream was needed to save that investment. The Kansas farmer had to feel that his dairy operations must pay for his time and trouble. So it was that the Kansas farmer was not compelled to invest his money in a creamery enterprise. It is safe to say that if the farmer had been compelled to build his own creamery the dairy industry of the State would to-day be very small as compared with its present proportions.

It must be borne in mind that while the promoted creameries were being operated in Kansas and also during the early days of the skimming-station, that the crop production of the State was very low. These were dry, hard years and there was every incentive from the standpoint of necessity for the success of the creamery, but even though the revenue was badly needed the farmers would not furnish these creameries with sufficient milk to warrant their continued operation. During the last days of the skimming-station the Kansas farmer had good crops and this was one thing which cut off the receipts from this system of handling the business. It had become an axiom in the business that Kansas farmers would milk cows only when there was no wheat or corn. We are proud to say that this opinion no longer prevails in the State and has not for a period of seven or eight years. During these ten years of unprecedented prosperity, a prosperity which can not be equalled to-day by the farmers of any State in this Union, the farmers have continued to sell cream. Does it not appear, therefore, that the Kansas farmers have regarded the business on its present basis as sufficiently profitable to encourage them not only in continuing the business but in improving their herds and providing themselves with better facilities for conducting the farm end of their business. Only this year upwards of 4,000 separators have been sold in this State. Does this indicate that the farmers of Kansas were dissatisfied with present dairy conditions?

Dairying has progressed as it has in Kansas during the past years purely and simply because dairying has been made easy and dairying under more arduous conditions would not have been followed at all.

The Minnesota farmer has been encouraged and helped in the dairy business in a measure ten thousand times greater than has Kansas. Minnesota has had large State appropriations for farmers' institutes; for dairy inspectors and dairy instructors. Her farmers have been helped in the organization of her creameries and have men of experience to give every assistance needed. The farmers have patronized their creameries and helped to make them a success because there was no other available market, so has the Kansas farmer aided in making the centralized creamery a success and without his help there would be no creamery system in Kansas to-day. But the change from one system to another in Kansas has cost the farmer nothing except his investment in a hand separator and occasionally one lost a share of stock in his local creamery or skimming-station.

It is no wonder that the cooperative creameries of Minnesota discourage the introduction of centralizing

The cooperative creameries of Minnesota, however, must succumb to the centralized system provided that system in that State can make more money for its farmers than the cooperative creamery. The creameries of Minnesota are fighting the hand separator but I know of fourteen counties in the heart of a cooperative section which have this year bought nearly 700 hand separators, consequently the hand separator system is working in Minnesota. It can't help but work. The economies of the hand separator will not permit people to haul whole milk every day year in and year out forever and anon. This means, therefore, a sure and certain revision of the method of creamery practice in Minnesota. If the hand separator makes centralizers, Minnesota will have centralizers. The hand separator has made centralizers in Kansas and there would be no dairy industry worth speaking of in Kansas except for the hand separator. It would be interesting to know to just what extent the promoters of dairying would expect the farmers of Kansas with an annual credit of \$280, for each member of his family, and a living besides, to engage in the dairy business. Do we have in this State during the life of any of us present, the making of an exclusive dairy section or a section where dairying will become even the chief industry of the farm? There is a condition in Kansas, it appears to me, which does not warrant at the present state of its progression, and from which there has been absolutely no demand expressed by the farmers themselves, the agitation for the farmers' creamery.

The most economical system of conduct and which will give the largest number of people the advantage of that business, is one which will and should survive. Any creamery, whether central, cooperative, or individual which can handle business cheapest and fill the needs of the community, can't help but exist paramount over and above all other systems. The individual creamery or the cooperative creamery in Kansas as a general proposition, has not been able to measure up to a standard of success which would give to other communities the enthusiasm necessary for the extension of the cooperative or individual idea.

KANSAS PRODUCT BY LOCALITIES.

Now, my figures show approximately 20,000,000 pounds of creamery butter made in Kansas last year and it will be interesting to know that this volume of product comes from about 700 points, or an average of about 28,000 pounds of butter per annum for each locality in which cream is produced. I have learned some figures covering the various sections of the State. From one section of the State comprising some ten or twelve counties, which are selected because they are producing more butter-fat than any other ten or twelve counties, I find in the month of November figures as follows: 14 points shipped 900 pounds or less of butter-fat; 8 points shipped 1,500 or more than 900; 4 points shipped 2,100 or more than 1,500; 12 points shipped 3,000 or more than 2,100; and 15 points shipped 3,000 or over, no point of the last 15 shipping in excess of 3,200 pounds of butter-fat in November, 1907.

These are neither winter nor summer receipts. The receipts for December, January, February, and March will be lighter than above. For April, May, June, July, August, September, and October the receipts will average twice as heavy. This will give you a good idea of the receipts on which a creamery would have to work and the chances for economical making of butter. Dairy Commissioner Wright, of Iowa, says a creamery must be able to make 150,000 pounds of butter annually before it can be made successful. Is there any chance for operating such creameries at any where near the expense of conducting small creameries as is being advertised for

the 144 most successful cooperative creameries operated in the States of Iowa, Minnesota, and Wisconsin?

Before the farmers of Kansas are carried off their feet with any plan to invest their own money in creameries and trust their own business qualifications, would it not be the part of wisdom to consider very carefully whether there is a sufficient volume of product upon which to operate a creamery?

MINNESOTA AND KANSAS PRICES.

The statement is made, or has been made, that the Kansas farmers are not receiving as much money per pound butter-fat for their product as are the farmers of Minnesota, which farmers are patrons of the cooperative creamery.

In 1906 the amount of creamery butter manufactured in Minnesota was 89,756,260, for which the creamery patrons of Minnesota were paid net \$13,744,422. These figures, as published in the newspapers have been verified by the Minnesota Dairy and Food Department. Therefore, we assert that these figures are correct, and being correct, it means that the farmers of Minnesota in 1906 received an average of 18.11 cents per pound for butter-fat sold. The net price paid the farmers of Kansas for 1906 by one centralizing creamery doing business in all corners of the State, was 20.49 cents, or 2.38 cents per pound butter-fat in favor of the Kansas price.

WHOLE MILK AND CREAM.

Now, as we know, the cooperative creameries in Minnesota are very largely whole milk creameries, necessitating the daily delivery of whole milk in the summer time and every-other-day delivery in the winter time, which means that the Minnesota farmer has made the year around at least three trips to the creamery where the Kansas farmer, with his hand-separator cream, has made one. I learned that the average price charged by milk-haulers in the State of Minnesota for hauling to creameries, is 15 cents per 100 pounds, or, in the case of 4 per cent milk, is 2 3/4 cents per pound butter-fat, and it is only fair to assert that the farmer can't haul his own milk at any lower cost per pound fat than the man who is engaged in hauling milk as a business. We have, therefore, a net return to the Minnesota farmer of less than 16 cents per pound butter-fat for the year 1906. The Kansas farmer, to be sure, has hauled his cream, but he has certainly hauled that cream at less cost than his Minnesota neighbor in hauling whole milk. The Kansas farmer has hauled at a minimum of expense and has a superior quality of skim-milk for feeding.

Even with this lower price net to the farmer of Minnesota for his butter-fat, his butter from whole milk, we are told, sells at a higher figure than Kansas butter, and this being so, it would appear, therefore, that the creamery machinery necessary to handle the entire product of the State of Minnesota is operated at a much greater expense than is the machinery necessary to handle all the dairy product in Kansas under the centralizing system. I apprehend that the Minnesota farmer will see the advantage of better skim-milk and cheaper transportation of his product to the market and that the creameries of that State will have the hand separator cream quality to deal with as have the creameries of Kansas. It would be interesting to know just what safeguards the creameries of Minnesota are throwing around the delivery of hand separator cream in order that it may be delivered in such condition that they maintain the present standard of their butter quality.

SELLING PRICE OF KANSAS BUTTER.

It has been asserted that Kansas butter is very poor in quality. It would appear, however, from the figures which the creameries of Kansas are able to pay for their butter-fat, that the butter made from this fat met with very favorable sale. It is claimed also that this butter is shipped southwest

and west and does not come in competition with good butter and that this is the reason why Kansas butter sells well. Does not in this fact the farmer have cause to congratulate himself? Have not the creameries of Kansas and Western States opened up a lucrative market which before was not open to creamery butter? If, as they do, the centralizers ship most or practically all of their butter to the south and west, pray tell us from what States or from what system, if you please, comes the tremendous quantities of second and third grade butter arriving in New York and which markets right now are full of low grade butter? Mr. Credicott, the butter inspector for the Government in Chicago, made the statement a few weeks ago, that only eight per cent of the butter arriving in Chicago would grade as extras. It would appear that there was a lot of poor butter made outside of Kansas, Nebraska, Oklahoma, Missouri, North Dakota, South Dakota, and Southern Iowa, which States and sections are recognized as conducting their business almost wholly along centralized creamery lines.

It behooves the farmer to know for himself whether or not he is being treated right. It behooves him to assimilate the best information obtainable before he permits himself to be swept from his feet by the present agitation for cooperative creameries. The farmer must bear in mind that if he engages in the creamery business he has his own money invested and he has his own business to manage, and he must decide for himself whether he has the qualifications necessary to make his investment and his management a success.

KANSAS DOING WELL.

The Kansas farmer is realizing as much money for his butter-fat, his quality considered, as are any of his neighbors in States similarly situated. The Kansas farmer can sell his cream for cash to any creamery within his reach and avail himself of the highest possible prices. He can patronize a creamery which will make the most out of his product and which creamery can be depended upon as finding the most profitable market available. It can not be disputed that the large western creameries are the best-equipped creameries in the country with the best trained help it is possible to employ and procuring the best results possible to obtain under the conditions.

The patron is constantly looking for an additional 1 or 2 cents per pound for his butter-fat a thing which is right and to which he is at all times entitled, but the patrons must remember that the source of greatest profit to him lies entirely within his own hands; that it is possible for him to produce his butter-fat at an actual expense of one-half what it is costing at the present time; that he can do this by more economical feeding and by milking better cows and all at less labor and more comfort to himself. The increased profit to the dairy farmer lies through more economical production on the farm. Economy, to be sure, in the manufacture of his butter, is necessary but economy in producing butter in the creameries of Kansas has been reached and is ever dependent upon the volume of the raw material on which there is to work.

Would it not appear that if the best interest of the farmer is at heart instead of persuading him to invest his earnings in creameries and take his chances with trained business men for success that it would be wise to start the crusade for greater profits on the farm and in so doing educate the cows, their owners, and their communities to the highest state of development, ready for a cooperation in whatever direction necessity or inclination may direct.

The annual meeting of the National Poland-China Record Company will be held at the Phillips House, Dayton, Ohio, Wednesday, January 22, 1908.

DON'T BUY GASOLINE ENGINES

UNTIL YOU INVESTIGATE "THE MASTER WORKMAN," a two-cylinder gasoline, kerosene or alcohol engine, superior to any one-cylinder engine; revolutionizing power. Its weight and bulk are half that of single cylinder engines, with greater durability. Costs less to buy—less to run. Quickly, easily started. Vibration practically overcome. Cheaply mounted on any wagon. It is a combination portable, stationary or traction engine. SEND FOR CATALOGUE. THE TEMPLE FURNACE CO., Mrs. Meagher and 15th St., Chicago. THIS IS OUR FIFTY-FIFTH YEAR.

DUROC-JERSEYS

Woodlawn
Durocs

25 head of fancy and spring boars for sale. They have good size, fine finish, and are sired by Shorty Orion, first at Illinois State Fair; Fancy Top Notcher, first at Kansas State Fair; Woodlawn Prince W. L. A., Choice Goods; and are from large, mature dams. Write us.
J. W. JONES & SON, Concordia, Kansas.

BLUE VALLEY HERD REGISTERED DUROC-JERSEYS

Breeders of high-class, pure-bred Durocs. Leading strains of Duroc families represented in our herd. All correspondence given immediate attention; and young stock for sale at all times. See us at "American Royal."

WATTS & DUNLAP.

Martin City, Mo.

CHOICE REGISTERED Durocs, P. C. and O. I. C. hogs; Shorthorn, Jersey and Galloway cattle; 40 varieties poultry and pet stock at farmers' prices; stamps for catalog. A. Madsen & Sons, Atwood, Kas.

MADURA DUROCS.

The home of Miller's Model by Hunt's Model, and Major Rosefelt, a grandson of Ohio Chief; 100 fancy, growthy pigs; also bred sows and gilts for sale.

FRED J. MILLER, Wakefield, Kans.

OAK GROVE HERD OF DUROCS

Herd headed by Choice Goods H. 3471 by Hunt's Model and Corrector's Model 3481. I have for sale a few choice males of spring and fall farrow that will be priced worth the money.

SHERMAN REEDY, Hanover, Kans.

HILLSIDE DUROCS AND HEREFORDS

Choice boars ready for service. Bred gilts and fall pigs, both sexes. Mc's Pride III, Oom Paul V, and Crimson Knight 2578 in service. 6 good Anxiety bred Hereford bull calves. Prices to correspond with the times. W. A. Wood, Eldorado, Kans.

PEERLESS STOCK FARM

DUROC-JERSEY HOGS FOR SALE.

R. G. Sollenberger, Woodston, Kans.

PIGS SHIPPED ON APPROVAL

200 head of Durocs, all ages, representing the blood of Combination, Valley Chief, and a son of Kant-Be-Beat.

T. L. Livingston, Burchard, Neb.

Silver Lake Durocs.

Fifty fall pigs will be priced right, either sex. Bred gilts will be priced right on mail orders. Bred sow sale Feb. 18. Boars in service, Lone Jack 30291, Jaul Jumbo 42209.

W. C. Whitney, Agra, Kans.

Orchard Hill Herd Duroc-Jerseys.

All stock for sale including tried sows bred to Norton's Top Notcher 45116, Gold Dust Top Notcher 22225 and Kanlio Chief 37491. Also spring gilts sired by and bred to these herd headers, properly mated. Also spring males. Dispersion sale February 13. R. F. NORTON, Clay Center, Kans.

B. N. WELCH,

Breeder of DUROC-JERSEYS. Crimson Chief 49009 heads my herd. Young stock for sale.

Waterville, Kansas.

Howe's

DUROCS; 100 early spring pigs, the best I ever raised. Improver, Top Notcher, Sensation and Gold Finch blood lines. Call or write.

J. U. HOWE, Route 8, Wichita, Kans.

EUREKA MANOR HERD OF DUROC-JERSEYS.

Choice breeding stock; the best I ever raised. Fall and spring boars, fall and spring gilts, and tried sows, bred or open. Prices the lowest, quality and breeding the best. Herd headed by Eureka Tip Top 43641 sired by the great World's Fair grand champion Tip Top Notcher 20729 and Olathe Chief 6123 by Ohio Chief 8721, the world's champion. Write your wants or call and inspect my herd.

J. F. ENSOR, Olathe, Kans.

SPECIAL!

I have a car of long yearling bulls, a car of bull calves, a car of yearling heifers and a car of heifer calves for sale. These cattle are all in good growing condition and are mostly reds. They were sired mostly by Baron Ury 2d 124970, Bold Knight 17904 and Headlight 2d 248305.

C. W. TAYLOR, R. 2., Enterprise, Kans.

Wall Street

Might have taken you in had I not come to your rescue with a few sows carrying the blood lines of Kruger, Buddy K., Tip Top Notcher, Crimson Wonder and Ohio Chief, bred for early farrow to Secret Prince 68211, A. B. Top Notcher 47823, Big Chief's Special 68213, Top Notcher Model and Billy K., Jr. Write me your wants.

G. W. COLWELL, R. 2, Summerfield, Kans.

Klondyke Durocs

30 choice bred gilts, sired by Chief Model 47065, a 700-pound, 2-year-old son of Hunt's Model 20177; Prover 63589, one of Improver 2d 13365 best yearling sons; Sam Advance 63587, a fine grandson of Proud Advance 23549. Prices \$15.50 to \$18.50. Write me now.

G. E. Newton, Whiting, Kans.

Ralph Harris Farm Duroc-Jersey Herd

Kansas Advancer 67427 and Crimson Advancer 67425 at head. At the American Royal, 1907, with 3 entries, we took reserve grand champion sow; champion sow under 12 months; 1st and 2d sows under 12 months; and 2d in junior yearling sows. We look for excellent pigs by our new herd boars.

RALPH HARRIS, Prop. B. W. WHITE, Mgr.
WILLIAMSTOWN, KANS.
Farm station, Buck Creek, on the U. P. 45 miles west of Kansas City.

K. & N. Herd Royally Bred Duroc-Jersey Swine

Have a few gilts that I will sell at reasonable prices, bred for April farrow. Also a few fall boars of September, 1906, farrow. Write for prices and descriptions.

R. L. WILSON, Chester, Neb.

DUROC-JERSEYS

Deer Creek Durocs

100 pigs of March and April farrow by sons of Ohio Chief, Tip Notcher and Kant Be Beat. Ready for shipment after July 1.

Bert Finch, - - - Prairie View, Kans.

Fairview Herds Durocs and Red Polled

Some good young boars by Crimson Challenger 43377 for sale. No females or Red Polled cattle for sale now.

J. B. Davis, Fairview, Brown County, Kans.

CRIMSON HERD OF DUROCS.

Herd boars, Red Perfection by Leone's Chief, Al-least Gold Dust by Parker Mc., and Red Pathfinder by American Royal. Iowa Girl still farrowing good litters. The best blood lines of the breed with size and quality combined. Spring pigs for sale. J. W. Reid, Fortis, Kans.

ATTENTION

Hog raisers of every kind. Had you forgotten that this is just the time to buy that male pig to head your herd? Well it is a fact and you had better get in line and come to the Rosebud and get something fine. Rosebud Stock Farm, Rathbun & Rathbun, Prop., Downs, Kans.

WESTLAWN DUROCS

Herd headed by Bobby S., a son of 2d Climax, 1st prize boar at Missouri State Fair 1903. Stock always for sale. Choice fall boars and gilts. Also young Shorthorn bulls from heavy milking dams. Prices reasonable. E. B. Grant, R. 9., Emporia, Kans.

Elk Valley Durocs

Herd headed by Doty Boy 2279, a son of the champions Goldfinch and Dotie. My sows are by prize-winning boars. Choice pigs of both sexes for sale.

M. Wesley, - - - Bancroft, Kans.

CUMMINGS & SONS DUROCS

100 toppy pigs of early March farrow, by Lincoln Top, Junior Jim, Tip Top Notcher Jr., Kants Model, Beautiful Joe and our herd boar OH HOW GOOD, second prize-winner at Nebraska State Fair. Sale in October; write or visit.

W. H. Cummings & Son, Tecumseh, Neb.

Vick's

DUROCS are bred for usefulness. Choice young stock for sale by such great boars as Vick's Improver 47886, Red Top 32241, Fancy Chief 24923 and other noted sires. Correspondence invited. Visitors coming to Junction City and phoning me will be called for. W. L. VICK, Junction City, Kans.

CHASE COUNTY HERD OF DUROCS.

Golden Chieftain, a grandson of Ohio Chief 8721-A, Harter's Choice, a granddaughter of Crimson Wonder and first and grand champion sow at St. Joseph, 1907, and others of the best breeding. Young stock for sale at all times. J. H. Gayer, Route 1, Cottonwood Falls, Kans.

Stadt's Durocs

First-class spring 1907 BOARS sired by Long Wonder and Nelson's Model at prices that will move them.

J. F. STAADT, Ottawa, Kans.

Lamb's

HERD OF DUROCS is built along the most fashionable blood lines and is noted for the individuality of its make-up. 50 fine pigs sired by the great Hanley, Lincoln Top, Buddy L by Buddy K IV, Crimson Jim, Ambition and other great sires. We invite correspondence with prospective buyers.

Elmer Lamb, Tecumseh, Nebr.

Timber City Durocs

Fall and spring boars by You Bet 31111, Doty Wonder 41888, Geneva Chief 8049, Rose Top Notcher 54069, and others. Sows bred to the above boars for sale. Over 400 head in herd, write your wants.

SAMUELSON BROS.,
Bala, Kans. and Cleburn, Kans.

Elk Creek Durocs

One 2-year-old boar by Improver 2d and out of Nebraska Bell. Also one yearling boar by Old Surprise, (a son of prize-winners) at living prices. 160 pigs of early spring farrow by Kant Be Beats Best, and Bell's Chief 2d, ready for shipment after July 1.

J. E. JOINES, Clyde, Kans.

ROSE LAWN Duroc-Jerseys

I have several high-grade Littera's name for sale.

L. L. Vreeman, Rose Lawn Place,
FURKA, KANSAS

DUROC-JERSEYS

Capital Herd Duroc-Jerseys.

Young boars and gilts for sale from such sires as Missouri Goldfinch, Long Wonder and Parker Boy, with excellent breeding on dam's side. All are good thrifty pigs. Call or write.

J. S. White & Son, R. 8, Topeka, Kans.

CRIMSON WONDER HERD

Our Durocs are in fine shape. 300 head to pick from. Happy Holligan 6471 by Crimson Wonder 28756 and winner in 6 months class, Crimson Lad I Am 62653, winner of 3d prize at Kansas State Fair, are both now for sale. Mr. and Mrs. Henry Shrader, Wauneta, Kans.

PLEASANT VIEW DUROCS

70 early pigs by Quality King 59831, Orion Boy 42137, and W's Top Notcher 59833. Also some choice tried sows at farmers' prices. Thos. Watkinson, Blaine, Kans.

PRAIRIE QUEEN DUROCS

70 early springs that are tops, by the great Kant Be Beat, Alex Heir, and Wilkes Echo, out of daughters of Ohio Chief and Village Pride, and other good ones. G. H. Ramaker, Prairie View, Kans.

GOLD DUST HERD DUROCS

Twenty toppy spring boars sired by Kant-Be-Beat, Improver II, Hogate's Model, Lincoln Wonder, and our herd boars, Crimson Russell 52463 and Kant's Model 52471, out of our best sows. They are strictly first-class and we are pricing them very low for quick sale. Write your wants.

Miner & Aitken, Tecumseh, Neb.

FOUR-MILE HERD DUROCS

Choice fall boars by Orion Jr. 31497, and Ohio Chief 2d 41197, 50 spring boars, growthy, heavy bone, good feet, nice color; sired by the above named males, and E's Kant Be Beat 57563, Crimson Chief 31263, Rose Top Notcher 54069, You Bet 31111, Tip Top Notcher 20729, and other noted sires. Sows of the best and leading families. Write or visit herd. Visitors met at trains.

E. H. Erickson, R. 1, Olsburg, Kans.

Otatop Herd Duroc-Jersey Swine

Composed of nothing but prize-winning blood. Pigs for sale of either sex.

JOHN W. TAYLOR,
Edwardsville, - - - Kansas

Haith's DUROCS

Herd headed by Lincoln Top, sweepstakes boar at Nebraska State Fair, 1907, assisted by Haith's Can't Be Beat, Haith's Hanley, Jim's Wonder, Wonder Again. A few good sows bred to these boars for spring farrow. Will breed a few sows to Lincoln Top, \$100 service fee. Sale date, January 29.

W. H. HAITH,
Route No. 1, Vesta, Neb.

Grant Chapin's Durocs

FOR SALE—Some very choice young boars of April and May farrow sired by Model Chief Again and out of my best producing sows. Some of them herd headers.

Bred sow sale January 28, at the Agricultural College, Manhattan, Kans.

Grant Chapin, Green, Kans.

POLAND-CHINAS

FAIRVIEW STOCK FARM

Forty-five head of high grade Poland-Chinas, 40 head of brood sows and gilts and 5 boars, to be held at Fredonia, February 29, 1908. Send for catalogue.

A. K. SELL, R. 2, FREDONIA, KANS.

BOARS, BOARS.

Choice spring males at right prices, by Grand Chief, Masterpiece, Nonpareil, Choice Chief, E. L. 2d, and other noted sires. Call on or write.

THOS. COLLINS, R. 4, Lincoln, Kans.

Stalder's Poland-Chinas

I have pigs for sale from the leading strains of the country. Prices reasonable. Write for full particulars.

O. W. Stalder, Salem, Neb.

Erie Gas Light Herd POLAND-CHINAS.

Headed by Sunshine Chief 2d by Chief Sunshine 2d, dam Queen Perfection, Margarette C, Mayflower, Ideal Sunshine 2d and other great sows in herd. Stock for sale. J. K. MAHAFFEY, Erie, Kans.

Home of Indiana 2d.

You all know the record of this great young boar. Come and see him and the many other sons and daughters of world and State Fair champions in our herd. PLACE TO GET HERD-HEADERS. TRY US. They have size, finish, easy feeding qualities with hot pedigree, the kind sought after by the farmer, breeder and showman. We price them right. Come or write us.

HOWARD REED, Frankfort, Kans.

JOHN BOLLIN,

Route 5, Leavenworth, Kans.

Poland-Chinas

Best and Sells
The State and World's Fair winning boars
Name: L. L. Dude and The Piglet in service.
Send money and serviceable boars for sale.

POLAND-CHINAS

Peacock's POLAND-CHINAS. 12 BOARS, either spring or fall verifiers, Mischief Maker, Corrector or On and On strains. If you are looking for the right kind, with sale expenses deducted, call, or write your wants. Annual bred sow sale Jan. 31. Farm adjoins town. W. R. Peacock, Sedgwick, Kans.

SUNNY SLOPE POLANDS

A number of spring pigs, either sex, the farmers' kind, at bottom prices. Gilts will be sold bred or open. Also a litter of Scotch Collie pups, the great watch and cattle dog.

W. T. HAMMOND, Fortis, Kans.

Becker's POLAND-CHINAS; 40 choice pigs; the easy feeding, early maturing kind; by Dandy Rex; first in class at Kansas and Colorado State Fairs 1905-06. Prices reasonable.

J. H. BECKER, Newton, Kans.

A. M. Jordan POLAND-CHINAS of modern breeding. "Advance" (by Chief Perfection 2d) and "Grand Mischief" in service.

Alma, Kans.

SIGLER'S Our Poland-Chinas are rich in breeding and individuality. Our prices are right and we respectfully invite correspondence with prospective buyers.

A. R. SIGLER, Pickrell, Nebr.

The Useful Type of Poland-Chinas

Herd headed by Pilate Chief 43565 by Johnson's Chief 35774, and Major King 43644 by Major M. 31527, a 1000-pound hog.

E. D. Morris, Bern, Kansas

CEDAR GROVE HERD

Of pure-bred POLAND-CHINA HOGS

We will have some bargains this season to offer the public. J. A. HEBREW, Stockton, Kans. Mention Kansas Farmer when you write.

ESBON HERD OF POLAND-CHINAS

I am pricing spring pigs at \$15 to \$25, either sex. Bred gilts \$20 to \$25. Tried sows bred \$40, sows bred to Speculator 43625, or Tedy Expansion sent for record. W. C. TOPLIFF, Eabon, Kans.

POLAND-CHINAS. SHORTHORNS.

A few thrifty young bulls and boars of the best breeding from champion and prize-winning families. Prices reasonable for quick sales.

R. M. BUCK, Route 2, Eskridge, Kansas

Somerheim Farm Poland-Chinas and Holsteins

For ready sale at a bargain, the herd boar, Capital Prince 45129, by Prince Darkness. Can use him no longer. Also several early spring boars that will make lusty herd-headers and a number of richly bred gilts. James B. Zinn, Box 348, Topeka, Kans.

Maple Valley Herd Poland-Chinas

60 fine spring pigs sired by On The Line, Col. Mills by Chief Perfection 2d, Prince Darkness, Dispatcher, Grand Perfection, On Time, and other great sires. Write me for prices and breeding. C. P. BROWN, Whiting, Kans.

Young Boars For Sale

Chief Enterprise at head of herd.

I am offering 35 head of spring boars sired by Chief Enterprise. Heavy boned, growthy, thick fleshed, and in splendid condition. This stuff will be PRICED RIGHT. Write me for further information.

Isaac Tyson, Mound City, Mo.

WELCOME HERD POLAND CHINAS

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FRANK GEE, Lawrence, Kans.

HOME IN MANHATTAN.

480 acres, farm land, wild meadow, and pasture; improved, watered; 12 miles out, 8 miles to shipping station; price \$20 per acre. 160 acres—50 acres best river bottom, balance pasture; improved; \$7,000. 240-acre finely improved prairie farm for \$10,000. 320 acres best natural pasture for \$5,000. Over 40 farms in this vicinity. Lists in more than twenty Kansas counties. Best large stock farm and ranch list in the west. Over 75 city properties. Large suburban and rooming-house list. Good exchange list. Manhattan city properties, including livery and harness business and hotel, for land. Write today. New state map for 10 cents in stamps. MANHATTAN REALTY CO., 304 Poyntz Ave., Manhattan, Kans.

A Fine Kaw Bottom Farm

FOR SALE—A fine Kaw bottom farm with good improvements, about 40 acres of alfalfa, only five miles from Topeka, for \$90 per acre.

W. M. FORBES & CO.

107 West 7th St., Topeka, Kans.

Stray List

Week Ending December 26.

Wabaunsee County—C. C. Stotler, Clerk. **MARE PONY**—Taken up by Ernest Roush in Plumb tp., August 7 1907, one mare pony, about 10 years old, 4 ft 10 inches high, weight about 700 lbs., star in forehead, branded IX on left hip.

Cherokee County—R. G. Holmes, Clerk. **HORSE**—Taken up by Naney Doss in Pleasant View tp. (P. O. Ashbury, Mo.), November 29, 1907, one bay horse, star in forehead; valued at \$35.

COW—Taken up by L. H. Gandy in Garden tp., December 13, 1907, one white and red spotted cow, smooth crop on left ear and spear brand on left hip; valued at \$20.

For Week Ending January 2.

Lyons County—Jno. E. Martin, Clerk. **STEER**—Taken up by Sarah J. Weaver in Emporia tp., one 3-year-old dark red steer, square crop on left ear; valued at \$35.

Live stock advertising in The Kansas Farmer brings results to the advertiser.

LEGAL.

Notice of Final Settlement.

The State of Kansas, Shawnee County, ss. In the Probate Court in and for said County. In the matter of the estate of Edward Zuercher. Creditors and all other persons interested in the aforesaid estate, are hereby notified that I shall apply to the Probate Court in and for said County, sitting at the Court House in the City of Topeka, Shawnee County, Kansas, on the 3d day of February, A. D. 1908, for a full and final settlement of said estate.

Dated December 19, A. D. 1907.

S. J. CRUMBINE, Administrator of the estate of Edward Zuercher, deceased.

(First published in Kansas Farmer, December 26, 1907.)

Sheriff's Sale.

Case No. 24687.

In the District Court of Shawnee County, State of Kansas. James Durkin, Plaintiff, vs. J. E. Tierney and Alice Bates, Defendants.

By virtue of an Order of Sale issued to me, out of said District Court, in the above-entitled action, I will, on Monday, the 27th day of January, A. D. 1908, at 10 o'clock a. m., of said day, at the east front door of the Court House in the City of Topeka, in the County of Shawnee, in the State of Kansas, offer at public sale, and sell to the highest and best bidder, for cash in hand, all the following described real estate, to wit: Lots numbered 1, 3, 5, 7, 9, 11, 13, and 15 on Third Street in Block 21, also Lots numbered 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29 and 31 on Third Street in Block 22. Also Lots numbered 2, 4, 6, 8, 10, 12, 14 and 16 on Gordon Street in Block 21. Also Lots numbered 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30 and 32 on Gordon Street in Block 22. All of the aforesaid lots are recorded in plat of Blocks 21 and 22, North Park Addition to the City of Topeka.

peka, lying and situate in the County of Shawnee in the State of Kansas.

The above-described real estate is taken as the property of said defendants, and is directed by said order of sale to be sold, and will be sold without appraisal, to satisfy said order of sale.

J. M. WILKERSON, Sheriff of Shawnee County, Kansas.

By JONATHAN D. NORTON, Under Sheriff.

M. T. CAMPBELL, Attorney.

First published in Kansas Farmer December 12, 1907.

NOTICE.

Notice is hereby given that we, the undersigned commissioners hereunto duly appointed by the Honorable A. W. Dana, Judge of the District Court of Shawnee County, Kansas, will on the 16th day of January, 1908, proceed to lay off according to law, for the Topeka-Southwestern Railway Company, along its route as now located from a point on said line, to wit: 55.1 feet north of the southeast corner of the southeast quarter of section two (2), in township twelve (12), south of range fifteen (15), east of the sixth p. m. to the west line of Shawnee County, Kansas, all lands, necessary for the route for said railroad and all such land as may be deemed necessary for sidetracks, depots, work-shops, water stations, material for construction, except timber, the right-of-way over adjacent lands sufficient to enable said Company to construct and repair its road and stations and a right to conduct water by aqueducts and the right of making proper drains and appraise the value of that portion of any quarter section or other lot of land so taken and assess the damages thereto, which said lands desired by said railway company are particularly shown by the map and profile of said Company's line of railroad in said county, filed in the office of the county clerk of said county. We will commence to lay off said route as aforesaid on the line of said Company's railroad, as located at said point on its line, to wit: 55.1 feet north of the southeast corner of the southeast quarter of section two (2), in township twelve (12), south of range fifteen (15), east of the sixth p. m. in Shawnee County, Kansas, on said day and will adjourn from time to time until our labors in this behalf are completed.

Dated the 12th day of December, A. D. 1907.

C. E. JEWELL, ED. BUCKMAN, W. M. HENDERSON, Commissioners.

HOTEL KUPPER

11th and McGee St.

Kansas City, Missouri



One of the newest and most centrally located hotel in the city. Absolutely modern in every detail.

European Plan, \$1 per day and up

When writing advertisers please mention this paper.

FRANK IAMS'

"Peaches and Cream" stallion and mares are best investments for deposits, you have in "banks" and can't draw out. Wait me around again Willie, then buy a stallion and two mares of Iams. They will make us 40 per cent and we will know where our money is. Iams will accept our certificate of deposit drafts, certified checks or bankable notes. Iams and his winners and sons of winners "stir up the animals." He hypnotizes the buyers with a "horse show" of bargains. Owing to bad crops, Iams' cash, his 26 years experience, he is selling more and better horses than ever. "Willie," buy an "Iams stallion" this fall. Save \$300 and get choice of

200 Percherons, Belgians and Coachers 200

Two to six years old, wt. 1700 to 2600 lbs., 90 per cent black boys, 50 per cent ten stallions. All registered and approved. Mamma, Iams is a hot advertiser, but he has "the goods." He sells "toppers" at \$1000 and \$1500, so good they need not be "peddled" or put on the "auction block" to be sold. He has on his selling clothes, they fit all buyers. No men with money or bankable notes get away from Iams. He buys, owns and sells more stallions than any man in the U. S. saves thousands of dollars to stallion buyers. He is not in the stallion trust. Iams places 1,000 or \$1,500 insurance.



\$1,000 — SAVED AT IAMS' — \$1,000

Ikey, what a rich graft these "slick stallion salesman" are working on the honest farmer, selling fourth-rate stallions at \$2,000 and \$5,000! Iams sells "top-notchers" so good, big and cheap that they do not need to be peddled to be sold. Mr. Buyer, see Iams' stallion yourself. Take no "gold brick stallion salesman's word." Iams has "the goods" you read about. His establishment is worth going 2,000 miles to see. Iams makes competitors "holler." He is knocking "high prices out of Xmas trees. Iams saws wads, "butts in," sells more stallions each year. He makes every statement good. Georgie, dear, buy a stallion of Iams. His \$1,300 stallions are much better than our neighbors paid those Ohio men \$4,000 for. Then I can wear diamonds. Iams speaks the languages, buys direct from breeders, pays no buyers, salesmen or interpreters, has not two to ten men as partners to divide profits with. Iams guarantees to sell a better stallion at \$1,000 to \$1,500 than are sold to stock companies for \$2,500 to \$5,000 by slick salesmen, or pay you \$500 for your trouble, you the judge. Iams pays horses freight and buyer's fare; gives 60 per cent breeding guarantee. Write for eye-opener and greatest horse catalogue on earth.

References—St. Paul State bank and Citizen's National bank.

ST. PAUL, NEB.



Just returned home with a grand lot of European stallions—Percherons, Belgians, Sires and German Coach. In all of our 21 years importing we have never landed a better lot; big, strong, masculine fellows, heavy bone, good actors and sound as gold dollars; ages 2, 3, and 4 years old. As to prices, there is no concern in the United States can sell an honest, all sound and all right stallion for less money than we can. Come and see us and examine our stallions.

When you arrive in Lincoln, take the State Farm or Interurban street car. Inquire for Sullivan's barns. If impossible to come at once, write us for further information concerning our stallions.

THE LINCOLN IMPORTING HORSE COMPANY,
A. L. SULLIVAN, Mgr. LINCOLN, NEB.



Robison's Percheron Sale

Seventh annual sale, Wichita, Kas.,
February 18, 1908.—40 mares,
20 stallions. Catalogs
ready January 15.

J. W. & J. C. ROBISON, Towanda, Kans.



FRANK WASSON,
Importer and Breeder of
Percheron and Shire Horses
Stallions of good ages or sale at my barns at all times.
FRANK WASSON, Clearwater, Kansas

MULLEN & SHEPHERD'S

Great Combination Sale

Pure-Bred Duroc-Jerseys, in Hall at Fair Grounds, at

Abilene, Kans., Monday, Jan. 20

J. D. Shepherd's Division

**7 Fall and Spring Gilts—3 Tried
Sows and 2 Boars of
June Farrow.**

The individuals in this offering were sired by such noted boars as Teddy R. 48067, Kid Newton 18003, Goodenough 13991, and Clemmet 44999. Teddy R. is a prize winner that has carried off high honors wherever shown. He won first in class and sweepstakes at two fairs in 1906, repeating the performance at Dickinson County Fair 1907. Shepherd's Choice won first in six months' class 1907. On the dam side of the draft is Red Rose 116740. She is a great mother and no one should fail to see her gilts in this sale. Another good one is Polly 136636. This sow farrowed 13 pigs September 11, and raised 10 of them.

Special Attractions:

Three gilts sired by Teddy R.; dam Red Rose. These are simply fine. They have been bred to that first prize boar pig, Shepherd's Choice 68353.

The entire offering will be in splendid breeding condition, not excessively fat, having been raised on alfalfa pasture and shorts sloop with very little corn. The tried sows have raised two litters of pigs this year. My winnings at the Dickinson County Fair in 1907 consisted of 9 firsts, 2 seconds, 2 thirds, sweepstakes on boar and sweepstakes on sow. Write for catalogue.

W. C. Curphey, Auctioneer.

J. W. Johnson and J. R. Johnson,
Fieldmen.

W. R. Mullen's Division

5 Tried Sows, 23 Gilts.

Some of the sows are granddaughters of Shamrock 20569; dams Madge's Kid I and II: Shamrock Kid 163456, farrowed August 15, 1906. Abilene Queen 169460, farrowed August 11, 1906. Abilene Belle 169458, farrowed August 11, 1906. Princess Clementine III 169152, farrowed August 11, 1906. Princess Clementine I 169450, farrowed August 11, 1906. These are all GOOD tried sows. Some of these are bred to Oom Paul II, Wonder 46831, and Hambletonian Top Notcher 68471. Oom Paul II Wonder 46831 has won three firsts in his class in Dickinson County Fair. Look up his breeding. Hambletonian Top Notcher 68471 was farrowed only last April 13, so he has only made one appearance at fairs and took a blue ribbon every time he showed, all but sweepstakes ring. His mother, sisters and he took more ribbons than any sow and litter at the Dickinson County Fair. Hogs are of the large, growthy type. In the offering are 23 gilts of April and May farrow, all of which will be bred to Hambletonian Top Notcher 68471. Here is a young boar that I think is one of the coming hogs. He is a splendid pig, of good bone, feet, length and arched back; has a nice head and ears. His breeding is at the top, carrying the lines of Improver 2d, Top Notcher, and is a great grandson of Kant Be Beat, the \$2,500 boar of Morrison & Sons of College View, Neb. His dam's breeding is right, too—her sire is Jumbo Perfection, who was the first prize boar at Nebraska State Fair in 1903 and 1904 and third prize at St. Louis. Dam sired by Hambletonian, now in Manlove herd at Bowen, Ill., and for whom they refused \$1,000.

SHEPHERD & MULLEN, . . . Abilene, Kans.

LEADER by Meddler 2d, TROUBLE MAKER 2d by Trouble Maker (full brother to Meddler), and MASTER MECHANIC by Contractor, head my heard and are included, with the sows bred to them, in my

Poland-China Brood Sow Sale

Harrisonville, Mo., Thursday, January 16, '08

These three boars are fancy and none is better bred. LEADER was sired by Meddler 2d out of Emergency by Corrector 2d, second dam Perfection Alto by Chief Perfection 2d. TROUBLE MAKER 2d was sired by Trouble Maker (a full brother, litter younger) to old Meddler) out of H's Black Bess 3d by Chief Perfection Jr. (by old Chief Perfection); next dam H's Black Bess 2d by a full brother in blood to Keep On. MASTER MECHANIC is out of the best litter I saw in 1907 and is the best son of Contractor. His dam is Edith U. S. 4th by Chief Perfection 2d. PERFECT MEDDLER (by Meddler 2d and out of a Trouble Maker dam from my best brood sow family) is a June boar to be sold in this sale. He is one of the heaviest-boned Meddler 2d boars I've seen and is a show prospect.

57 SOWS AND GILTS 57
All Bred Except 10 Head

There are 13 mature brood sows, including one by Proud Perfection, two by Trouble Maker, one by Majestic U. S. and 9 by Chief Perfection Jr. (State fair winner) and Ideal Tecumseh (first in class at Iowa and Illinois State Fairs) by Chief Tecumseh 3d. There are 19 fall yearlings sows including Sunbeam by Mischief Maker and Crocus by Corrector 2d. These two are as fancy and valuable sows as will be sold anywhere this winter. Crocus is out of a Meddler dam. Eight of these fall yearlings are by Chief Perfection 3d (full brother to G's Perfection) and nine are by Trouble Maker (full brother to Meddler). Twenty-five elegant spring gilts, fancy as they can be and with lots of size, are included, 15 of which are bred. These include two by Royal Perfection (by Chief Perfection 3d), 8 by Perfect Corrector (by Corrector 2d), 12 by Trouble Maker, 1 by Chief Perfection 3d and two by Meddler 2d. Will also sell Suda Bell by Illinois Special out of a Keep On dam, bred to Next In Line.

Send bids to Geo. E. Cole, in my care. Send your name now for catalogue. Auctioneers: Sparks, Burger, Snyder, Johnston and Page.

C. E. HEDGES, . . . Garden City, Mo.

JACK AND JENNET SALE

At my farm 1 mile south of Blackburn, Okla., January 10, '08.

5 head of Mammoth Jacks and 13 head of Mammoth Jennets, 10 of which are bred to Mammoth Jacks. 6 of the above Jennets are bred to James Jefferson, 6 years old, a Mammoth Jack, 16 hands high, black, with white points, weight 1,100 pounds. 4 are bred to Bismark, 8 years old, black with white points, 15 hands high, weight 1,000 pounds. Cronje is a brown jack, coming 3 years and is 15 hands high. 1 fine yearling jack, black in color, and one jack colt, just weaned. The above jacks and jennets are all genuine Mammoth stock, extra large and good colors. Write and come to the great sale.

HENRY D. C. POOS, Owner, . . . Blackburn, Okla.
Jno. W. Teter, Clerk, Eli Tatro, Auctioneer.

ERICKSON'S Bred Sows AT AUCTION

The sale will be held at my farm six miles northeast of Olsburg, which is on the L. K. and W., and five miles southeast of Cleburne, which is on the Blue Valley branch of the Union Pacific. Sale under cover. The date is

Wednesday, Jan. 22

and the day before Samuelson Bros. sell at their farm near Cleburne and to which free conveyance will be furnished from my sale. My offering of forty head of Duroc-Jersey bred sows on the above date I think will contain blood lines that can't help but please you and the individual merit will show for itself. I have bought from the best herds in the country and am putting my best foot forward in this instance. Eight tried sows, four fall yearlings, and twenty-eight spring gilts make up the offering. Fourteen sows by Orion Jr. 31479, he by old Orion and eight bred to him. Six by E's Kant Be Beat by Red Raven and grandson of Kant Be Beat on dam's side and twelve bred to him. Four by Ohio Chief 2d, one by Hunt's Hodel, one by Improver 2d, four by Crimson Chief, he by old Crim-son Wonder and one by old Kansas Wonder. For a catalogue address

E. H. ERICKSON,
OLSBURG, KANS.

Auctioneers: Lafe Burger, Jas. T. McCulloch, Chas. Currie.
Remember Samuelson Bros.' sale the day following at Cleburne, Kans.

A DUROC-JERSEY Bred -- Sow OPPORTUNITY

A select draft of 45 head of tried sows, fall yearlings and spring gilts from the Timber City Herd of Samuelson Bros., of Cleburne, Kans. Sale to be held on farm near

Cleburne, Kan., Thursday, Jan. 23

We will sell 45 head, consisting of nine tried sows, six fall yearlings and thirty spring gilts. Of the tried sows one is by Ohio Chief 2d; three by You Bet 31111 (winner of first at the American Royal, 1904, as produce of sow) by Brilliant 9265; one by Perfection Wonder 2d 31115, by Perfection Wonder 14779; two by Roosevelt 2d 20365 (winner of second at American Royal, 1904); one by Advance Top Notcher 43501, he by Top Notcher Chief (junior champion World's Fair 1904); one by Captain Paul 19539.

The fall yearlings are sired by You Bet. Of the spring gilts, six are sired by Choice Goods I Am by W. L. A.'s Choice Goods; four by E's Kant Be Beat; four by Rose Top Notcher by Advance Top Notcher; eight by You Bet and eight by Geneva Chief 48049.

These will be bred for March and April farrow to Geneva Chief, White House King 69543, by White Hall King, Attraction, by Attractive Chief, one of the best sons of Red Raven.

Sale will be held under cover rain or shine. Free conveyance will be had from Cleburne and also from the sale of E. H. Erickson, which is held the day before at his farm six miles from Cleburne. For catalogue address

Samuelson Bros.,
CLEBURNE, KANS.

Auctioneers: Burger, McCulloch and Currie. Send bids to J. W. Johnson.

Vick's Duroc-Jersey Bred Sow Sale

—WILL BE HELD AT—

Junction City, Kans., Sat. Jan. 25

40 Head in all, representing nearly
every leading strain.

Not a spring gilt in the offering. About two-thirds will be tried sows. The rest fall yearlings. Everything bred for early spring farrow to my herd boars, Vick's Improver by Improver 2d, Diamond Dick 57793, grandson of Katbebeat, Highland Chief 59749, grandson of Ohio Chief and old Orion, and Model B by Vick's Improver. Among the sows will be daughters of Improver 2d, Orion, Shakespeare, Auction Boy 3d, Chief Orion, and other good sires. We have 240 to select from and it is our intention to put an offering that will please the boys. I have had many pleasant times with Kansas and Nebraska breeders and take this opportunity to invite you all to be with me sale day whether you are going to buy or not.

W. L. Vick, Junction City, Kansas

Cols. John Brennan and W. C. Curphey, Auctioneers. J. W. Johnson, Fieldman.

An Expansive and Old Hutch BRED SOW SALE

At the farm 6 miles south of

Waterville, Kans., Wed., Jan. 22

Our offering on the above date numbers 45 head and consists of about twenty spring gilts that go in the sale weighing 300 pounds and over. They were sired by Expansive, a son of old Expansion, and one of his biggest sons. They are bred for early farrow to Old Hutch, the sire of Big Hutch, the great boar at the head of Thompson Bros.' herd and the sire also of several others that are now as famous as himself. The sows in the sale not sired by Expansive will be safe in service to him. Bids may be sent to J. W. Johnson of The Kansas Farmer.

Thomas & Swank, Waterville, Kan.

Auctioneer: Col. T. E. Gorden.

FIRST QUALITY DUROCS

At Auction, Tues., Jan. 21

If you are a breeder of Duroc-Jerseys of course you want our catalogue of bred sows to be sold on the farm January 21, 1908, at

Marysville, Kansas,



A FEW ATTRACTIONS ARE:

Seven sired by First Quality, sell bred to Model Topnotcher.
Three sired by Nebraska Wonder, sell bred to First Quality.
Six sired by Nebraska Wonder, sell bred to Model Topnotcher.
Three sired by Cook's Improver, sell bred to Model Topnotcher.
Six sired by Cook's Improver, sell bred to Chief Crimson.
Don't forget the place, the date or the opportunity.
Send bids to J. W. Johnson in our care.
Auctioneers: Col. Judd McGowan, Col. L. R. Brady.

JAMES L. COOK,
Marysville, Kansas.

MELLENBRUCH'S DUROC BRED SOWS

AT AUCTION,

Hiawatha, Kans., Friday, Jan. 24

The sale will be held under cover and breeders will be entertained at the Hiawatha Hotel. My offering of bred sows on the above date will number 35 head and will consist of 25 nice, well grown out spring gilts and 7 tried sows and 3 fall yearling gilts. The spring gilts are mostly by Whalebone, he by American Wonder and he by Pilot Wonder. The three fall yearlings are of different breeding but well bred. Six of the spring gilts are by Hunt's Model, and the tried sows represent such noted families of Durocs as Crimson Wonder, Tip Nop Notcher, and Kant Be Beat. Almost the entire offering is safe in service to two great young males, one by Monarch and the other by Golden Rule. Catalogues now ready. A postal card brings one. Address

J. H. Mellenbruch, Morrill, Kans.

Auctioneers: Col. Judd McGowan, Col. C. H. Merion. J. W. Johnson, Fieldman.

ANNUAL BRED SOW SALE

Thursday, January 23

Will occur my regular Duroc-Jersey bred sow sale at my farm adjoining town. I will sell 40 head as follows:

Thirteen fall yearling gilts, mostly by Crimson Challenger, a grandson of Duroc Challenger on his sire's side and Crimson Wonder on the dam's side. Also a few of them by a grandson of Ohio Chief.

Nine tried sows in the prime of their usefulness.

Twenty spring gilts of early farrow mostly sired by Crimson Challenger. A major portion of the offering will be bred to Fairview Chief, who is one of the great sons of old Kant Be Beat. About seven head will be bred to Monarch, the great Orion and Protection bred boar. The tried sows are selections from my herd that are proven profitable brood sows.

Catalogues are now ready to mail. A postal will bring one by return mail.

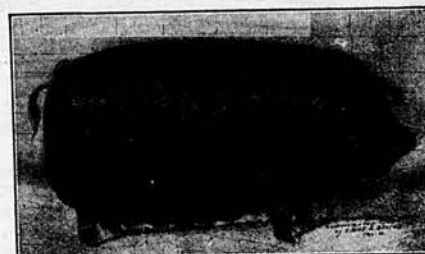
Auctioneers: Col. Judd McGowan, Col. C. H. Merion. J. W. Johnson, Fieldman.

J. B. DAVIS,
Fairview, Kansas.

KERR'S SPLENDID DUROC OFFERING

**At the farm 4 miles south of
Sabetha, Kans., Wednesday, Jan. 22**

Sale will be held in the new sale pavilion at the farm where all will be made comfortable. Thirty-five head of bred sows have been catalogued for this sale and they are choice throughout. Eleven are nice, smooth fall yearlings, eighteen choice spring gilts and six are tried sows that complete the number offered. Most of the fall yearlings were sired by Leader, he by Tom Watson and a few were by Crimson Wonder 2d, he by old



Crimson Wonder. The spring gilts were sired by Lincoln Chief by Ohio Chief and some by Fairview Chief, he by Kant Be Beat, and two dandy good ones by II Gold Finch. Fifteen are bred to Lincoln Chief, twelve to Golder, the great young male sired by Golden Rule. The balance are safe to Leader. Catalogues ready. Address

Geo. Kerr, .. Sabetha, Kansas

Auctioneers: Col. Judd McGowan, Col. Wm. Speaks, Col. D. D. Wickens. J. W. Johnson, Fieldman.

Remember the J. B. Davis' sale at Fairview, Kans., the day following.

A True Cutting Axe

Good, true, clean work with an axe depends as much upon the form, balance and hang of the axe as upon the skill of the workman.

If the taper of the blade is abrupt or irregular, it will not cut deep and requires too much grinding. If it is not accurately balanced, it will deflect and true cutting will be impossible.

If the hang is not perfect, it is awkward and tiring.

Keen Kutter Axes are designed to suit the work to be done and to meet every requirement of the workman. The form is wonderfully adapted to fast, clean work and strength of edge. The center of the eye agrees exactly with the cutting edge and the gradual taper allows deep cutting and easy grinding.

The handles are formed, fitted and adjusted in our factory by experts employed for the sole purpose. They are then secured by the Grellner Everlasting Lock Wedge, so they can never work loose.

This is a wedge of cast steel, locked permanently into the handle by a steel pin that when once driven in can never come out. The great care exercised in the making of this axe is typical of the construction of all

KEEN KUTTER

Quality Tools



Keen Kutter Tools are ground and hand-whetted at the factory, not only so they will be ready for use, but to insure an edge free from fault or flaw.

The same perfection of detail is to be found in all Keen Kutter Tools and implements, which include a full line of Carpenters' Tools, Forks, Rakes, Hoes, Garden Trowels, Manure-hooks, Grass-shears. Also Pocket-knives, Table Cutlery, Scissors and Shears. All bear the Keen Kutter Trademark and are absolutely guaranteed.

Sold for nearly 40 years under this mark and motto:

"The Recollection of Quality Remains Long After the Price is Forgotten."—E.C. Simmons.
Trademark Registered

If not at your dealer's, write us.

SIMMONS HARDWARE COMPANY (Inc.), St. Louis and New York, U. S. A.

KEEN KUTTER TOOL CABINETS

contain an assortment of tools suitable for home, farm or shop. The right tool for every use, a place for every tool, and every tool in its place. The only complete outfit of first-class tools sold under one name, trademark and guarantee. Various styles and sizes from \$8.50 to \$85.

