

NEBRASKA

KANSAS FARMER

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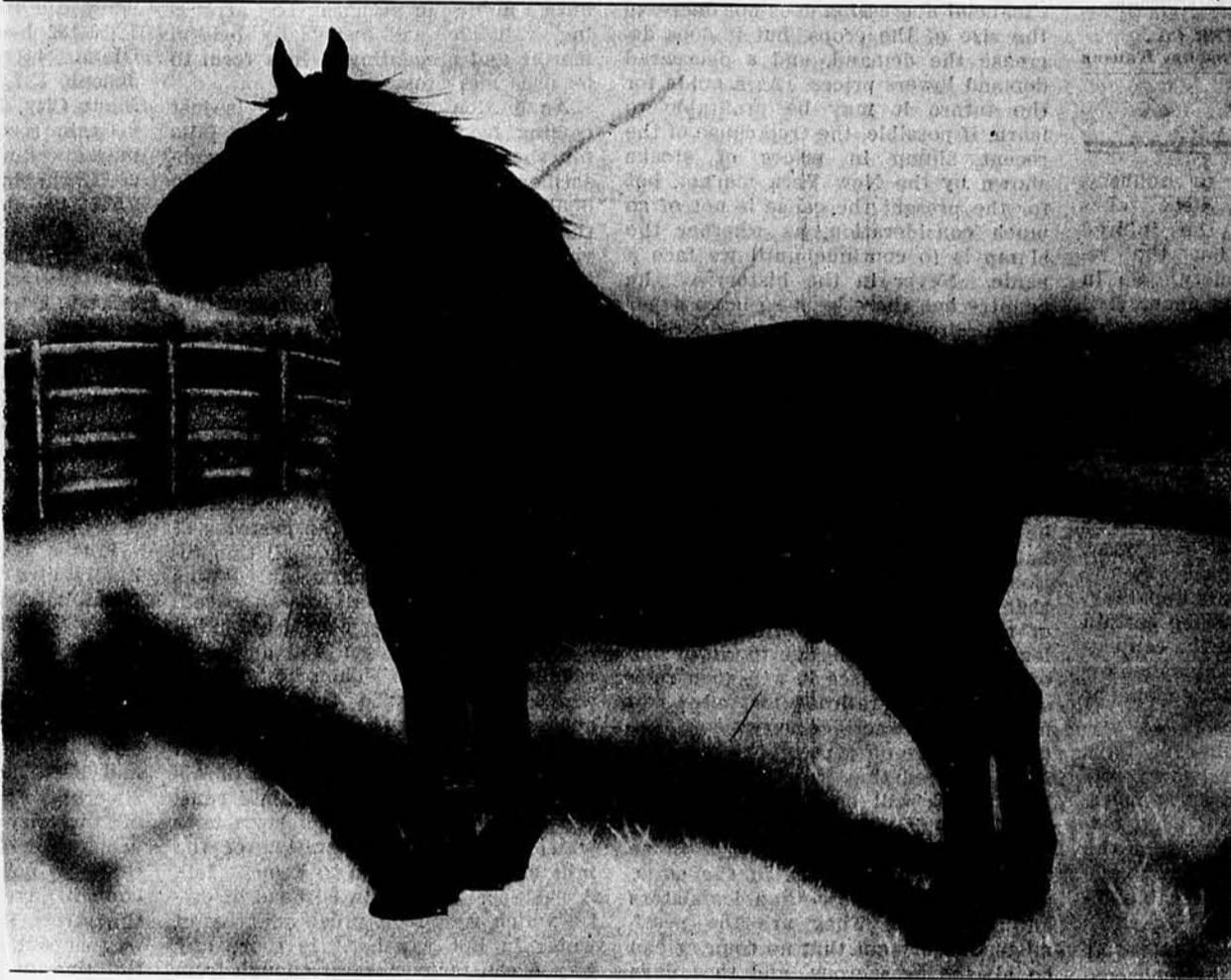
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PREVENTING THE STRIKE.

A great strike which threatened to cripple if not suspend the operation of forty of the principal railroads of the country has been under discussion for some time, and has for the last two weeks seemed inevitable. Finally, official notice of the situation was taken by the Interstate Commerce Commission and the Department of Labor under authority conferred by a recent act of Congress. Just what powers have been given to these bodies

seems to be little understood, but that some sort of agreement between the managers of the labor unions and the managers of the railroads is to result from the official intermediation is now probable.

The whole people must suffer should there be any obstruction of the country's scanty means of traffic. There are, therefore, three parties interested with reference to the proposed crime of "tying up" the railroads. In this respect this offense is similar to



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all others. In cases of robbery, arson, or murder, the State takes a hand, not to help the injured to obtain vengeance, but the reduce the danger to society. So in the case of disagreements about civil rights or interests, society maintains courts for peaceable settlement. That would be a crude state of society in which two farmers disagreeing about a partition fence were told to "fight it out." Until recently disagreements about wages and hours of labor have had no way of adjustment except for the disputants to "fight it out." The opposing interests have, year by year, marshalled larger forces until now the prospect of collision is truly appalling, on account of the catastrophe certain to be visited not only upon the contestants, but also upon every industry, every business, and all dependent thereon.

That society must sooner or later protect itself against outrages by providing a peaceable and orderly method of adjustment has long been evident. If the new law under which the officials are now acting shall prove efficient, it marks a period of notable advancement in human affairs.

Some surprise has been indulged at the failure of either side to such controversies to bring action against the other under the conspiracy laws. For instance, why does not some railroad management bring action for conspiracy against the unions and their officers? The answer is found in the old law maxim about "clean hands." Railroad managers conspire together in manners of doubtful legality and would probably be thrown out of court on a counter charge.

But the unoffending public has a right to be heard, and there should be statutes under which the public may bring the contestants into court and compel them to accept a reasonable settlement of their differences. It is objected to this that while a railroad corporation may be reached by court processes, there would be great difficulty in reaching the labor unions because no official can bind the members of such voluntary organization, or can be required by the court to demand of members that they obey any order. These organizations have a real existence and they do recognize the authority they confer. Doubt-

less a way will be found whereby these great bodies of citizens as well as the great corporations with which they contend will be made amenable to the duly constituted authority of all the people for the determination of matters on which the welfare of all depends.

Strikes and lockouts should very soon be made things of the past. To accomplish this it will doubtless be found necessary for Government to assume duties and authority not assumed in times past. The complex civilization of the present and the future with its development of combinations of great power can not be maintained without adequate means of direction, restraint, and control. If these have not already been provided they will be required of the statesman in the near future.

FINANCIAL MANIPULATIONS.

Are we drifting toward a financial panic, or are we simply getting rid of an overgrowth in stock valuations? This is a question of great importance to the farming community in every part of the country. Farmers are not dabblers in stocks, but every period of financial depression affects them injuriously. During the past ten years there has been a steady increase of farm values. In some sections this increase has been more marked than in others, but the increase has been felt everywhere. The wonderful prosperity of the country has operated to make an increased demand for farm products, and it follows naturally that should prosperity turn to depression farmers would feel it very sensibly. Financial depression does not decrease the size of the crops, but it does decrease the demand, and a decreased demand lowers prices. As a guide for the future it may be profitable to learn, if possible, the true cause of the recent slump in prices of stocks shown by the New York market, but for the present the cause is not of so much consideration, as whether the slump is to continue until we face a panic. Never in the history of the country has there been so large a per capita circulation, neither has there ever been so great a volume of business of every kind. So it is not the want of increased circulation, or of an increase in the volume of business that is needed to avert a panic.

It has been charged, on the one hand, that the slump in prices has been manipulated by the railroad magnates with a view to scare off legislation; on the other hand it is charged that it is due to the radical attitude of the President and of many State legislatures. If it is due to either one of those two causes it will soon remedy itself—the railroad magnates can not afford to sacrifice very many millions to scare off a possible ghost, nor is it believed that the President and legislatures will bring on a panic by pushing legislation beyond the limits of justice or even expediency. Some observers, however, see in the situation something more than legislators and railroads. They are the pessimists who cry out that no country can be always prosperous, and that days of adversity are necessary to counter-balance things.

WHITNEY CHARGED.

Those interested in agricultural science are watching with much interest the controversy between Dr. Cyril G. Hopkins, president of the Association of Official Agricultural Chemists and professor of agricultural chemistry and agronomy in the University of Illinois, and the Bureau of Soils of the Agricultural Department. It seems that Professor Hopkins has charged the Bureau of Soils with suppressing material data for the purpose of making an apparent agreement between results as shown by the Experiment Station in Ohio and those obtained by the Bureau of Soils, and also that the statement of Professor Whitney, of the Bureau of Soils, in regard to the results of wheat culture and rotation experiments at one of the stations is erroneous and misleading. When these charges were brought to the attention of the Secretary of Agriculture he turned the matter over to

Assistant Secretary Hays for investigation. Secretary Hays has made his report, which is adverse to the charges made by Professor Hopkins.

This controversy calls to mind a serious disagreement of a few years ago between Professor Whitney and Professor King in which serious doubt was thrown upon the fairness of the former. Those who know Dr. Hopkins and Professor King will want the plans and specifications of this latest certificate of character for Professor Whitney before rendering judgment adverse to Dr. Hopkins's charges.

COBURN'S LATEST.

The Fifteenth Biennial Report of the Kansas State Board of Agriculture is a big book. It contains 1,336 pages. It is divided into four parts. Part I, "The Book of Corn," occupies pages 1-424; Part II, "Farm Animals," pages 425-890; Part III, "General Home-Making," "Commercial Fertilizers," and "Proceedings of the Board," pages 891-996; Part VI, "Statistics of Counties," showing population, acreages, productions, and live stock, their values for 1905 and 1906, assessed valuation of properties for taxation in 1906, etc., pages 997-1191; "General Summary" of statistics, assessed valuation of taxable property, 1906, population and area, and State summaries for 1905 and 1906, pages 1192-1206; "Crop and Live-Stock Statistics" for the years 1905 and 1906, pages 1207-1263; "The Fifth Decennial Census" follows page 1264.

An adequate review of a book like this is practically impossible. It is an added illustration of Secretary Coburn's ability in selecting and arranging valuable and especially helpful matter and presenting it in a form to be used and preserved.

An edition of 20,000 copies is just coming from the printer. This falls far short of one copy for each subscriber to THE KANSAS FARMER. No doubt others will want copies, so that those of our readers who desire this valuable book before the edition is exhausted should apply immediately to Hon. F. D. Coburn, Secretary State Board of Agriculture, Topeka, Kans. This is a rare opportunity to secure a most valuable book for the asking.

TAPPED HIS SPRING.

EDITOR KANSAS FARMER:—A and B own adjoining farms. A had a good spring in his pasture, a few rods from the line fence dividing the pastures of A and B, which furnished all the water that the stock could drink. B was short of water and had to sink a well. He tried to get water nearer his buildings and went down 180 feet but reached no water. Then he went up above A's spring a few rods and across the fence, where he struck the course of the spring and went down eighteen feet, tapping the vein of A's spring. Now when B's windmill runs, A's spring stops. B has a large tank which requires the operation of the mill most of the time to keep it full. A pastures from 70 to 90 head of cattle which require a great quantity of water in hot weather. Is there any way A can recover water enough from that spring to supply his cattle? It would seem that a man would have a right to dig anywhere on his own land, and yet I don't know whether he would have such right to the damage of his neighbor. J. H. W. H. Morris County.

Underground waters which on coming to the surface form a spring are described by law writers as "percolating waters." This designation is used even though the water in question may have a definite channel if the existence and location of such channel are unknown and not reasonably ascertainable. Underground waters are presumed to be percolating waters until it is shown that they flow in a well-known and defined channel.

The general rule of law is that the owner of the soil may intercept and divert the percolating subsurface waters without incurring liability to the

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owners of adjacent or nearby lands who are thereby deprived of its use. The "American and English Encyclopedia of Law" further says: "This is true notwithstanding the fact that the consequences of his act in so diverting or intercepting the percolating waters would be to injure or even render entirely worthless another's well or spring or surface watercourse in which the waters would have flowed."

The qualifications of this rule tend to restrict the person making the diversion to a beneficial use of the water and to qualify the right to convey it to a distance.

There has often been complaint of the hardship inflicted upon the owner of a well or spring which has been made valueless or has been greatly impaired by the diversion of the waters from which it had been fed. But the right of the owner of the land to take out whatever he may find beneath its surface has been held to apply to water as well as to stone.

But even though the law is against A in this case it may be possible to make a reasonable arrangement with B for a division of the supply. It is not necessary always to take the "pound of flesh."

MARKETING FOOD STUFFS.

Live-stock arrivals at seven primary markets during the month of February aggregated 3,312,533 head, against 3,313,098 in February, 1905, and 3,052,090 during February, 1904. Of the total animals received, cattle constituted 656,752 head, hogs 1,400,050, sheep 761,323, and horses and mules 39,741. The receipts by city show the following figures. Chicago, 1,351,182 head; Kansas City, 580,000; Omaha, 441,200; St. Louis, 344,595; St. Joseph, 332,964; St. Paul, 99,471; Sioux City, 162,528.

Grain receipts at fourteen primary markets during February aggregated 60,718,967 bushels, as compared with 57,658,429 bushels during February, 1906, and 43,883,937 during February, 1905. Of the total receipts, wheat constituted 15,012,361 bushels; corn, 3,395,036; oats, 13,426,811; barley, 4,881, and rye, 652,878. Increased receipts are shown by wheat and corn while losses are shown in the receipts of oats, barley, and rye, the gains being especially heavy in the case of corn.

CITY COUNCIL CAN NOT RENT STREET.

EDITOR KANSAS FARMER:—Will you kindly give me some information on the following: A owns a city block on the outskirts. B owns a block joining on the east and lives on it. The street between these blocks has never been used for public purposes. Some of B's buildings occupy the street to about the center. A's block has been fenced and cultivated several years. At a recent meeting of the city council B submitted a proposition to rent a "vacant strip" that was not used for anything. The council gave B the privilege of using the street in question. B proceeded to tear out the fence, which was along that side of A's block, and put up a strip about thirty-seven and half feet wide along that side of the block. A forbade B to do this, but she saw him doing it. Now, what wish to know is this: First, did the city council have any right to rent this street to B; second, has B made himself liable for trespass and damage, and what would be the course to pursue in the matter? Any information you may give on this matter will be thankfully received. Stafford County. A. Subscribers.

A case covering much of the above inquiry was decided by the Kansas Supreme Court and is reported in K. S. 1. The opinion of the court is written by Justice Valentine, all the justices concurring. In this case it was held that "The only legitimate use that can be made of a street, the sidewalk, by any private person, for passing and repassing upon the same." It was further held that no private person any right to use a street, or any portion of the same,

any purpose except for passing and re-passing.

It is therefore plain that the city council which has no other powers than those of the city has no right to lease a street to any person for cultivation.

A street is a highway and in most respects comes under the general law of the highway. If vacated the land reverts to the adjacent property-owners. When not used for passing and re-passing the city still retains the right to such use whenever it is needed for such purpose. When not used as a highway the right to cultivate or to use for other purposes, if it exists at all, appertains to the abutting property-owners as far as the middle of the street from either side. Except for the purpose of passing no one should presume to destroy, damage, or remove any property placed by either property-owner upon his half of such a street. The right to destroy or remove such property does not pertain to an adjacent property-owner.

Gross earnings of principal railroads of the United States show slightly larger figures than the earnings for the corresponding month in 1906—\$61,847,147, as against \$60,613,077. These figures relate to about 40 per cent of the total mileage of the country and represent its various geographical divisions, as reported by the Department of Commerce and Labor.

Those who were readers of THE KANSAS FARMER five to fifteen years ago will remember with pleasure and profit the able discussions of culture problems contributed by H. R. Hilton, then of Topeka. Recently Mr. Hilton has been engaged in the manufacture of glass in Pennsylvania. He has not, however, neglected to think of problems of the soil. One result of his study is the production of the "Hilton Hoe," which is an advance over anything in this line heretofore available. One of the advantages of this hoe is that it cuts both ways. It leaves the soil in excellent condition with the weeds all destroyed. A small tool much on the same plan saves hand weeding in the garden and among flowers. The writer took home one of these small implements. It so pleased the youngest boy that he forthwith cut out all dandelions from the lawn. Good thing!

Galusha A. Grow, the father of the homestead law, died at his home in Glenwood, Pa., last Sunday. For ten years Mr. Grow fought in season and out of season for "free homesteads for free men." The first bill passed was vetoed by President Buchanan. Mr. Grow took the first opportunity to introduce a better bill which was finally passed and signed by Abraham Lincoln. The middle West is a monument to the statesmanship of the veteran who at the age of 84 years has passed on.

BOYS' CORN-GROWING CONTEST IN SHAWNEE COUNTY.

The managers of the Shawnee County boys' corn-growing contest met at the Court House last Saturday and distributed seed for the 1907 contest to such as were there. The state of the weather prevented a full attendance of either committeemen or contestants.

It was decided to secure the use of the auditorium for the judging of the corn raised this year in the Shawnee County corn contest. Music and other entertainment will be furnished and the boys who enter the contest will be entertained and given a "seeing Topeka" street car ride. The prize-winners will be given a free trip to the State corn contest the final of which will be held at Manhattan. It is believed that from 150 to 200 boys will participate in the contest. The Commercial Club will have printed circulars, telling of the contest, sent to every farmer in Shawnee County.

The committee is composed of one member from each township in the county. Bradford Miller is chairman,

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which means that the business will have efficient attention.

One quart of seed, or enough to plant approximately one-fourth of an acre of land, will be furnished each contestant. This is to be planted and tended by the boys. Seed will be obtained from the committeemen in each township and some of it will be kept in Topeka where it can be secured by those who wish to get their seed here. The boys can secure either white or yellow corn as they prefer.

KANSAS RATE CASES SET FOR APRIL 8.

The cases of the Farmers', Merchants', and Shippers' Club of Kansas vs. the Santa Fe and the Rock Island Railroads, cases that are to be decided by the Interstate Commerce Commission, are set for hearing at Topeka on Monday, April 8.

The importance of these cases can scarcely be exaggerated. There has long been prevalent in Kansas a belief that shipments to and from interior points in this State were made to pay more than just rates as compared with shipments to and from certain other points. It has also been widely believed that Kansas shippers were charged excessively high rates. These two beliefs have led to the beginning of the cases before the Interstate Commerce Commission.

It is important that the issues be thoroughly tried and that if the rates complained of are either unduly high or are discriminatory against Kansas they be changed so as to make them just and fair, while if they are neither too high nor yet unjustly discriminatory this fact should be clearly established so as to put an end to an impression which not only creates much dissatisfaction but is a positive detriment to Kansas development because of the disadvantages under which Kansas shippers are supposed to suffer.

The Farmers', Merchants', and Shippers' Club of Kansas has undertaken a great work. It has a clear view and a definite purpose. Its membership should be widely extended so that it may have proper influence in presenting the interests of this Kansas.

Miscellany

Cheat, Meadow Fescue or English Blue-Grass, and Brome-Grass.

EDITOR KANSAS FARMER:—During my travels in Kansas the past winter I found that a great deal of cheat-seed is being sold for meadow fescue, and that nearly all meadow fescue contains more or less cheat. Most farmers, and many seed-dealers, are unable to distinguish between the seeds, or even the growing grasses. In the hope of giving some help on this question I have prepared the following, and would be glad if you would give it space in your next issue:

In the Central States, especially Kansas and Southern Nebraska, meadow fescue or English blue-grass as it is often called, has become an important pasture grass, and for several years profitable crops of seed have been produced, but unfortunately it has become difficult to get pure seed because most of it contains more or less cheat. In some localities pure cheat-seed has been, either ignorantly or maliciously, sold for meadow fescue, the farmers not knowing the difference until the crop was harvested, and often not until they had sold the seed to their neighbors or shipped it to market. This has occurred at Beatrice, Neb., Hutchinson, Kans., and many other places. Sometimes cheat is mixed with brome-grass-seed, but not so often as with meadow fescue. Many of the reported failures of these grasses are due to cheat having been sown instead of meadow fescue or brome-grass.

Notice carefully the difference between these grasses: Cheat-seed measures one-fourth to five-sixteenths of an inch in length, is hard, thick, and much rounded on the back, and deeply grooved on the opposite side. It frequently, though not always, bears

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a short awn or beard, which is generally broken off in thrashing. If the hull is scraped off the seed is three-to four-sixteenths of an inch in length, and very deeply grooved on one side—a cross section being almost V-shaped.

Meadow fescue is much smaller and less deeply grooved. It measures three-to four-sixteenths of an inch in length, and the seed fills the hull only half or two-thirds of its length. The seed with the hull off is a short little seed something the shape of a grain of corn, scarcely grooved at all, and only one and one-half to two-sixteenths of an inch long.

Brome-grass-seed is much the darkest color and largest of the three. It measures five-to eight-sixteenths of an inch in length, is thin and rather flattened. The hulled seed is long, flat, and almost as thin as chaff.

Since cheat is filled to the end of the hull and meadow fescue is filled scarcely more than half way we are enabled to suggest an easy and quick method of testing these two seeds: Take a seed endwise between the thumb and finger and pinch; if it is cheat it will not bend, for cheat is filled to the end, but if it is meadow fescue it will double over one-third to one-half the way down, for the soft hull extends far beyond the grain. This test will not distinguish these seeds from all other grass-seeds, but will distinguish between these two.

Cheat may be cleaned out of meadow fescue almost completely by running the seed through a fanning-mill, providing the proper screens are used. In the field cheat is not likely to give much trouble after the first year provided there is a full stand of meadow fescue or brome-grass.

Cheat is an annual. It comes up in the fall, lives over winter, ripens its seed, and then dies. If cheat grows after the seed is ripe it comes from the seed and not from the old roots, as they never start again after ripening one crop, but it reseeds readily and therefore may grow year after year in the same field. The life of cheat is the same as that of winter wheat.

Cheat stools freely, many of the stalks commonly leaning outward instead of rising erectly as meadow fescue does. The heads are heavy and usually droop somewhat and spread out much like a head of oats. Cheat is a heavy yielder, and for this reason if a small proportion of the seed sown is cheat a very much larger proportion of the crop harvested is likely to be cheat. This grass should generally be looked on as a weed, yet it has some redeeming qualities. It makes heavy crops of hay of moderate quality, and yields of over sixty bushels of seed per acre are reported. The seed is probably of considerable value as feed, but just how much can not be stated. This grass is very hardy, and stands trampling well. It will grow at lower temperatures and withstand more abuse and drouth than wheat. If sown early it makes good fall and spring pasture, especially for hogs and poultry.

Meadow fescue is a valuable perennial grass, and is very well liked by all stock. It will endure more drouth and starts earlier in the spring and grows later in the fall than timothy. It usually makes only a light hay crop. The stems are rather hard and not very leafy, and the hay is not so good as that from many other grasses. After a hay or seed crop is out there is

generally a heavy aftermath that furnishes a large amount of pasture.

Brome-grass is the best grass yet introduced in the drier regions. It endures drouth and cold better than any other introduced grass. It is a perennial, and spreads readily from root-stalks, but not as rapidly as Kentucky blue-grass. This enables it to endure close pasturing and still maintain its stand. It is one of the first, if not the first, of grasses to furnish pasturage in the spring, and one of the latest in the fall. It is preferred by all stock to almost any other grass. The stems of this grass are very leafy and the hay is excellent, but unless the ground is very rich the yield is usually unsatisfactory after the first year. There is generally a thick growth of leaves near the ground and a heavy aftermath.

In most places neither brome-grass nor meadow fescue can be expected to do well on poor land. On rich, moist land both of these grasses are heavy yielders of either pasture, hay, or seed. For pasture neither of them should be sown alone, but fourteen pounds of grass-seeds and six pounds of clover or alfalfa should be used. In a large part of Kansas and Nebraska a mixture of fourteen pounds of brome-grass, meadow fescue, and orchard-grass, together with six pounds of alfalfa to the acre will probably make the best pasture obtainable. South of the middle of Kansas, however, brome-grass is considered to be of doubtful value, and is not recommended. If sown at all in the southern half of the State it should be done only in an experimental way until it proves of value for the particular locality.

J. A. WARREN,
Scientific Assistant Bureau of Plant Industry, U. S. Department of Agriculture.
Washington, D. C., March 16, 1907.

Consolidation of Rural Schools.

SUPT. ALBERT BAYLISS, SPRINGFIELD, ILL., BEFORE THE NATIONAL FARMERS' CONGRESS.

I have been invited to speak to you about the "country" school. The topic seems to imply that the common schools out in the country are a class by themselves; that there are peculiarities in their needs, characteristics, or efficiencies which somehow differentiate them from the common schools in town, and require specific consideration.

THE COUNTRY SCHOOLHOUSE.

I wish, briefly, to refer to some of the grounds for this prevalent, and, perhaps, justifiable notion. First, as to the customary provisions for the material comfort and convenience of the school—the place where the teacher and children come together to live and work, and grow—mentally, morally, and physically. We all know the country schoolhouse, at least from the outside. With a gradually increasing number of exceptions, any district could trade schoolhouses with any other, unseen, and neither gain nor lose by the operation. It usually stands end to the road, has two or three windows on each side, and a door in the road end, which commonly opens directly into the schoolroom. Cloak-rooms are the exception. There is not always shelf or closet room for the scanty apparatus. The heat usually comes from a stove so placed that some of the children are always too warm and others always too cold. There is no provision for ventilation, but plenty of direct drafts of cold air,

The walls are customarily dingy and devoid of ornament. The floor is not invariably clean. Few country teachers are eligible on their merits for promotion to the important position of janitor in a city school. The working equipment is often meager, and more often unsuitable. The school grounds are too small and very rarely well kept. The outbuildings are frequently ugly looking, and sometimes entirely disreputable, both within and without. As a rule, all these things are much better in town. There is hardly a thriving community of 1,000 people and upwards in Illinois, in which the schoolhouse is not handsome, comfortable, well lighted, heated, and well kept. Not infrequently, the town school is rather well ventilated. Convenient cloak-rooms, closets, ornamented and well-equipped schoolrooms are the rule rather than the exception. This will be universally true before long. Except in the larger cities there is the same difference in the grounds, though we do not yet furnish them as we should, for the purpose of exercise and play.

THE TOWN SCHOOL.

Secondly, while some of the alleged effects of over-organization in the graded town schools may be conceded—at least in the past tense—the facilities for work are almost invariably more adequate than in the country. The country school is not only a one-room school, but it is a one-teacher school. In the organized graded school, with three or four or more teachers, even when the principal is a teacher on full time, the influence of comparison, example, emulation, criticism, correction, and cooperation, is always operative to some extent, the combined effect being stimulating and wholesome. Generally speaking, it is within bounds to say that the town school-teacher works with these advantages, under the influence of light, warmth, trees, books, pictures, etc., as an environment, while the country teacher, with inferior facilities and comparatively depressing surroundings, bravely attacks a much more difficult problem, in the hope that she will be called next year to a place in some school with a janitor, in which the work will be lighter and she will be paid more dollars a month for more months in the year. It is this hope which stimulates her and helps to make her a better teacher.

THE TEACHER.

In the third place, the quality of the teaching body is superior. I am not speaking of individuals, nor suggesting that there is a regular gradation which would rate the best teacher in the country just below the poorest in town. I wish to avoid absurdities as well as hyperbole. I do not mean anything of that sort. If a rational test of comparative efficiency were possible, and a search warrant out for the best individual working teacher in Illinois, the chances that she would be discovered in the country are at least in the ratio of relative numbers employed in town and country. There is a young man in the Agricultural College of the University of Illinois, who rode six miles a day for four years to a high school in another township, taught school where he could for a year or two, took the full course at our oldest State Normal School, then taught two years in a country district, the last being a year of nine months, and his wages \$80 a month. No comparison of individuals in Illinois could leave that young man out. What I do mean then is this, the aggregate efficiency of the whole teaching body in town is higher than that of the whole teaching body in the country. It must be so. Let us analyze a single fact. In Illinois within the school year ending June 30, 1904, we paid 2,394 men for teaching in graded schools the sum of \$2,111,569.51, which was an average annual salary of \$883. To 3,854 men who taught in the ungraded schools we paid the gross sum of \$990,858.98, which was an average salary of \$257. Likewise there was paid to 12,780 women for teaching in graded schools the sum of \$7,670,413.91, and to 8,443 women for teaching in ungraded schools the sum of \$2,039,

688.12, the average annual wages being \$600 and \$241 respectively, or to make the comparison without reference to sex the average annual payment to teachers in graded schools was \$644 against \$246 to teachers in ungraded schools. I venture to say in the hope that I shall be corrected if in error, that essentially these figures illustrate the conditions in Michigan, Ohio, Indiana, Iowa, and Wisconsin, as well as they do in Illinois. Where then must the most efficient group of teachers be found? The conditions under which the work is done in town, and the higher annual wage scale, combine to command the higher qualifications.

I have been told that this comparative wage scale does not prove the proposition. All I can answer is that it ought to be convincing if it isn't.

Again, I have been told that the comparison is not quite fair because the money paid for supervision and for teaching in high schools is included in the graded school totals, to which I reply that if the country schools had equivalent high school opportunities and equivalent supervision there would remain no specific country school problem of commanding importance. The question would very likely take some such form as, how can the town schools keep the pace set by the more fortunately located schools in the country?

SUPERVISION.

This leads to the last point of difference in this enumeration. There is no supervision of the country school work at all comparable to that of the town schools. Here again I am not comparing individual supervisors. In our State I think it would be quite possible to match county superintendent against city superintendent, man for man, and play the game quite a while. Nor is it, as in the case of the working teachers, a comparison by groups. It is a comparison of the conditions under which the work is done. To illustrate:

I have in mind a county with an area of about 800 square miles in which there are 156 isolated, one-room, one-teacher schools. Twenty-five of the school grounds are treeless and twenty of the schoolhouses are worn out. There is a city in the county large enough to require 114 teachers and twelve school buildings. The city superintendent has a supervisor of music and a supervisor of physical culture to help him, as well as an office assistant the year round. The county superintendent has clerical assistance during the year amounting in cost of \$106.06. The difference in salary is \$500 a year in favor of the city man. Now, this city superintendent has plenty to do. There are 5,231 children under his general care and direction. But in each of the twelve buildings there is a principal with supervisory powers. He can call these principals together for consultation any day, and the whole body of 114 teachers as often as necessary. He can call up any building by telephone, he can take a street car and be at any school-room door within half an hour. At certain hours of every day any pupil can be sent to him for advice, or any parent may step into his office and advise him. He can set up a standard of excellence in reading, writing, and ciphering, in geography, history, manners, industry, and punctuality, and can give the schools and principals and teachers such encouragement as their various approximations to his standard seem to need. He can transfer pupils, misfit teachers, or even principals for the good of the service, thus keeping square pegs out of round holes. In ways too numerous to mention he may organize his great work for maximum efficiency. He is a superintendent operating under conditions that make it his own fault if he does not superintend.

On the other hand the county superintendent, after incidentally examining 252 applicants for teachers' certificates, preparing and conducting a ten-days' institute, securing, correcting, and consolidating, for the use of the State, reports from his twenty-five township treasurers, giving a look and a promise to some of the twenty-six

KILLS TICKS **ZENOLEUM** **CURES SCAB**

The Purest Coal-Tar Dip

The successful shepherd watches his sheep as a cat watches a mouse. He dips in Zenoleum to keep the sheep free from ticks and lice. He dips to cure scab, if by accident scab infests his flock. He disinfects the pens to keep them clean and the sheep healthy, because healthy sheep grow into good fleeces and more mutton. This makes a flock profitable. *ZENOLEUM is recommended as a remedy for stomach worms.*

The Principal Sheep Breeders in America

USE ZENOLEUM

They find it the best of all dips after many years' experience. Forty-two Agricultural Colleges say "Zenoleum is best." It is equally good for many ailments and diseases of cattle, horses, swine, and poultry, and has a hundred uses of interest to good housewives.

No Strings to the ZENOLEUM Guarantee

Here it is: If Zenoleum is not all we say it is, or even what you think it ought to be, you can have your money back. No talk, no letters—just money.

The Zenner Disinfectant Co.,
161 Lafayette Avenue
Detroit, Mich.

Free Booklet Veterinary Adviser

64-page book for Stockmen written by Agricultural College Authorities. *Positively free for the asking. Send postal quick.*

Prices At All Dealers

Small size, 25 cts; Quart, 50 cts; Half gallon, 90 cts; One gallon, \$1.50; Five gallons, \$6.25—or we will deliver one gallon or more, charges paid, to your station. **Ask Your Dealer First.**



THIS 50 CENT BUTTER KNIFE, 18 CENTS FOR TEN DAYS ONLY.



Warranted Sterling Plate Silver.

This handsome engraved butter-knife is heavily plated with pure coin silver on a base of pure nickel silver. It will wear for years. We are a new firm and intend to undersell all other reliable dealers in General Mail-Order Merchandise in America. In order to demonstrate this fact to you, you must see our latest new catalog, with its money saving prices. **REMEMBER, you get BOTH THE BUTTER KNIFE AND THE CATALOG POSTPAID for nine 2-cent stamps. ROY-MORRIS CO., Dept. H., Topeka, Kas.**

smaller graded schools, and performing a variety of miscellaneous duties required by the laws, found he had remaining just 134 working days in which to visit and otherwise supervise his 156 ungraded schools. The records indicate that he saw most of them, that the average length of time he spent with them was two hours, but that twenty-five of them did not receive even the two hours of direct oversight or the few words of counsel and encouragement given the others; a counsel and oversight which to more than one young teacher may have meant all the difference between total failure and a measure of success.

These facts are taken from the record of a single county in a single year. They are typical and illustrate the prevailing difference between the conditions of school supervision in town and country.

These four considerations and what they imply, then, are in themselves sufficient to account for the mode of thought which places the country school in a class by itself.

(To be continued.)

A Book About the Silo.

"Modern Silage Methods" is the title of an excellent book of 200 pages. It discusses the points of interest concerning silos and silage. An instructor in one of the agricultural colleges says this is one of the best books he has seen and he intends using it as a text in his lecture room. The book is well indexed and is an authority on the subject. If you are interested write to the Silver Manufacturing Company, Salem, Ohio. If you say you saw their address in THE KANSAS FARMER they will send you a copy free.

The Holstein, Friesian is rapidly regaining its old time popularity. Last week two fine young bulls were sold by Kansas breeders. Parthena DeKol Carene was sold by M. G. Babcock of Nortonville to Henry Van Leeuwen, Ottawa and Reformer Gerben by H. B. Cowles, of Topeka to the Boys Industrial School, Topeka.

When a man begins to sneer at everything he has outlived his usefulness.



By Mail, prepaid, 69c.

Crosby Bros. Special

The equal of any dollar corset made. The true foundation of the fit and style of a gown lies, not in the gown, but in the corset. The illustration is of the latest spring model. Notice the long, graceful lines, the tapering waist, the habit hip, the supporters front and side. This corset is made in all sizes from 18 to 30. In ordering be sure to state size desired.

CROSBY BROS., Topeka, Kas
Mail Order House of Kansas.

Well Drills and Drillers' Supplies

The best on the market. Manufactured by **THATCHER & SONS, Stillwater, Oklahoma.** Write for circulars and prices.

294 Hidden Name, Friendship, Big Blue Envelope and all other kinds of GARD and Premium Articles. Sample Book of Plant Cards and Biggest Premium List, all for 2 cent stamp. **OHIO GARD COMPANY, CLEVELAND, OHIO.**

Going to School or Learn a Trade?

If so, write for our fine new catalogue giving complete information about the special opportunities offered for obtaining an education in almost any subject and learning some of the best trades. Address **G. H. LONGWELL, Pres. Highland Park College, Des Moines, Ia.**

Aberdeen-Angus Cattle.

YOUNG ABERDEEN-ANGUS CATTLE for sale at bargain prices, especially bulls of serviceable age. **T. F. CULVER, Garnett, Kas.**

How to Fertilize

Every farmer knows that plants need Food as much as cattle. He knows, too, that plants can not get all the Food they need out of the ground alone. He must supply them with certain Food himself, or they will not thrive and bear their full yield of fruit. Exactly as he supplies hay and oats to his horse so he must supply Nitrogen and phosphate to his plants. He may buy these in the open market exactly as he does his hay or his oats, or he can buy them in combination in the form of a "complete fertilizer." There is no secret value in the complete fertilizer, it is nothing more or less than the ingredients combined and sold at a higher price. Nitrogen is by far the most expensive as well as effective of plant foods, and it will pay the farmer well to stop and think before he buys it in this combination form.

The Best, Cheapest, and Most Digestible Nitrogenous Food for Plants

The cheapest and most practical form which to furnish nitrogen to plants is Nitrate of Soda. In the rainless region of Chili are stored away vast quantities of Nitrogen in what are known as Nitrates—the only form in which Nitrogen can be utilized by a plant. The Nitrogen which exists in organic matter, that is, roots, stems, dead leaves, weeds, leather, dried blood, etc., and also Nitrogen in the form of Ammonia salts, must first be changed to Nitrate before it can be taken up by plants. This change is dependent upon conditions of weather. If season backward or there be a prolonged drought this change may be so retarded as to deprive the plant altogether of Nitrate Food at the very time it needs it most; moreover Nitrogen in the form of ammonia salts leaves an acid residue in the soil. Nitrate of Soda, on the other hand, is entirely independent of weather and leaves alkali behind as a soil sweetener. It is immediately available under any circumstances, for it is readily soluble, and immediately it comes within reach of the roots of plants it begins to be taken up by them. It can, therefore, readily be seen that the practical value of various forms of Nitrogen ranges from nothing at all, where conditions of temperature or soil prevent Nitration, to 100 per cent in Nitrate of Soda where Nitration has already completely taken place. Moreover, the process of transferring the nitrogen of cotton seed meal, dried fish, dried blood, tankage, sulfate ammonia, and other nitrogenous constituents of "complete fertilizers," into Nitrate is very wasteful, for much valuable Nitrogen is lost in the process, as well as by natural oxidation. Soil experiments have shown that 100 pounds of Nitrogen in these forms have only about one-half to three-fourths the manurial value of 100 pounds of nitrogen in its NITRATED form of Nitrate of Soda.

A Great Saving

In view of these facts it seems extraordinary that farmers should continue to purchase their Nitrogen in compound form with phosphate, when they can procure it much cheaper, and ready for the plants' immediate use, in the form of Nitrate of Soda. One ton of Nitrate of Soda has more valuable energizing food for plants than seven tons of the average cheap low grade complete fertilizers, on which you are paying freight on inert filler, and it gets more and better food than you get in ten tons of the average so-called high grade "complete fertilizer." You do not buy the real thing and actually

save big money in cost and in freight? One hundred pounds of Nitrate per acre is all you need as a starter. Why not have the substance instead of the shadow? It costs from 25 to 30 cents a pound in so-called "complete fertilizers," and even then is often in a form which is not available as food for the plants, for it must first be converted into Nitrate. The time required to do this varies from a few days to a few years according to the temperature of the soil and the kind and condition of the material used in the "complete fertilizer."

It must be recognized that the farmer should have a chance to derive some profit from the use of a fertilizer, and wise buying is a prerequisite to successful use.

How It Helps Crops

If a young pig or a young calf does not have an abundance of the right kind of feed when it is young it becomes stunted in growth, and never recovers from it, no matter how judiciously it is

need a steady, even growth are greatly benefited by Nitrate of Soda, which can be furnished all ready for digestion when the plants require it.

The highest agricultural authorities have established by careful experimentation that 100 pounds per acre Nitrate of Soda applied to crops has produced the INCREASED yields tabulated as follows:

Barley, lbs. of gain.....	400
Oats, lbs. of gain.....	400
Rye, lbs. of gain.....	300
Wheat, lbs. of gain.....	300
Potatoes, lbs. tubers.....	3,600
Hay, barn-cured, upwards of lbs.....	1,000
Cotton, lbs. seeds cotton.....	500
Sugar-beets, lbs. tubers.....	4,000
Beets, lbs. tubers.....	4,900
Sweet potatoes, lbs. tubers.....	3,900
Cabbages, lbs.....	6,100
Carrots, lbs.....	7,800
Onions, lbs.....	1,800
Turnips, per cent.....	27
Strawberries, quarts.....	200
Asparagus, bunches.....	100
Tomatoes, baskets.....	100
Celery, per cent.....	30
Hops, lbs.....	100

Nitrate of Soda is a plant tonic, and an energizer; it is NOT a stimulant in any sense of the word.

lowing are fair samples of the results reported, giving the weight of cured hay in each case:

HORACE FIELD, MATTAPOISETT, MASS.
Plot without Nitrate, 60 lbs. Plot with Nitrate, 90 lbs.
"Hay was well made. Nitrate plot ready to cut 10 days earlier than plot without Nitrate and the growth now is much heavier on the Nitrate plot."

WILLIAM NORMAN, TOLEDO, O.
Plot without Nitrate, 36 lbs. With Nitrate 62 lbs. "This is what I call dynamite soda."

E. P. NANCE, OAK LEVEL, KY.
Plot without Nitrate, 70 lbs. Plot with Nitrate 104 lbs.

OLE O. HATLEDAL, BENSON, MINN.
Plot without Nitrate, 20 lbs. With Nitrate, 52 lbs.

"Plot with Nitrate now thick with grass again and will produce second crop of hay. Plot without Nitrate will not be worth cutting again."

DAVID H. EPPLEY, MUSKINGUM, O.
Plot without Nitrate 42½ lbs. With Nitrate, 78 lbs.

"Am much pleased and only wish I had used it on my whole field."

HERBERT J. FRANCE, BLAIRSVILLE, PENN.
Plot without Nitrate, 63 lbs. With Nitrate, 118 lbs.

"Hay was thoroughly cured when weighed. Plot with Nitrate kept six or eight inches ahead all summer."

H. E. HAPPLE, COCOLAMUS, PENN.
Plot without Nitrate, 28 lbs. With Nitrate, 53 lbs. "Am well pleased with the result."

ALONZO J. BRYAN, HUNTERDON, N. J.
Plot without Nitrate, 31 lbs. With Nitrate, 63½ lbs. "The Nitrate made wonderful results."

CHAS. J. GROTH, SPRINGVILLE, N. Y.
Plot without Nitrate, 78 lbs. With Nitrate 147 lbs. "Cut Nitrate plot twice."

E. B. STRONG, CAUMING, NOVA SCOTIA.
Plot without Nitrate, 68 lbs. Plot with nitrate, 91 lbs. "Much pleased with results."

LEONARD D. SPICKNALL, LA BELLE, MO.
Plot without Nitrate, 44 lbs. With Nitrate, 69 lbs. "I consider Nitrate of Soda a most valuable producer, as hay seems softer and brighter from Nitrate plot than from the other."

WM. HENDERSON, ATHENS, PENN.
Plot without Nitrate, 34 lbs. With Nitrate, 60 lbs. "It was a fine test."

The average of these tests show an increase of 2.775 pounds of field cured hay per acre with the use of 100 pounds Nitrate of Soda. Bearing in mind the cost of Nitrate of Soda per 100 pounds, it is very evident that it pays to use it.

The Purpose of the Nitrate Propaganda

Free books, bulletins and all desired information are promptly forwarded to farmers interested. Thousands of farmers of the United States have seen Nitrate of Soda advertisements and thousands have written in answer to them for free books.

No nitrate is sold by the Nitrate Propaganda; it is maintained simply to put the facts clearly and accurately before the cultivators throughout the country and rapidly they are finding out that Nitrate of Soda is the cheapest and by far the most practical form of supplying their crops with Nitrogen. It is the only existing instantly available Nitrogenous Food for Plants.

Free Information

To a limited number of farmers who want to know, the Propaganda, in addition to bulletins from agricultural experiment stations, giving results of actual trials with Nitrate of Soda, is sending—handsomely illustrated books, which should be in the library of every farm in the United States.

Farmers who may not care to make any of the experiments, who would like to know the results that others have obtained or who desire any information whatever concerning Nitrate of Soda, should write to William S. Myers, Director, John Street and 71 Nassau Street, New York.

OLD-FASHIONED WHEAT CROPS
Big stalks, well-developed heads and large kernels—the best, whether you sow for hay or wheat—will be assured if you use

Nitrate of Soda

The two wheat fields illustrated above tell their own story. By tests carried on all over this country, it has been demonstrated that 100 lbs. of Nitrate of Soda to the acre has resulted in an average increase of 300 lbs. of wheat on each acre. It is the standard nitrogenous fertilizer, and the cheapest.

TEST IT FOR YOURSELF ENTIRELY FREE

Let us send sufficient Nitrate of Soda for you to try, asking only that you use according to our directions, and let us know the result. To the twenty-five farmers who get the best results, we offer, as a prize, Prof. Voorhees' most valuable book on fertilizers, their composition, and how to use for different crops. Handsomely bound, 327 pages. Apply at once for Nitrate of Soda, as this offer is necessarily limited. Books of useful information will be sent free to farmers, if paper is mentioned in which this advertisement is seen.

Send name and complete address on post card.

WILLIAM S. MYERS, Director, John Street and 71 Nassau, NEW YORK

afterwards fed. The intelligent cultivator has learned that this holds good in the feeding of plants. Nitrogen is the element which enters most largely into the building up of the plant itself—root, stem and leaves. Most plants need to take up most of their Nitrogen during the early stages of their growth, as in oats. It is plain, therefore, that the cultivator can not afford to overlook Nitrate, and thus endanger the chances of his crops which must have Nitrogen in a form the plants can use. The presence of Nitrate at the outset enables the plant to get its food when it needs it most, and develops a vigorous growth of roots, leaves and stems capable of withstanding the scorching rays of the sun or sudden changes of the temperature, diseases or the attacks of parasites.

Nitrate of Soda is of high value for early crops, such as peas, corn, beets, and cabbage, where rapid maturity is desirable. It is a special help to hay, grain, rye, wheat, timothy, orchard or other cereals or grasses, all of which are unable to obtain sufficient Nitrogen from the soil just when they need it. It is a great specific in the production of sugar beets, potatoes, cotton and sugar cane.

Small fruits, such as blackberries, currants, raspberries and gooseberries, which

Nitrate of Soda may be used alone without other fertilizers, as a Top Dressing, at the rate of not more than 100 pounds to the acre.

How to Learn About It

The Nitrate mines in Chili are supervised by the government and authentic information is annually circulated about Nitrate of Soda among those who should profit by it. For this purpose the Nitrate of Soda Propaganda is maintained. Advertisements have been placed in the leading agricultural papers and offices established at John Street and 71 Nassau Street, New York, for giving out information in regard to actual tests made with Nitrate of Soda and as to its uses.

Results on Hay

For three years samples of Nitrate of Soda have been sent to farmers to experiment on Timothy. In each case two patches were marked out in the hay field side by side—each about 20 feet square, about 1-1000 of an acre. One received Nitrate of Soda, equivalent to 100 pounds per acre, the other had none. The fol-

Stock Interests

LIVE STOCK REPRESENTATIVES.

C. E. SHAFER, Eastern Kansas, Missouri and Iowa
L. K. LEWIS, Kansas, Nebraska and Oklahoma

PURE-BRED STOCK SALES.

Shorthorns.
April 12—Andrew County, Mo., Shorthorn Breeders' Association, Savannah, Mo.
April 13—H. E. Bachelder, Mgr., Fredonia, Kans.
April 13, 1907—Shorthorn cattle. Annual sale of S. E. Kansas Stock Breeders Association at Fredonia, Kans., H. M. Hill, Mgr.
April 19, 1907—John McCoy & Son, Morrill, Kans., sale at Seneca, Kans.
April 23, 1907—Everett Hayes, secretary Brown County Improved Stock Breeders Association, Hiawatha, Kans.
May 23—Henry Kuper, Humboldt, Neb.
May 31—W. A. Foraythe, Greenwood, Mo.
June 4—Taylor & Jones, Williamsville, Ill.
June 11—T. J. Wormald & Sons, Liberty, Mo.
June 21—Jos. Dunca, Osborn, Mo.
November 6 and 7—Purdy Bros., Kansas City.

Herefords.
April 19, 1907—Marshall County Hereford Association, Blue Rapids, Kans.
April 17—Marshall County Hereford Association at Blue Rapids, Kans., D. W. Preston, Sec.
April 16—So. Omaha, Neb., D. R. Mills, Mgr.
April 19—Sam'l. Draybar, Elk City, Kans.
May 15—Fair Acres Herefords. Mrs. C. S. Cross, Emporia, Kans.

Poland-Chinas.
April 13—W. A. Davidson and Thos. Collins, Glasgow, Kans.
May 24—Hebbard & Roy, Wichita, Kans.
June 12—J. Walter Garvey, Thayer, Ill.
September 19—J. T. Hamilton, So. Haven, Kans.
October 7—T. S. Wilson, Hume, Mo.
October 12—D. C. Upton, Independence, Mo.
October 12—Sam Rice, Independence, Mo.
October 14—E. E. Axtell, Oak Grove, Mo.
October 17—Charlie W. Dingman, Clay Center, Kans.

October 19—Geo. Falk, Richmond, Mo.
October 21—F. D. Winn, Randolph, Mo.
October 22—F. A. Dawley, Waldo, Kans.
October 22—W. N. Messick & Son, Piedmont, Kas.
October 23—A. P. Wright, Valley Center, Kans.
October 24—G. M. Hebbard, Peck, Kans.
October 25—W. J. Honeyman, Madison, Kans.
October 26—Martin Lents, Atherton, Mo.
October 26—A. B. Hoffman, Heece, Kans.
October 28—Bollin & Aaron, Leavenworth, Kans.
October 29—Leon Calhoun, Potter, Kans.
October 30—The Big 3, Centerville, Kans.
October 31—L. C. Caldwell, Moran, Kans.
November 1—Harry E. Lunt, Burden, Kans.
November 2—C. E. Shaffer & Co., Erie, Kans.
November 2—Dietrich & Spaulding, Richmond, Kans.

November 4—C. S. Nevius, Chiles, Kans.
November 5—Lemon Ford, Minneapolis, Kans.
November 5—E. L. Calvin, Bolcourt, Kans.
November 6—W. E. Crowther, Golden City, Mo.
November 7—T. P. Sheehy, Hume, Mo.
November 8—D. E. Crutcher, Drexel, Mo.
November 8—U. S. Ison, Butler, Mo.
November 9—H. H. Harshaw, Butler, Mo.
November 11—Adams & Loranoe, Moline, Kans.
November 12—W. N. Messick & Son, Piedmont, Kans.
November 12—I. E. Knox and Wm. Knox, Blackwell, Okla.
November 13—J. C. Larrimer, Wichita, Kans.
November 14—C. W. Dingman, Clay Center, Kas.
November 16—C. G. Mills, Pleasant Hill, Mo.
November 18—J. J. Ward, Belleville, Kans.
November 19—A. & P. Schmitz, Alma, Kans.
November 19—C. E. Tennant, New Hampton, Mo.
November 20—Bert Wise, Reserve, Kans.
November 20—E. E. Maupin, Pattonburg, Mo.
November 21—F. D. Fulkerson, Brinson, Mo.
November 21—Everett Hayes, Hiawatha, Kans.
November 22—C. E. Hedges, Garden City, Mo.
November 23—F. F. Oreley, Oregon, Mo.
October 7—T. S. Wilson, Hume, Mo.
October 16—Bernham & Blackwell, Fayette, Mo.
October 22—Jas. Mains, Okaloosa, Kans.
October 23—John M. Coats, Liberty, Mo.
February 5—C. E. Tennant, New Hampton, Mo.
February 6—E. E. Maupin, Pattonburg, Mo.
February 7—F. D. Fulkerson, Brinson, Mo.
February 8—Wm. Wingate, Trenton, Mo.

Duroc-Jerseys.
October 16, 1907—Ford Skeen, Auburn, Nebraska
Duroc-Jerseys
November 2—Jos. Lynch, Independence, Mo.
November 23—Geo. Hann, Olathe, Kans.
November 23—Marshall Bros. & Stodder, Burden, Kans.
January 21—Jas. L. Cook, Marysville, Kans.

O. I. C.
October 17—Frank Walters, Rockport, Mo.
Combination Sale.

April 16, 17, 18, 1907—All beef breeds at South Omaha, Neb., D. R. Mills, Mgr., Des Moines, Iowa.
May 1, 2 and 3, 1907—Aberdeen-Angus, Shorthorns and Herefords, South Omaha, Neb., W. C. McGavock, Mgr., Springfield, Ill.
May 14, 15, 16, 1907—All beef breeds at Sioux City, Iowa, D. R. Mills, Mgr., Des Moines, Iowa.

Horses.
May 8—Dr. Axtell and C. E. Warkenstein, Wichita, Kans.

Distribution of Meat, Dairy Products, and Food Animals in the Export Trade of the United States.

Meats, dairy products, and food animals sent out of the United States last year aggregated over 250 million dollars in value. More than 60 per cent of this enormous total went to the United Kingdom. Even this large percentage, however, is less than that of a decade ago, when Great Britain took over 70 per cent of the products of this character passing out of the United States.

Of this 250 million dollars' worth of meats and dairy products (including food animals in this term) passing out of the United States last year, 40 million dollars' worth was live animals; 58 millions, lard; 36 millions, bacon; 25 millions, fresh beef; 21 millions, hams; 18 millions, oleomargarine; 14 millions, pork other than bacon and hams; 4½ millions, butter; and 2½ millions, cheese.

Of the 40 million dollars' worth of live animals sent out of the country in the calendar year 1906, 38¼ mil-

lions was the value of cattle. Of this large total the United Kingdom took 35 million dollars' worth, and of the remainder Cuba took over 1 million dollars' worth; Belgium, nearly 1 million, and Canada, nearly one-half million dollars' worth. Of the 58 million dollars' worth of lard, the largest single item under the grouping of meats and meat products, 20 million dollars' worth went to the United Kingdom; 17½ millions to Germany; 6 millions to Netherlands; a little less than 3 millions to Belgium; a little less than 3 millions to Cuba, while the remainder went chiefly to Mexico, Central and South America, and the West Indies. Of the 36 million dollars' worth of bacon exported, 29 millions went to the United Kingdom; a little over 2

These figures for 1906, it is proper to add, include about 2½ million dollars' worth of meat and dairy products sent to Hawaii and Porto Rico, which are no longer included by the Bureau of Statistics of the Department of Commerce and Labor in its statements of exports, but are included in the present calculation, because the comparison is made with conditions in 1896, when both those islands were included in the list of countries to which merchandise of this character was exported.

The table which follows shows the shipments of meats, food animals, and dairy products in the calendar year 1906, by principal classes of articles, to the United Kingdom and to all other countries:

Total value of meat, food animals, and dairy products shipped from the United States to the United Kingdom and to all other countries in the calendar year 1906.

Articles exported.	To United Kingdom.	To all other countries.	Total.
Lard.....	\$20,108,939	\$37,875,890	\$57,984,829
Cattle.....	34,814,879	3,468,253	38,283,132
Bacon.....	29,187,198	6,699,954	35,887,152
Beef, fresh.....	24,481,315	2,699,969	27,181,284
Hams.....	18,157,837	2,828,519	20,986,356
Oleomargarine.....	1,499,396	16,307,540	17,806,936
Pork, other than bacon and hams.....	8,265,813	5,860,501	14,126,314
Tallow.....	2,502,724	3,227,132	5,729,856
Butter.....	3,579,535	968,831	4,548,366
Beef, salted or pickled.....	1,256,546	3,197,816	4,454,362
Reef, canned.....	2,048,044	1,444,169	3,492,213
Cheese.....	2,187,723	440,411	2,628,134
Sheep.....	437,325	393,670	831,495
Hogs.....	0	841,232	841,232
All other.....	5,785,850	*13,492,649	19,178,499
Total.....	\$154,313,624	\$96,705,536	\$251,019,160

*Includes \$2,647,779 worth of food animals, meats, and dairy products shipped to Hawaii and Porto Rico.

millions to Belgium; a little less than 1 million dollars' worth to the Netherlands; a little less than 1 million dollars' worth to Germany, while the remainder was widely scattered. Of the 21 million dollars' worth of hams exported, 18 millions went to the United Kingdom, the remaining 3 million dollars' worth being widely distributed. Of the 24¼ million dollars' worth of fresh beef sent out of the country, 24½ millions went to the United Kingdom.

It will be seen from these figures that the United Kingdom is not only the largest purchaser of the meats, dairy products, and food animals sent out of the United States, but actually takes considerably more than one-half of the total. The actual figures of the value of meats, food animals, and dairy products exported to foreign countries last year aggregated 248 million dollars, but if to this be added the value of material of this character sent to Hawaii and Porto Rico, the total exceeds, as above indicated, 250 million dollars. Of this total of 250 millions the United Kingdom took 61.6 per cent. A comparison of the figures of 1906 with those of 1896 shows, however, that the percentage now taken by the United Kingdom is considerably less than a decade ago. The share taken by the United Kingdom of the meats, dairy products, and food animals sent out of the country in 1896 was 71 per cent, against 61.5 per cent in 1906. Not only is this true, but the total value of exports of this character has greatly increased meantime.

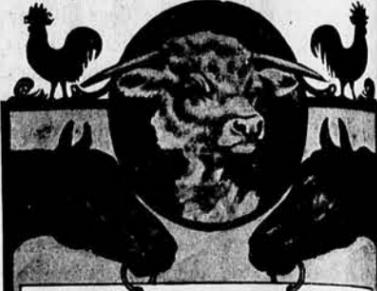
The value of meats, food animals, and dairy products sent out of the United States in 1896 was but 174 million dollars and in 1906 250 millions, indicating an increase of 45 per cent during the decade. Countries other than Great Britain took in 1896 but 29 per cent of the 174 million dollars' worth of exports of this character, while in 1906 they took 38½ per cent of the 250 million dollars' worth exported, indicating a much more rapid growth proportionately in the exports of this character to other countries than to the United Kingdom. The total value of merchandise of this character sent to the United Kingdom in 1896 was 123 million dollars; and in 1906, 154 millions, an increase of 31 million dollars. To all other parts of the world the total sent in 1896 was 50 millions and in 1906 96 millions, an increase outside of the United Kingdom of 46 million dollars. During the decade, total exports of this character increased 45 per cent, the increase to the United Kingdom being 25 per cent and to other parts of the world 90 per cent.

Wintering Stockers and Feeders for Finishing on Grass.

(Copyright, 1906, by H. W. Mumford.)

The writer is unable to present any statistics indicating the percentage of cattle purchased for feeding purposes that are simply "wintered" principally upon roughage with a view of finishing subsequently on grass. It is generally known, however, that a large majority of the cattle purchased for fattening are purchased in the fall and early winter months, and more than half of these are bought with a view of wintering them as cheaply as possible and then fattening on grass. The reasons for this system of management are not far to seek. On the average corn-belt farm there are stalk-fields and straw stacks from which little, if any, revenue is secured unless used in wintering cattle. In other sections straw, clover hay, and other roughages do not find a ready cash market, and because of this some other disposition is made of them. Wintering cattle for subsequent fattening on grass seems to be the most popular channel through which to convert these feeds into cash. Summer fattening is usually more profitable than winter fattening, and is much more generally practiced. Those in possession of good pasturage wish to make the best use of it, and consequently do not feed liberally of corn or other concentrates during the winter months. In this connection it may be stated that, as a general proposition, the more cattle gain on concentrated feeds in winter the less they will gain on the grass in the summer. That is to say, if corn is fed liberally during the winter months the cattle will not make as large gains when turned to grass as they would were they wintered largely on roughage and not the best of roughage at that. Different systems of management would undoubtedly be recommended for cattle varying in age and quality. The wintering of calves and yearlings intended for baby beef will be considered in a subsequent article on "Baby-Beef Production." This narrows the subject in hand to the wintering of yearlings, 2-year-old, and older feeding cattle, that are to be finished on grass in summer. Experienced cattle-feeders will concede that it is one of the fine points of the cattle-feeding business to know just how well to winter such cattle. Local conditions as to the extent, nature, and value of pasture lands determine to a large extent what is good practice in any particular instance. Where abundant pasturage of the best quality is available on cheap lands, feeding cattle may very properly be wintered largely on roughage without

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The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. **SUPPRESSES ALL CAUTERY OR FIRING.** Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. THE LAWRENCE-WILLIAMS CO., Cleveland, O.



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PUTS AN END TO
LICE, TICKS, MITES, FLEAS, MANGE, SCAB, RINGWORM, ALL SKIN DISEASES.
Don't waste time and money on inferior dips.
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NON-CARBOLIC. STANDARDIZED.
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We will refund the money if Bickmore's Gall Cure does not cure collar and saddle galls while the horse works.
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Is guaranteed to cure all chaps, bruises, cuts, grease heel, scratches or torn or scratched teats, etc., in cows. Take no substitute. See trade mark. Every horse owner can have our illustrated Horse Book and large sample box Gall Cure for 10 cents for postage on both. Write today, or ask your dealer.
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POSITIVELY HEALS **SORE SHOULDERS**
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IT HEALS THEM ANYWAY IN HARNESS, UNDER SADDLE OR IDLE
IF NOT SOLD IN YOUR TOWN WE WILL SEND YOU SAMPLE, if you send the name of your dealer.
Put up in 25c, 50c and \$1.00 Cans
MONEY BACK IF IT FAILS
SECURITY REMEDY CO. MINNEAPOLIS MINN.
FOR **BARB WIRE & ALL CUTS**
SECURITY ANTISEPTIC HEALER
DEATH TO HEATER Guaranteed
NEWTON'S HEAVE AND CURE
A VETERINARY SPECIFIC
15 years sale. One to two cans will cure Heave, or any other ailment. Send for booklet. The Newton Remedy Co.

effort on the part of the cattle-herder to secure large gains. But, if pasturage is limited and the value of pasture lands is great, then, the combination of feeds well calculated to produce satisfactory gains should be used. The writer believes there is a growing tendency over a large part of the corn-belt where these conditions prevail to feed cattle more liberally than formerly and that this tendency is in harmony with good practice. It is rarely economy to carry stockers or feeders a considerable time on a mere maintenance allowance, even though the subsequent gain in grass be thereby increased.

As bearing on this general subject of wintering feeding cattle some interesting records of the Missouri Station are quoted. The results in feeding all roughage of various kinds that spring steers would eat with corn in varying quantities produced the following results in three successive years.

Kind of roughage	Date of trial	Lbs. hay per steer daily	Lbs. shelled corn per steer daily	Av. daily gain in lbs. per steer in lbs.
Timothy	1899-1900	16.7	4	.65
Timothy	1901	15.4	6	1.00
Timothy	1901-1902	16.9	6	1.37
Alfalfa	1901	17.9	6	2.00
Alfalfa	1901-1902	19.0	6	1.92
Cow-pea	1899-1900	19.0	4	1.54
Cow-pea	1901	12.3	6	.37
Cow-pea	1901-1902	16.9	6	1.63

These records graphically show the value of clover, alfalfa, and cow-pea as compared with other roughages when used as a supplement to corn in wintering cattle. It would seem from the experiments quoted that from six to six pounds of shelled corn per day fed in conjunction with the good clover, alfalfa, or cow-pea the steers will eat makes an ideal ration for wintering feeding cattle, and the use of timothy and millet may be followed by unsatisfactory results. The writer does not forget that larger winter gains will undoubtedly make the gains on grass in summer somewhat less, but it should be remembered that these gains were made on a ration a large percentage of which was roughage. These records are valuable as further indicating the amounts of the various roughages such cattle will consume when all they will take.

Truman Pioneer Stallion Sale.

We are pleased to advise our readers when Truman's Pioneer Stud Farm, Bushnell, Ill., advertised to sell immediately Shire and Percheron stallions at the Auction at Kansas City they only meant what they said but they intended exactly what they preached. There were a lot of choicer stallions offered at public auction in this country than they were brought into the sale in the pink of condition notwithstanding the fact that several of them were imported during February last. In his opening address Col. Carey expressed his impression upon the crowd that there was neither any reserve bidding that day and his statements were carried out to the letter. In the outset the buyers had confidence in the Truman's, especially after Jones read the telegram from Mr. Truman from his home in England in which he expressed his good wishes and success for the buyers. While we are fully aware that from a financial standpoint the sale was not successful for the Truman's but in the eyes of the few dollars they took out of the horses.

We sincerely hope that the Truman's hold another sale next year as the buyers have every confidence that even if they were treated fair and square, manager J. G. Truman announced at the sale that they had plenty of first-class stallions on hand at Bushnell, Ill., no less than thirty four Shires and Hackneys on the Ocean enroute for sale.

Any of our readers contemplating purchase of a stallion we advise to correspond with Truman's Pioneer Stud Farm, Bushnell, Ill., before buying or better, come and see their stalls as we are assured they have barns full of strictly high-class stallions, more especially Shires. Other thing in their favor is that they do not have a horse on hand that has been imported longer than this year so that buyers will have no doubts in their minds as to whether certain horses are either culled or imported horses from last season. Every horse they sell is guaranteed absolutely satisfactory to the buyers which has been the Truman standard for the twenty-nine years in this country.

The sale was as follows:

Percheron, 6 years old,	Levitt, Wilson, Kans.,	\$1,600
Shire, 6 years old,	Beeler, Kingsley, Kans.,	1,100
Percheron, 5 years old,	Bainum, Maryville, Mo.,	925
Shire, 3 years old,	C. W. Beeler,	1,025
Percheron, 3 years old,	Dunaway, Chilhowee, Mo.,	540
Shire, German Coach, (Sub.)		

A Budget of Real Letters

Here's a "Budget" of real letters written by farmers and stock-raisers in their own language and handwriting.

If you enjoy reading the actual experiences of your fellow farmers telling how they have battled and conquered scab in sheep.

How they have stopped disease among their hogs when they were dying off at a rapid rate; how they have rid their stock from ticks, lice, fleas, mange and eczema.

How they prevent these scourges gaining further foothold—this "Budget" will particularly interest you.

You will get a lot of valuable information that may be the means of saving you hundreds of dollars.

These letters were sent to us by farmers who have used Dipolene—that great germ destroyer, preventive and cure of all farm stock diseases.

They are actual, positive evidence that there's nothing you can get which will prove as good, safe and sure a means of keeping disease off your farm as Dipolene.

Dipolene is a pure coal tar preparation that is perfectly harmless—non-poisonous. It promptly cures scab, mange, eczema, etc.; kills lice, ticks, fleas, and when sprinkled around barns, sheds, pens, in troughs, etc., is a positive preventive of all stock diseases.

As a dip it is effective and economical. One gallon makes 100 gallons of strong solution. Will not discolor or injure wool or feathers and is beneficial to skin.

DIPOLENE
THE ONE MINUTE STOCK DIP

Is a remedy every farmer should have on hand and use occasionally. It's the best insurance against loss from disease you can get.

Let us send you this "Budget of Real Letters" to prove our claims. They are better arguments than ours—they are actual facts.

FROM FARMERS

Telling Their Experiences with DIPOLENE In Their Own Handwriting.



To convince you of its true merit without risk we allow you **30 Days Free Trial!**

Buy a can at your dealers—if he does not handle it send to us direct—we pay the freight. Try it 30 days, if not as represented send it back at our expense. Isn't that fair?

You can't afford to risk loss by not taking advantage of this liberal offer.

Marshall Oil Co., Dept. E1, Marshalltown, IA

H. V. Morris, Logan, Kans.	600
Frise II, Percheron, 5 years old, H. V. Morris	450
Bon Adrastus, Shire, 6 years old, Jno. Russell, Creston, Ia.	530
Norman Baron, Shire, 4 years old, J. B. Bainter, Dresden, Kans.	710
Galety Banker, Shire, 3 years old, R. E. Everett, Milburn, Mo.	1,100
Bon Exploit, Shire, 4 years old, R. E. Spurgeon, Olathe, Kans.	730
Bon Hostillia, Shire, 4 years old, R. E. Spurgeon	730
New Cut Bowd, Shire, 3 years old, F. W. Poos, Potter, Kans.	975
New Cut Harold, Shire, 3 years old, C. W. Beeler	710
Substitute, Imp, Shire, Jno. Russell	515
Bushnell Invincible, Shire, 5 years old, F. M. Hutton, Lathrop, Mo.	890

Last Call for the Hanna and Hill Shorthorn Sale.

On April 13, 1907, at Fredonia, Kans., there will be sold at public auction a select draft from the well known herds of S. C. Hanna, Howard, Kans., and H. M. Hill, Lafontaine, Kans. This offering will consist of their choicest young cattle, two-thirds of which are direct descendants of Mr. Hanna's importation, and are rich in the blood of the imported Collynie, imported Ingelwood, imported Mariner, and other noted sires. There will be six young bulls of the best breeding and quality. The remainder will be choice young females many of them not over a year old. Those that are old enough will be bred to imported Collynie, and imported Rosewood and other good bulls. Three of the cows will have calves at foot by these bulls. Ten of the forty will be pure Scotch and the rest Scotch-topped cattle.

Imported Collynie's descendants are especially noted for their extraordinary feeding qualities. These cattle have been selected because they are the growthy, thick-fleshed, early maturing kind that will go right on in the hands of the purchaser and make good. They will be well fitted for the sale ring, not fat but in the very best condition to insure the greatest amount of usefulness to their buyers.

No breeder of Shorthorns, in Kansas, can afford to miss the opportunity of securing some of this good seed for his herd. Write V. L. Polson, Fredonia, Kans., for a catalogue and arrange to be present. Don't forget the date and the place. See advertisement in this issue of THE KANSAS FARMER.

Frank Iams Writes:

"Mine Son Ikey—Get into the band wagon, all railroads lead to St. Paul, Neb. (at 2 cents a mile). The home of the largest individual owner and importer of Percherons, Belgians, and Coach stallions in the United States, Frank Iams of 'Peaches and Cream' stallion fame, has opened up a new barn of 60 stallions (not seen by the public before). They are his famous prize-winners at the Illinois, Iowa, and Nebraska State Fairs, and the 1907 show horses selected in Europe for the big State fairs of 1907. At the Illinois State Fair he won second prize on 4-year-old percheron and it took a \$10,000 stallion to put him second. Iam's 3-year-old Percheron won two prizes out of the four there (16 horses shown). At Iowa State Fair Iam's Trallala defeated the champion Percheron stallion of France. At Nebraska State Fair, Iams' Percherons and Belgians won every first prize (bar one) and both sweepstakes prizes, and grand sweepstakes prize over all breeds, in 2-, 3-, and 4-year-old classes. His 1907 show horses are the 'best ever.' These horses and more are all in his barns and must be sold, to make room for his '200 head' importation. Ikey!, 'It's a cinch' that Iams is saving thousands of dollars to stallion buyers. He sells winners and sons of winners at \$1,000 and \$1,500 (few higher), guaranteed better than any \$3,000 to \$5,000 company stallion, sold by 'gold bring' stallion salesmen. If you don't find this true, and every statement in catalogue, you get the \$500 hung up. Iams' twenty-five years of successful business, and his 'square dealing,' keen judgment, his characteristic advertising, his independent stand against the giant stallion trust, having the big ton 'black boys,' your kind that sell themselves, and no questions asked. It's '16 to 1' that Iams talks less and sells ten times as many stallions as any man in the United States. He is an easy salesman, and people know that they get a square deal with Iams. His stallions are so good that they do not need a 'gold brick salesman or auction block to sell them.' They sell themselves, they are the salesmen. Iams has 'lifted the lid' again and is knocking 'high prices on stallions' off the 'X'mas tree.' It is 'bargain day' at Iams' stallion barns, all your folks will take off their hats and say: 'Iams has the goods' as advertised. Iams wants your business. That's why he advertises. He will put your hair in a curl' with swell ton stallions and save you \$1,000 or \$1,500

Blacklegoids

Simplest, Safest, Surest Vaccination for the prevention of **BLACKLEG IN CATTLE**

NO DOSE TO MEASURE. NO LIQUID TO SPILL. NO STRING TO ROT.

Just a little pill to be placed under the skin of the animal by a single thrust of the instrument. You cannot afford to let your cattle die of blackleg when a few dollars spent on Blacklegoids will save them. Write for circular.

PARKE, DAVIS & COMPANY
HOME OFFICES AND LABORATORIES, DETROIT, MICH.

NOTICE—For a limited time we will give to any stockman an injector free with his first purchase of 100 vaccinations.

and a better stallion (then you can wear the diamonds), not the peddler or auction blockman. You say: 'Why can Iams sell better stallions at half the price of others?' Iams buys and sells every stallion himself at his home barns. He buys stallions by 'special train load,' 80 to 160 at a time. He speaks the languages, saving you 20 per cent. He is not in the stallion trust, saving you \$300. He pays no slick salesman \$1,000 to sell you a fourth rate stallion. He has no two to ten men as partners to share profits. He pays spot cash for his stallions, owns his farms, houses, barns, stocks, and stallions. He sells stallions by 'hot advertising,' \$1,000 or \$1,500 insurance placed by Iams on stallions. Our illustration is Iams Favorite (59321), Black Percheron, 4 years old, weights 2,140 pounds—a peaches and cream 'top-notch'—your kind. He is a smooth, finished drafter of big size, big, clean bone. A sensational 'peaches and cream' stallion that don't need any booster or hammer thrower to sell him. You will keep 'a shovin' and a pushin' until you own him when you see him at Iams'. Iams has on his selling clothes, they fit all buyers. No man that will talk business, and will pay cash or give bankable note get away from Iams. Write for Iams' 1907 horse catalogue with 100 illustrations, an eye-opener that will save you thousands of dollars.

E. B. Grant's Durocs and Shorthorns.

E. B. Grant, of Emporia, Kans., starts an advertisement in this issue of THE KANSAS FARMER, to which we wish to call especial attention. In starting his herds Mr. Grant realized the importance of the right kind of a foundation to build on, and was careful to secure only the best. For this reason he selected his Duroc-Jerseys from the well-known herd of McFarland Brothers, of Sedalia, Mo., who are noted for producing grand champions, champions, and prize-winners that have won at some of the greatest shows in the country, such as the World's Fair, American Royal, and Missouri State Fair. Mr. Grant's sows, with few exceptions, are from this herd and are sired by champion and prize-winning boars. They are a choice lot and are producing splendid results.

Two of his sows are litter sisters and were sired by Joe 29271, who won grand championship under 6 months at the World's Fair. His sire was Oom Paul 2d. He has four fine gilts from these sows, by Tip 41501, he by Tip Top Notcher, grand champion at the World's Fair. These sows are very prolific and are farrowing large litters, and raising them. Another of Mr. Grant's sows, Miss Orion by Oom Paul 2d and bred by McFarland Brothers, has one of the finest litters the writer has ever seen. They are show prospects in every sense of the word. They were sired by O. K. 48383, he by Buddy K. 4th, champion at the Illinois State Fair. His herd-boar is Bobby S. 146961 by 2d Climax 23361, who was first prize boar at Missouri State Fair in 1903. He is a good individual and a splendid breeder.

Mr. Grant's Shorthorns are a useful lot. The cows are heavy milkers and good breeders, and there is a nice lot of young stuff coming on. His herd-bull, Lacklan of Orange 242309, was purchased at the American Royal. He is an outstanding individual with lots of scale and quality and fit to head a good herd. His sire is Abodar, he by Aberdeen. He was calved October 29, 1904, by Orange Leaf; whose sire was Tip Top 166591.

Mrs. Grant also raises pure-bred Golden Wyandotte chickens and Mammoth Bronze turkeys of exceptional quality, from which she always has stock and eggs to sell in season. Her card advertising eggs for sale can be found in the Poultry Department of THE KANSAS FARMER. Mr. Grant has for sale at the present time a yearling Shorthorn bull from a heavy-milking dam that is fit to head a good herd; also a number of very thrifty

Horse Owners

Do not let your horses work with sore shoulders. Harness, Saddle or Collar Galls positively cured with three or four applications of Beardslee's Gall Cure. Also a sure preventive for soft or green horses from becoming galled just when you need them to do your heavy spring and summer work.

I will send a full pint of Beardslee's Guaranteed Gall Cure postpaid to any part of the United States for 50 cents, with a guarantee to cure or money returned. Also other valuable information to horse owners free.

—Address—
The Beardslee Co.
37 Belden St., Boston, Mass.
Agents Wanted in Every Locality

BIGGER PIG MONEY.

Scours and Thumps kill, on an average, half the pigs in every litter or make runts. Stop that slaughter and waste by giving them

ANTI-SCOUR

Does away with starving methods. Regular rations for sow and pigs. Endorsed by all hog-raisers who have tried it, and experiment stations. Guaranteed sure, speedy, easy and inexpensive, 400 doses in box, \$1.00. Sent postpaid or at your druggist's. Send for booklet, "Bigger Pig Money." Endorsed by Prof. Kinzer, of Kansas Agricultural College; Frank Dawley, Waldo, Kans.; Everett Hayes, Hiawatha, Kans.; John W. Jones & Son, Concordia, Kans.; and hundreds of other prominent farmers and breeders.

THE AGRICULTURAL REMEDY CO.
521 Kansas Ave. Topeka, Kans.

It's Easy

to hatch them, but it takes the proper feed to raise them. Otto Weiss Chick Feed is scientifically prepared by a poultryman of 25 years experience. A trial will soon convince.



Products for stock and poultry as feed and conditioner. Guarantee everything we sell. Free circular.

The Otto Weiss Alfalfa Stock Food Co.
221-227 So. Santa Fe, Wichita, Kans., U. S. A.

THOS. OWEN, 2801 West Euclid Avenue, Ind. Phone 6306, is Topeka agent for these goods.

Save YOUR PIGS

Get a Sure Getter Pig Ferret, The Great Veterinary Instrument farmers of the "hog belt" are all talking about. "Gets 'em" alive, saves the mother. Sales mgr. wanted in every Co. Price \$3. Write today.

R. C. FOLLET & CO., Box 29, Manlius, Ill.

USE OUR MONEY

We helped 10,000 Agents last year. Goods ship't on 30 days' credit; deliver and collect before paying. Portraits 35c; frames 15c; sheet pictures 2c; stereoscopes 25c; views 1c; all art goods at lowest wholesale prices. Big catalog and sample outfit free.

CONSOLIDATED PORTRAIT & FRAME CO.
260-124 West Adams St., Chicago, Ill.

fall boars and gilts that will be sold right if bought soon.
 Write Mr. Grant for particulars or call and inspect his herds at West Lawn which is two and one-half miles west of Emporia, Kans. Visitors are always welcome.
 When writing please mention THE KANSAS FARMER.

Marshall County Hereford Sale.

The fifth annual sale of the Marshall County, Kansas, Hereford Association will be held at Blue Rapids, Kans., Wednesday, April 17. For this sale the breeders have selected a better lot than usual and will present them in good condition. The 47 head in the sale list will be consigned by thirteen members, and includes 33 good young bulls and 14 cows and heifers. Of the latter, 10 head are safe in calf. Five have been bred to E. R. Morgan's champion bull, Onward 18th. There will be an extra good 2-year-old bull sired by Twilight 72227, the bull that has sired the sale-toppers in these sales for the last two years. Some good herd-header prospects are also included. The females should be in good demand, for they are all of choice breeding and are safe in calf to good bulls.

Miss Lou Goodwin, of Blue Rapids, Kans., consigns among others four good young bulls to the Marshall County Hereford Association sale April 17 at Blue Rapids. Three of these are sons of her former herd-bull, Beau Mystic, the first-prize aged bull at last fall's American Royal show. The other is a good young son of May's Keep On, one of the best breeding bulls ever used in that part of the State. This sale is full of good bargains. Send for catalogue to F. W. Preston, secretary, Blue Rapids, Kans.

Truman's Recent Sales.

J. G. Truman, manager, Truman Pioneer Stud Farm, Bushnell, Ill., and Kansas City writes:

Notwithstanding the fact that we had our sale of thirty imported Shire and Percheron stallions advertised which took place at our stables in Kansas City on Wednesday, March 27th, our sales here at Bushnell have been really better than we had anticipated under the circumstances. Our trade has been better for the month of March than at any time in the history of our twenty nine years in the importing business. Among our very recent sales are the following:

Imported Shire stallion to Cloverdale Shire Horse Company, Tittusville, Penn.; imported Shire stallion to Mr. C. L. Waltz, Spaulding, Ia.; imported Shire stallion to the Burlington Truman Horse Company, Burlington, Ill.; imported Hackney stallion to William J. Mitchell, Labelle, Mo.; two imported Shire mares to Charles Cappel, Loganport, Ind.; imported Shire stallion to Ripley Shire Horse Company, Ripley, N. Y.; imported Shire stallion to C. E. McPherson, Fairfield, Ia.; imported Hackney stallion to Charles Cappel, Loganport, Ind.; imported Shire stallion to C. C. Featherby, Yarmouth, Ia.; imported Shire stallion to Claypool Shire Horse Company, Claypool, Ind.; Shire stallion to the Terre Haute Shire Horse Company, Terre Haute, Ill.; a Percheron stallion and mare to N. E. Burton, Port Stanley, Ontario; imported Shire stallion to Dale Bros., Manlius, Ill.; imported Shire stallion to Stewart, Sunkel and Collier Company, Paris, Ill.; Percheron stallion to Hamilton Percheron Horse Company, Hamilton, Kans.; imported Shire stallion to Deloraine Breeders Association, Deloraine, Manitoba; Shire stallion to Perry, Rutherford and Ireland, Deloraine, Manitoba; Percheron stallion and mare to Jno. Barnes, St. Thomas, Ontario; imported Hackney stallion to the Victoria Hackney Company, Victoria, Ill.; imported Shire stallion to W. S. Root, Sparland, Ill.; imported Shire stallion to George L. Levitt, Wilson, Kans., and in addition to this horse Mr. Levitt purchased and imported Percheron and an imported Shire stallion at our sale last week; imported Hackney stallion to W. P. Blackford, Hillsboro, Ia.; imported Shire stallion to Robert Mason, Mt. Union, Ia.; imported Shire stallion to C. J. Winters, Washington, Ia.; imported Shire stallion to Berlin Draft Horse Company, Berlin, Ia.; imported Shire stallion, to H. D. Butterbrodt, Tipton, Ia.; imported Shire stallion to Fred Holtby and Grant Bates of Collins, Ia.

In addition to the above sales we have our sales including our auction at Kansas City this week.

C. B. Palmer's Poland-Chinas.

C. B. Palmer of Peabody, Kans., is a new breeder in the Poland-China world. He has been buying choice bred sows from a number of the good herds in the State, and starts out this spring with the best of prospects for a fine crop of early spring pigs. A number of his sows have all ready farrowed nice litters and the balance are due soon.

His sows are from the well known herds of A. P. Wright, Valley Center, Kans., F. P. McGuire, Hutchinson, Kans., and E. E. Axline, Oak Grove, Mo. He has one sow by Mischief, he by Mischief Maker; one by Western Chief, by Sunshine Chief, and he by Missouri Black Chief; two sows, whose second sire was Chief Ideal 2d 28951, and a number of others equally well bred. This sow Excelsior was in the prize-winning herd of F. P. McGuire at Hutchinson State Fair 1905. Mr. Palmer's herd-boar in Happy Prince 43322, by Prince Proud, A. P. Wright's prize-winning boar, who won second in herd at Illinois State Fair, Sweepstakes at Hutchinson State Fair 1905, and who sired the first-prize Happy Prince is as good individually as he is well bred. He has a strong back, well sprung ribs, heavy hams, excellent head, stands up well on his toes, is a sure breeder and is fit to head a good herd.

Mr. Palmer is advertising him for sale in THE KANSAS FARMER for he can not use him on all his sows. He will be sold right if Mrs. Palmer raises pure-bred Single Comb Brown Leghorns of the extra large kind, her card advertising eggs for sale at reasonable prices. Any one needing a good boar should write Mr. Palmer at once also

It Tells at the Pail

Give the cows what they need and they will give you what you want. No mystery about it. We don't claim to balance the ration, but we do claim to improve digestion by supplying the animal with exactly what the noted medical colleges and authorities claim the animal needs to increase production. No one can doubt that all growth depends upon digestion—we know that only about fifty-five per cent. of the food of a healthy animal is digested. What the average animal digests we don't know—but Dr. Hess Stock Food will make every cow, steer and hog digest the largest possible amount of food and convert it into profit. If we fed a cow or steer for the same purpose we feed ourselves, they perhaps would not need a tonic continuously. But we make it a business to overfeed the steer, crowding him to an early market, and that's why they should have something to aid digestion.

DR HESS STOCK FOOD

the medicinal stock tonic and prescription of Dr. Hess (M.D., D.V.S.) is just what the overfed animal needs. It does not supply additional protein to make bone, muscle, etc., but it does make the food of the farm produce the maximum amount of growth and milk production, besides curing and preventing stock diseases.

Professors Quitman, Winslow, and Finlay Dun, the most noted medical writers of the age, tell us that bitter tonics improve digestion, iron makes blood and the nitrates assist nature in expelling poisonous material from the system. These ingredients make up Dr. Hess Stock Food— isn't this pretty strong proof? But besides this every pound is sold on a written guarantee.

100 lbs. \$5.00 } Except in Canada and
25 lb. pail \$1.40 } extreme West and South.
 Smaller quantities at a slight advance.

Where Dr. Hess Stock Food differs in particular is the dose—it's small and fed but twice a day, which gives it the most digestive strength to the pound. Our Government recognizes Dr. Hess Stock Food as a medicinal tonic, and this paper is back of the guarantee.

Free from the 1st to 30th of each month—Dr. Hess (M.D., D.V.S.) will prescribe for your ailing animals. You can have his new Veterinary Book free any time for the asking. Mention this paper.

DR. HESS & CLARK, Ashland, Ohio.
 Also manufacturers of Dr. Hess Poultry Pan-a-cosa and Instant Louse Killer.

INSTANT LOUSE KILLER KILLS LICE.

watch for his advertisement of stock that will be started later. When writing please mention THE KANSAS FARMER.

The Blue Valley Creamery.

One of the best illustrations of how pluck and energy will succeed in this Western country is made by the Blue Valley Creamery Company, which started in a very small way only a few years ago at Marysville, Kans., on the banks of the Blue River, from which the company took its name. The methods adopted and the vim and energy which were put into the business by Mr. J. A. Walker and his associates soon made it necessary for this company to have larger quarters and, in considering this question, it was found that a larger field of usefulness was also necessary. The company moved to St. Joseph, Mo., where it had improved railroad facilities and easy access to the business of four States. It started in a small way on South Seventh Street but in a surprisingly short time it moved into its own building at its present location. Here it was equipped with all the modern and up-to-date machinery and methods, and its success was pronounced from the start. Indeed, its growth has been wonderful as compared with that of other like institutions, but not wonderful when its energetic methods are considered. Under the direction of Mr. W. W. Marple, than whom there is no better creameryman in the West, the Blue Valley Creamery Company conducted the first special dairy train on earth. This was a dairy school on wheels which ran over the St. Joseph and Grand Island road from St. Joseph to Grand Island and gave lectures and demonstrations at each station. The results of this expensive experiment were so satisfactory that other like trains have been run over other roads at intervals.

In addition to the energetic methods which have characterized this institution, and their up-to-date processes of manufacture, they have been equally progressive in their business methods and were the first of the larger creamery companies to adopt the graded cream system which they have always maintained. Their methods in manufacture and business so greatly increased their prosperity that their large St. Joseph factory was found to be too small and their territory too circumscribed. Something over a year ago, they invested about \$50,000 in a plant at Chicago which is larger and equally well equipped with the St. Joseph plant, and which makes of the Blue Valley Creamery Company the largest exclusive butter-manufacturing plant in the world. The opening up of the new Chicago plant at 313-337 South Clinton Street made it necessary to shift the working force somewhat and the great St. Joseph creamery was placed under the direct management of Mr. B. F. Copley, who brings to his work a degree of clear business insight and ability that has already renewed its wonderful vitality and increased its prosperity.

The growth of this institution has been wonderful, and its prosperity great. The secret of success has not lain entirely in the methods of manufacture of their product, although these were of the latest and best. It has not lain entirely in the intelligence and energy which has been put into the business, although these were exceptional. One of the strongest points in the success which has been attained is to be found in their business methods, by which they pay cash for what they buy and pay it immediately. They pay more money for good cream than they do for poor and have thus encouraged the production and selling of good cream. Success in their own business has brought success in other lines as well. Mr. J. A. Walker, who is now at the head of the Chicago office, was president of the first and greatest National Dairy Show ever held in the

world, and has been reelected to this office for the enlarged National Dairy Show which will again be held in Chicago this fall. Mr. W. W. Marple was president of the Missouri State Dairy Association and was superintendent in charge of the Missouri dairy exhibit at the Louisiana Purchase Exposition. Our readers will be more directly interested in the St. Joseph branch of the Missouri Valley Creamery Company because this is the point to which they ship their cream and from which they receive their checks. It is a satisfaction to know that under the management of Mr. Copley their business relations with this great company will be even more satisfactory than heretofore.

Gossip About Stock.

We call your attention to the Hilton hoe, manufactured by H. R. Hilton, Allegheny, Pa. He was for many years a prominent resident of Kansas and now has a practical line of garden tools that will appeal to most of our readers, and we trust that he will receive his full share of orders. His goods are all right and his prices very low.

Kansas should have a thousand pure-bred sheep where there is one to-day. There should be a hundred pure-bred flocks in Kansas to-day. We are pleased to note that a few of the right sort are already established. The Vinewood Stock Farm of registered Shropshires advertised by Geo. F. Kellerman of Mound City, is one of the kind we are proud of. Any one needing anything in this line can depend on getting something good. Write him for particulars.

On March 26, at his home farm near Topeka, Mr. G. G. Burton sold a number of registered and Grade Jersey and Holstein cattle. This was a farm sale in which horses, implements, etc. were disposed of. In the sale of Jerseys the four registered cows averaged \$71; the heifers, \$48.30, and the calves, \$23. The grade cows averaged, \$57, the grade heifers, \$36.90 and the grade calves a little less than \$10. In the Holstein sale the highest priced brought \$95. The grade Holstein cows averaged \$69.78. The 3-year-old Jersey bull sold for \$56. The 3-year-old Holstein bull brought, \$60.50, and a Holstein bull calf brought \$40. The milk breeds of cattle are selling better than most beef breeds and are gaining in popularity every day.

New Advertisers.

- O. L. Chase, the Paint Man.
- Security Remedy Co., Gall salve.
- New South Wales Government.
- Wm. S. Myers, Chilean nitrate works.
- R. B. Irwin, Barred Rock eggs.
- R. Hanson, Barred Rock eggs.
- E. F. VanBuskirk, Red Polled bulls.
- A. P. Chacey, Scotch Collies.
- Geo. M. Noble & Co., farms for sale.
- F. R. Bayer, stallion for sale.
- Elm Park Place, Houdan eggs.
- F. L. Bailey, Hereford bulls.
- O. A. Rhoads, Toulouse geese.
- Erie Gas Light Herd, Poland-Chinas.
- M. B. Williams, foreman wanted.
- A. J. Stratton, Buff Orpingtons.
- E. Rauer, Barred Rock eggs.
- J. E. Wright, Leghorn eggs.
- W. A. Prewett, Poland-Chinas.
- Blue Valley Creamery, shippers' system.
- Miss Lizzie Griffith, White Plymouth eggs.
- Mrs. Neva Love, White Leghorn eggs.
- G. H. Ramaker, Duroc-Jerseys.
- O. E. Walker, Holstein bulls.
- Mrs. E. B. Grant, Golden Wyandotte eggs.
- Marshall County Hereford Association, sale.
- Mrs. C. B. Palmer, Leghorn eggs.
- E. B. Grant, Westlawn Durocs.
- Chas. B. Palmer, Poland-Chinas.
- John McCoy & Son, Shorthorn sale.
- O. H. Longwell, Highland Park College.
- W. A. Nelson, renters act quick.

WET WEATHER WORK IS HEALTHFUL AND PLEASANT IF YOU WEAR TOWER'S FISH BRAND WATERPROOF OILED CLOTHING BLACK OR YELLOW

Perfect Protection Longest Service Low in Price Sold Everywhere



LET ME QUOTE A PRICE

and save you 30 to 50 per cent on my line of Split Hickory Vehicles. Sold direct from my factory on 30 days' Trial and 2 years' Guarantee. Don't take of buying until you write me a paper for my special proposition and BIG BUGGY BOOK—bigger and better than ever this year. Illustrates 125 styles and gives prices.

Split Hickory Vehicles

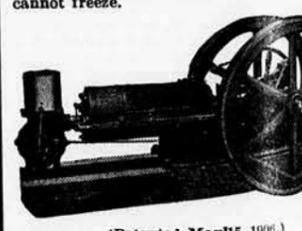
Tells how I use hickory split with the grain (not sawed wood) in my vehicles. Why split hickory is the best—lasts longer—looks better. Tells how I upholster, trim and paint my buggies. Gives photographs of my full line of high-grade harness. Write me today.

H. C. PHELPS, Pres., Ohio Carriage Mfg. Co., Station 251 Cincinnati, O.



WATERLOO VAPOR COOLED GASOLINE ENGINES

The only horizontal vapor cooled gasoline engine in the world. Absolutely frost proof and cannot freeze.



(Patented May 7, 1906.)

The king of all gasoline engines. Our catalogue will tell you all about them, also power and sweep feed grinders. Send today.

WATERLOO GASOLINE ENGINE

1014 3d Avenue West WATERLOO, IOWA

SOLD ON MONTHS' TRIAL

1907 model gasoline engines of all sizes. Highest class engines made. Three month trial will prove it. For information and prices, write to:

Holland Engine Co., Dept. 8, Cedar Rapids, Iowa



Agriculture

Bromus-Inermis Questions.

I wish you would send me directions to how to sow Bromus inermis, how much seed is required to the acre, and what kind of a machine is best to sow with. I tried my drill and could not get it to feed Bromus inermis. Which is the best time to sow it? Kindly send me bulletin 134 on alfalfa seeding.
THOS. GRIBBEN.

Saline County.

I have mailed you a circular giving information regarding the seeding of Bromus inermis and also a circular on seeding alfalfa. It is not possible to sow Bromus inermis with an ordinary grain drill unless you make special provision. I have sown the grass with the grain drill in the following way: nail together two strips of board about two inches wide. Place these in two pieces in the bottom of the drill box, splicing the boards near the middle of the seed-box. Drive two ten-penny nails through the boards into each seed-cup. Attach an upright handle to the strips of board near the middle of the box. With a man to drive the team and a boy to move the maker, it is possible to distribute the seed fairly even. Only a small amount of seed should be put into the grain-box at a time, just barely enough to cover the strips of board. The drill could be set to sow two or three bushels of oats per acre, or you can, with a little adjusting, sow about eight to twenty pounds of seed per acre, which is the usual amount required when the Bromus inermis is sown alone.

Usually I would recommend to sow broadcast by hand or with a wheel-row seeder, provided you have a good grass box. We have one of these seeders, manufactured by O. E. Thompson & Sons, Ypsilanti, Michigan. However, an old hand at the business can sow the seed broadcast and do a good piece of work, choosing the day when the wind does not blow. The detailed information is given in a circular which has been mailed to you.
A. M. TENEYCK.

Oats in Kansas.

Representative White of Shaw County to include oats in the bill asked for an appropriation for the purpose of purchasing seed-oats, but he thinks that it does not pay to grow oats in Kansas.

My experience has been that an oat is fully as good as wheat or corn, for the purpose of changing from wheat, it is the only crop which enables the change without actual loss. Since prairie hay is becoming scarce here, and alfalfa so plentiful, oat straw is almost a necessity and is worth \$6.00 to \$7.00 per ton.

M. C. POLLEY.

It would be all right to import small quantities of seed of a number of varieties of foreign oats in order to test them in this country, and we are already doing this. I would hardly think it advisable to ship in a large amount of seed-oats of any variety from any country until it has been thoroughly proven that the seed is superior to our own growing. We are now testing varieties secured from all parts of the world and some of the introduced varieties are proving better producers than the old sorts. Time will tell whether we can maintain this high and good quality of grain by importing these oats in this country.

Do not think much of the plan of importing large quantities of foreign seed-wheat. The more modern scientific plan is to introduce small quantities of a great many of different and best varieties and test them here, and when we have found that certain varieties are better producers than others, increase the wheat or grain and secure a large amount of seed for distribution. In any way we can prove what we get from the seed we have when the seed is distributed.

It may add that we are doing this kind of work at this Station. Some



You Get More Harvest Profits

If Harvest Finds You Ready

TO get all the profits possible out of your harvest this year—that is a plain business proposition with you.

It needs no argument to prove that you can not be sure of all the harvest returns—no matter how favorable the outlook—unless you have made full and effective preparations before hand.

A quick harvest—an easy harvest free from breakdowns and delays due to inefficient machines—is the harvest that yields every cent of its value to you.

The vital point then is your harvesting machines. You can not afford to take chances on it. A mistake in this matter means loss of golden hours in the field, and profit-eating expenses, to say nothing of the worry.

You can not decide this question wisely when the harvest rush is on. This is one part of your preparation that you can make now, and that it pays to make now.

The test of time is one of the best guides to your selection. And when you think of harvesting machines that have proved their efficiency year after year for a generation, what names are brought at once to mind?

Champion, McCormick, Osborne, Deering, Milwaukee, Plano.

There must be a reason why these six machines have become familiar the world over—wherever harvesting is done.

It means that they have withstood all the tests of all conditions of harvest fields everywhere.

It means not only that they were built on right principles at the first, but that they have steadily led in improvements from year to year, thus holding the place they have established as the standard.

But world-wide reputation—much as it means—is not the only reason for absolute confidence in this line.

Each machine stands on its present merits, because it is built under the most favorable conditions.

The International Harvester Company is able to demand and obtain the very best materials of every kind and the highest mechanical skill—everything that goes to make the perfect machine.

To erect and maintain experimental shops and laboratories and to employ the best specialists to work out every principle and detail—these things would not come within the reach of the ordinary manufacturer. But the International Harvester Company can and does concentrate the

excellence of all its splendid equipment in these machines.

By owning and operating its own coal and iron mines, its own smelters and steel mills, and its own timber and saw mills, the International Harvester Company is enabled to select the best wood and steel that forests and mines afford.

And in addition it can and does employ the best labor.

With such advantages of increased resources, nothing but the best of material need be accepted. And it is easy to see how machines can be improved in a degree not attainable in any other way—how such rigid tests as these machines are subjected to, can be insisted on—why no machine ever leaves the works until the best qualified experts have pronounced it perfect.

All this care in the selection of materials—all the skill of labor—all the thoroughness of inspection and test—and all the perfection which these things mean and bring about goes into your machine.

Isn't it worth while to consider who gets the benefit in the end—what this concentrated effort on your machine would mean to you in the critical time of your harvest?

Isn't it worth your while to consider whether you will not be the gainer in a large degree by preparing for harvest or haying time with a machine that you know?

Harvest time is not the time to try something you are not sure of. You want all the guarantee of steady, reliable operation that you can obtain.

Manufacturers can afford to experiment, but you can not.

You want a machine that has been proved by time—that has been proved by use under all conditions—that has been proved by your own neighbors—and that is made under conditions that assure you that it is the best within the manufacturing possibilities.

And if repairs ever have to be made, you want to be sure that you can get them at once, and that the parts will fit. This is another special advantage of these machines—repairs are always right at hand, for International local agents everywhere have them in stock.

Harvest economy and efficiency not only call for good machines but good twine as well.

International Harvester Company binder twine is made from high-grade pure sisal and manila fibers—the best raw materials that can be procured. The Champion, Deering, McCormick, Milwaukee, Osborne, Plano and International binder twine is sold in the following grades: Sisal, standard, manila and pure manila.

Call on the International agent and get a catalog, while you have plenty of time to study it. If you don't know an International agent write us and we will give you the name of the one nearest you.

International Harvester Company of America, Chicago, U. S. A.

(INCORPORATED)

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



fifty different varieties of wheat have been tested here in the last three years. Many of these were imported seed and a few of the imported varieties have proven superior to home-grown varieties. Namely: such varieties are the Kharkof, Malakog, Beard-ed Fife, and Red Turkey. These we have planted in larger area and were able to distribute a thousand bushels of well-bred seed-wheat of the best producing varieties last fall, and have some 120 acres planted to supply seed for next year's planting.

I am satisfied that this is the way

to introduce better varieties and better bred wheat for growing in this country, and the wheat can be much more cheaply secured by this plan than by introducing ship-loads of it, as seems to be the purpose of the bill recently passed by our State Legislature. Not all foreign varieties have proven to be better adapted for growing in this country than our home-grown seed.

In fact only occasionally do we find that imported seed is superior to seed grown in this country. It is therefore necessary to test what we introduce

and prove that it is better than the wheat which we already have. Then we have shown by actual tests that a certain variety of wheat is superior to others. It only takes a few years to secure a vast amount of seed of this variety. For instance, from one bushel of wheat it is possible to produce 24,300,000 bushels of wheat by successively sowing the product of this one bushel for five years, figuring thirty bushels per acre as the annual average crop.

As to imported wheat being of better grade or quality than the best

wheat which we can grow in Kansas this is also an error. In my judgment there is no country in the world which can produce a better quality of hard red winter wheat than can be grown on selected lands in Central and Western Kansas. All that we have gained or can gain by importing seed-wheat is to secure better producing varieties, and there is no wheat adapted for growing in our soil and climate but may be improved by growing it here and carefully selecting and grading the seed for future planting.

A. M. TENEYCK.

Good Seeds.

Please advise me regarding seeds of pure-bred plants, and what you have for sale. F. W. WILSON.
Doniphan County.

Our supply of seed-corn is practically exhausted, as is also our supply of spring grain seed. We have seed of pure-bred Black Hulled White and Red Kafir-corn at \$1.25 for the first grade and 75 cents per bushel for second-grade seed. We also have seed of pure Kansas Orange, Coleman, Black Dwarf and White cane-seed at prices given for Kafir-corn. We have a limited amount of seed of several new varieties of imported millet which promise well, from the tests at this station, at \$1.50 per bushel. We will have a supply of winter wheat and winter barley of the best-producing varieties for sale this fall, and a year from this spring we expect to have a full supply of all the best-producing varieties of small grains, corn, etc. However, the demand for seed-corn and small grain seed has been so great that our supply is now nearly exhausted.

A. M. TENEYCK.

Cow-Peas and Corn Forage.

I have about three or four acres of very sandy, worn-out soil that I would like to sow broadcast with cow-peas and corn, mixed, for cow feed. In what proportions should I mix the seed? I thought by mixing with corn the vines would run up the stalks and in this way would be much easier to cure and handle. This ought to make good cow feed and the peas would probably help the ground. I would like to manure it, but 100 loads—which is all I can get—won't go far enough, so I am putting manure on the corn ground.

A. FARMER.

I would advise to sow about a half-bushel of corn with three pecks of cow-peas per acre, sowing early in June. A combination of corn and cow-peas sown in this way will make good forage, but I prefer to plant the peas with the corn in rows and cultivate the crop rather than to sow broadcast and give no cultivation. If corn and cow-peas are mixed half and half and planted thickly in drills with the corn-plant, the stalks of corn will furnish support for the cow-pea vines and the crop may be cut with the corn-binder and set up in shocks the same as ordinary corn fodder.

It is true as you have stated that growing cow-peas on this land will have a beneficial effect, perhaps not equal to manuring, but in a measure restoring the fertility of the soil. For further detailed information regarding the culture and growing of cow-peas, I have mailed you a copy of circular No. 8, treating on this subject.

A. M. TENEYCK.

Gypsum Questions.

The land I dynamited and subsoiled last August was sown to alfalfa September 1. I got a splendid stand and it made a wonderful growth last fall—wintered nicely, and is growing splendidly now. No difference how much rain falls the ground seems to take all the water in as fast as it falls. A little later I want to put some gypsum on this field. How much should I use per acre? I have never used any and will be thankful for any information you may give me along this line. There is a mill here and I can get the gypsum at a reasonable price.

M. T. WILLIAMS.

Barber County.

I am glad to hear that you have successfully started alfalfa on the dyna-

mitted land. It has occurred to me, however, that if it is possible to get a stand of alfalfa on this land without dynamiting, that the alfalfa would have the same effect as dynamiting, only that it would take a longer time. Namely, the roots of the alfalfa would penetrate through very hard subsoil and reach a great depth, thus tending to make the subsoil more porous and make better conditions for taking in water.

With reference to the use of gypsum, I would advise that you do not apply it in too large quantities. When the gypsum is sown with the alfalfa by the use of a fertilizer drill, do not apply more than 200 pounds per acre, although three or four hundred pounds may be applied broadcast before seeding. A still lighter application may be made to the growing alfalfa, and I would not advise to repeat the application every year, since the effect of gypsum is to liberate the plant-food already in the soil and thus finally exhaust the available supply of potash, phosphoric acid, and nitrogen. Meanwhile larger crops may be secured, but at the expense, finally, of the soil fertility. For more detailed information on this subject, I have mailed you a copy of circular No. 2 containing a discussion regarding the use of gypsum or land plaster as a fertilizer.

A. M. TENEYCK.

Fall Wheat.

I would like to know if it is feasible, and at what time in the spring, if at all, a farmer should harrow his fall wheat.

R. F. McCUNE.

Franklin County.

I have mailed you a circular discussing the harrowing of wheat. In my judgment, most fields of wheat are just now (March 24) in good condition to harrow. If the wheat is backward and has not started much, I would advise you to wait a little while. However, the ground is rapidly drying out, and in most cases the wheat has stood enough to fully cover the ground, and unless the ground is rough, and too loose and mellow, or covered with clods, the harrowing will not injure the wheat.

In my judgment, harrowing wheat this year is apt to give advantage, since there may be a lack of moisture before harvest time. There is little question but that harrowing does conserve the soil moisture. It may be advisable to harrow now and again after a week or ten days, and even a third harrowing may be given. However, harrowing once or twice is usually sufficient.

A. M. TENEYCK.

The Veterinarian

We cordially invite our readers to consult us when they desire information in regard to sick or lame animals, and thus assist us in making this Department one of the most interesting features of The Kansas Farmer. Kindly give the age, color, and sex of the animals, stating symptoms accurately, and how long standing, and what treatment, if any, has been resorted to. All replies through this column are free. In order to receive a prompt reply all letters for this Department should give the inquirer's postoffice, should be signed with full name and should be addressed to the Veterinary Department of The Kansas Farmer, Topeka, Kansas, or to Dr. C. L. Barnes, Veterinary Department, Kansas State Agricultural College, Manhattan, Kansas. If in addition to having the letter answered in The Kansas Farmer, an immediate answer is desired by mail, kindly enclose a 2-cent stamp. Write across top of letter: "To be answered in Kansas Farmer."

Cow's Eye Affected.—I have a cow, 12 years old, that has been a good milker until now. She has a large swelling under right eye, breathes hard, and slobbers considerably. Sometimes a discharge comes from her nostrils. What can I do for her? She has been troubled for six weeks.

Holyrood, Kans. J. D.

Answer.—I think the enlargement underneath your cow's eye is simply the result of some external injury. I would recommend that you apply a stimulating liniment daily over the affected part.

Colt's Ear Split.—I have a 2-year-old horse colt that got its left ear split back about one inch on the tip. It happened about a year ago. I never knew just how it was done but there is a kind of a growth coming ever since around where it was split. It is on the blood wart nature. I have used some linseed-oil on it but it



THE GREAT DAIN LINE



DAIN'S "AUTOMATIC" STACKER



DAIN'S "UNIVERSAL" STACKER

Twenty-five years ago the first Dain Hay Stacker was put upon the market and immediately met with a hearty reception. The Dain has always been a great favorite with the farmer and has grown more popular every year. A Hay Stacker is a necessity wherever hay is grown—it enables the farmer to handle his hay the quickest, easiest and best way.

In the Great Dain Line we have a stacker for every purpose, to suit every purchaser. Each one of them has its special features that recommend it, while the complete line offers the farmer a wide range of choice.

The Automatic, Universal and Junior are each made in larger sizes for handling alfalfa, as well as other hay.

For convenience of operation and for moving from

place to place Dain Stackers have no equal. Like all Dain Tools they are built for business—"a little better than is necessary" to stand the strain—just right, however, to give lasting satisfaction. That's one advantage the farmer gets when he invests in any machine made by Dain—the name is his guarantee of quality and service. It only appears on tools that have stood the test, that have merit, that make friends on account of their advantages.

We'd like to tell you all about our stackers, how they work and all their good features. If you will write we'll send you circulars describing each of them. We are complete outfitters for hay makers—furnish everything that you need.

Write for circulars today. Don't buy until you look them over carefully.

HAY STACKERS



DAIN'S "JUNIOR" STACKER



DAIN'S "NEW IDEA" STACKER

DAIN MFG. CO.,
Ottumwa, Ia., or
JOHN DEERE FLOW CO.,
Gen. Agts., Kansas City, Mo.

A Shady Transaction

If anybody sold you some lumber and if upon careful examination you discovered that it was really not solid timber but merely short pieces spliced together you would call it a shady transaction. That is about the kind of a proposition you are up against when you buy cut stay fence.

It's really not a first-class, full strength product. About half of its strength is wasted—sacrificed to convenience and speed in manufacture. Our stay wire is NEVER cut. It runs continuously up and down across the fence for many rods without an end, thus preserving and utilizing ALL the strength and service there is in the wire.

30 Days Approval. Let us prove to you that Advance Fence is the best made fence on earth. We offer to ship you all you need on 30 days approval. We want you to examine it carefully and compare its construction with other fences. You may stretch up a part or all of it and turn your stock against it. In fact give it any kind of a test you wish.

Then we will let you be the judge—absolutely. If you do not like it send it back and it won't cost you a cent as we will pay freight both ways and refund to you every cent you paid. We know that Advance Fence will please you or we would not dare make this liberal offer.

We Prepay Freight and guarantee safe delivery of shipment. You take no risk whatever. Write for our Free Fence Book and Prices.

Advance Fence Co.,
37 Old St., Peoria, Ill.

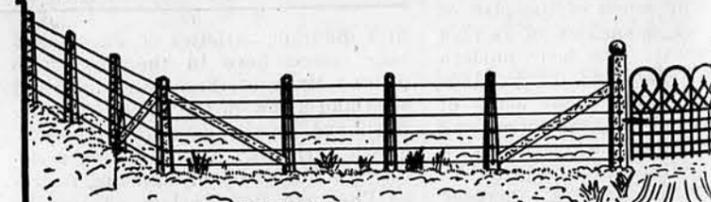




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Most economical and durable roof covering known. Easy to put on; requires no tools but a hatchet or a hammer. With ordinary care will outlast any other kind of roofing. Thousands of satisfied customers everywhere have proven its virtues. Suitable for covering any building. Also best for ceiling and siding. Fire-proof and water-proof. Cheaper and more lasting than shingles. Will not rot, warp, or shrink. Keeps your building cooler in summer and warmer in winter. Absolutely perfect, brand new. \$1.50 is our price for our No. 15 grade of Flat Semi-Hardened steel roofing and siding, each sheet 24 ins. wide and 24 ins. long. Our price on the corrugated, like illustration, sheets 22 ins. wide x 24 ins. long, \$1.75. At 25c per square additional we will furnish Beaded Ceiling, per square, \$2.00. Can also furnish standard beam or "V" roof. **WE PAY THE FREIGHT TO ALL POINTS EAST OF COLORADO** except Okla., Tex. and Ind. Ter. Quotations to other points on application. Satisfaction guaranteed or money refunded. We will send this roofing to any one answering this ad. C. O. D. with privilege of examination if you will send 25c of the amount of your order in cash; balance to be paid after material reaches your station. If not found as represented, you do not have to take the shipment and we will cheerfully refund your deposit. **Ask for Catalog No. WE 81.** Lowest prices on Roofing, Eave Trough, Wire, Pipe, Fencing, Plumbing, Doors, Household Goods and everything needed on the Farm or in the Home. We buy our goods from the manufacturer and receiver's sales. **CHICAGO HOUSE WRECKING CO., 38TH AND IRON STS., CHICAGO**



Build Your Fence with Concrete Posts Made of Cement Mortar

There are from TWO to THREE MILLION wood posts going to decay in each county. Make them CONCRETE reinforced with steel cables and they will last FOREVER. Cost no greater than best wood posts. FIRE, nor the elements of time will not destroy. Protects stock against lightning. One county build you a profitable business. We furnish equipment for a factory. Address

THE PARAGON CONCRETE FENCE POST CO., 417 Portsmouth Bldg., Kansas City, Kan.

seems to make more blood come in it. The growth is as large as a hen's egg. What would you advise? D. L. G. Hepler, Kans.

Answer.—In regard to your horse that has a split ear and a growth that has started along the raw surface of the ear, I would advise you to remove the growth, cutting sufficient amount of the ear to get all of the tumor, then you had better stitch the edges of the wound together and have the ear heal so that it will be the same as before it was cut.

Mare Run Down in Health.—One of my driving mares took sick last September and was quite sick for about a month. She became very poor and for about one month would eat very little. After that she began eating and ever since has had a good appetite, but does not gain in flesh. She seems always ready for her feed, but her hair looks bad and she hasn't much life in her. W. T. D. Wagoner, I T.

Answer.—Secure from your druggist four ounces of Alkano. Put a tablespoonful in a pint of water. Give your animals of this solution, with a syringe, one ounce three times daily before meals. This is a powerful medicine and I think will stimulate her if anything will, for it has put the flesh on horses that have been run down badly.

Mare Out of Condition.—I have a coming 4-year-old black mare that I bought last fall, and was supposed to be with foal. Several times I noticed that she passed quite a quantity of blood. The first time I noticed it, I thought she acted as if she had the colic, but in the morning she seemed all right, but there was blood on the plank floor and I thought perhaps she had lost her colt. I have noticed this several times and have consulted different people but they can not give me a satisfactory answer. R. H. G. Gaylord, Kans.

Answer.—If your animal is passing blood it may be a very serious condition of the intestinal tract. I would advise you to secure 8 ounces of Eucalyptol. Give one ounce in a quart of water two times daily as a drench.

Constipation.—I have a hog weighing about 500 pounds that is constipated. I gave 10 grains of calomel and the result was not satisfactory, and so gave 30 grains followed by saline salts. What better or more can I do? What do you advise on above treatment? E. D. R. Cottonwood Falls, Kans.

Answer.—I would advise you to use raw linseed-oil for the hog. If the hog makes a good recovery would advise you to feed it oil-meal in its feed, say a tablespoonful of the oil twice a day, until its bowels are regulated.

Aborting Cows.—I would like some advice in regard to my milch cows. I have had five cows to abort and one an 8-months-old calf. Part of my cows are half Jersey and part are pure-bred Shorthorn. I feed them second cutting alfalfa and some Kafir-corn, ground corn-cob, and some bran. Some of the heifers were from good milch cows and they are milking pretty well after losing their first calf. M. P. N. Bazaar, Kans.

Answer.—I will refer you to M. Grosche, 30 Old Slip, New York, for medicine for your cows. I think you can get the necessary medicine from him in order to prevent a repetition of the trouble.

Barb-Wire Cut.—We have a fine colt that got his foot over the wire and cut it under the fetlock. He will be 3 years old in the spring and is a coal black stallion. Proud flesh has grown all around the sore. I have used different remedies but they have failed to heal. It was cut some time last May. Any information in regard to treatment will be gladly received. Banner, Kans.

Answer.—I would advise you to have all the proud flesh cut from the sore on your colt. Secure from your druggist 2 ounces each of tannic and boric acid and apply as a dusting powder on the wound. Do not use any water excepting enough to keep the wound clean.

Horse Has Lampers.—I bought a 5-year-old dark gray horse that looks

poor. He has the lampers and can not eat good. Some say I should burn it and others say cut it with a knife, but I am afraid he will not take the bit very well afterwards. If you know of anything for this I wish you would let me know by mail. When in good condition he weighs 1,000 pounds. He also has worms about three inches long. He is in good condition otherwise. I thank you in advance. O. H. Guymor, Okla.

Answer.—I would advise you to feed your horse some ear-corn for the lampers, and then give him plenty of ground feed with a little oil-meal in it and I think he will make a rapid recovery.

Affected Udder.—I have a registered Holstein cow, 8 years old this coming April. She will weigh probably 1,350 pounds. Had her last calf November 14, 1906. Both calf and cow did splendidly. Cow gave about forty-five pounds of milk per day. The first week in January the right front quarter of her udder became greatly swollen. I noticed it when it first began swelling, and within less than three hours it was quite large and hard and giving her considerable pain. I treated the affected part and in about three days the quarter seemed all right. For a few milkings I would force out of the teat some clots of milk that were somewhat tough and then the rest of the milk would come about natural. I thought she was all right until about the last day of January when the trouble recurred but in a much milder form. The swelling was much less and the flow of the milk was natural and I noticed no indications of pain. This is a valuable cow and if you can help me I will greatly appreciate it. W. P. Ottawa, Kans.

Answer.—I would advise you to secure from your druggist six ounces of fluid extract of photolacca de candra and rub it on your cow's udder three times daily.

Wire Cut Falls to Heal.—I have a black driving mare, coming 4 years old, that cut her fore foot on wire the first of last September. I used carbolic acid and lard and I saw signs of proud flesh. I used burnt alum and blue vitriol. Boils began to come on her foot and broke out almost to the front of her foot. The sore has worked towards the front of her foot and is about five inches long. It wasn't cut very badly. I don't think it will crack the hoof. I need something to heal the proud flesh. Mankato, Kans. V. A. J.

Answer.—I would advise you to burn the proud flesh from the wound on your horse, then use equal parts of tannic and boric acid on the sore. Two ounces of each will be plenty to get at once.

Colt Has Lump on Foot.—I have a coming 2-year-old dark bay mare colt that has a lump on right front foot in front, extending from ankle joint upwards. It is the size of half a hen's egg divided lengthwise. It has been there six or eight months. I have used different remedies for some time but they don't seem to reduce the lump any. She is not lame and the lump is half-way hard. Can this be removed, and how? O. J. B. Randall, Kans.

Answer.—I would advise you to use a fly blister on the lump on your animal's ankle. If this does not give the desired results, write me again.

Mare Out of Condition.—I have a 10-year-old mare, due to foal in two months. December 1 her left hind leg was swollen on stifle nearly the size of one's hand. Since then about six inches up and back, a lump has formed. R. A. Logan, Kans.

Answer.—Bathe the affected parts with hot water three or four times daily, using the water as hot as the attendant can bear. After using the hot water apply the following liniment: Compound soap liniment, 8 ounces; tincture of iodine, 2 ounces; turpentine, 2 ounces; fluid extract of belladonna, 4 ounces; spirits of camphor, 4 ounces. Apply this liniment with considerable rubbing. If your mare doesn't improve write again.

Williams' Shaving Soap. THE strongest beard is easily and quickly softened by the rich, soft lather of Williams' Shaving Soap. Besides softening the beard it soothes the face and leaves it smooth and comfortable. "The only kind that won't smart or dry on the face." Send 2c. stamp for a TRIAL CAKE of Williams' Shaving Soap, or 4c. for a Williams' Shaving Stick, trial size, enough for 50 shaves. Address: THE J. B. WILLIAMS CO. GLASTONBURY, CONN. Dept. A.

How Much Paint to the Can?—UNCLE Sam sets the Standard Measure for a gallon at 231 inches. The "HIGH STANDARD" PAINT can has 24 1/2 inches inside. Every time you buy a "HIGH STANDARD" gallon can, you get a gallon of paint. Every time you buy a 2 1/2-inch-inside can, you get short measure—even though it is filled to the brim. Every size can of "HIGH STANDARD" is full U.S. Government Standard Measure of paint—not capacity only. So when you are offered paint a trifle "cheaper" than Lowe Brothers, see if the quantity is there. But paint quality is the real consideration, after all. That is where the real economy comes in—satisfaction and service. Lowe Brothers "High Standard" Liquid Paint Gives Best Results in spreading and covering, working and wearing—a difference of 30 to 50 per cent. over "cheap" paint which quickly proves its costliness. "HIGH STANDARD" PAINT is made of the materials which a third-of-a-century of practical and scientific paint-making has proven to be best; mixed and milled, ground and reground, by powerful machinery to an indescribable fineness and a perfect union of solids and liquids. "HIGH STANDARD" PAINT is sealed in air-tight cans—which keep it always fresh and good—and marked with "The Little Blue Flag"—Your Protection. There is a Lowe Brothers Paint for every use and a Lowe Brothers dealer in nearly every town. Write us for nearest dealer's name and our practical booklet, "Paint and Painting." Mailed Free. The Lowe Brothers Company, 450-456 Third St., Dayton, O. Paintmakers Varnishmakers New York Chicago Kansas City

A PERFECTION Insures Bigger Crops and Better Crops. It will clean, separate and grade your corn, clover, alfalfa, kaffir corn, oats, wheat and any other kind of grass seed or grain you raise. We will ship you a Machine on trial, with freight prepaid, and you can convince yourself that it is just what you need to produce better crops. Dear Sirs:—Find enclosed check for No. 1 "Perfection" Cleaner and Grader. It works fine as far as I have tried it. If you have no agent here, I might sell a few for you. Yours truly, D. P. SMYER, Argonia, Kans., Aug. 16, 1906. Our separate corn grading machines will grade corn 98 per cent perfect and will insure a BUMPER CORN CROP. Write us today and we will tell you all about our machines. Tell us what kind of grain you raise and we will send samples cleaned on the Perfection. THE LEWIS-TUTTLE MFG. CO., 305 A Kansas Ave., Topeka, Kans.

THE "DENNING" FENCING IS FAMOUS For its "Peerless Tie" close mesh, strength and durability. Our motto is "not how cheap but how good." Yet our prices are as low as any compared with weight. We use the best galvanized steel wire. Our hog fence is superior. Our poultry fence beats the world. Our lawn fence is ornamental. Our slat corn cribs and steel grain bins are popular. Ask your dealer, or write us for catalogue. THE DENNING WIRE & FENCE CO. Color Rapid, Iowa

HEALTHY TREES HONEST IN QUALITY WE PAY PROMPT
 Grafted apple 4c, budded peach 4c, budded cherry 15c. Concord grapes 25 per 100. Black Locust \$1 per 100. Complete colored cat. tree. G. H. Hildreth Nurseries, Box 22, Fairbury, Neb.

Seeds OF ALL KINDS
 Tested Bromus-Inermis
 SEED CORN—Everything you plant. Samples and Quotations on application.
GEO. T. FIELDING & SONS,
 Manhattan, Kans.

SEED CORN—C. E. HILDRETH, Al-
 lamont, Kans. Original
 or, breeder and grower of Hildreth Yellow Dent corn.
 First prize at fairs and corn shows. First prize acre
 yield, 108 bushels, 1905. First prize, acre yield, home
 county, 108 bushels, 1906. \$2.50 per bushel, crated.

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. Mailed
 at 2 cents per packet and upwards. Mailed to you, if you mention this paper.
IOWA SEED CO., Des Moines, Iowa.

EVERGREENS
 Nursery grown, hardy everywhere.
 All sizes for all purposes, lowest
 prices, 50 bargain lots, 1/2 doz. class,
 prepaid \$1 to \$10 per 100. Also Nur-
 sery grown Forest Trees.
FREE—One beautiful Black Hill
 Spruce to every customer. Send
 for free Cat. and Bargain Sheet.
D. Hill, Evergreen Specialist
 Box 24, Dundee, Ill.

PLANT JACK PINE
 On sandy land in Kansas, Nebraska
 and northward. Jack Pine from Minne-
 sota is most rapid evergreen for profit.
 As I supplied the very successful Jack
 Pine for the Government plantation in
 Holt County, Nebraska, in 1890, I prob-
 ably know how to pack. I have a mil-
 lion vigorous seedlings.
H. E. AYRES, Athol, Minn.

The World's Fair Prize Winning Corn
 Just WON FIRST PREMIUM at the Corn Breed-
 ers' State Show at Manhattan. Heaviest yield, 113.15
 bu. per acre. A grand lot of the 4 best corn's grown to-
 day. Sample and Catalog tells how to raise corn
 every year FREE.
JOHN D. ZILLER, Hiawatha, Kans.
 HE RAISES CORN.

**Strawberry Plants that Pay
 to Plant are Kind We Grow**

Our acreage this year is very large
 and we have a large quantity of first-
 class plants. Our fields were all under
 mulch early and we are sure we can
 furnish our customers with the very
 best plants possible. We also grow
 large quantities of other small fruit
 plants. Our new catalog is different
 from any catalog you have ever read.
 It contains valuable information to the
 fruit grower. It will pay every fruit
 grower to have a copy. It is free.
 Address **F. W. DIXON, Holton, Kans.**

Red Tag Trees
 PHOENIX NURSERY CO.
 BLOOMINGTON, ILL.
 TRADE MARK
 The Red Tag is
 the identification mark
 on all genuine
**PHOENIX TREES
 and PLANTS**
 The sturdiest and best nursery stock ex-
 perience and good soil can produce.
 Look for the Red Tag on all trees you
 buy. Send to-day for free catalogue.
PHOENIX NURSERY CO.,
 600 PARK STREET, BLOOMINGTON, ILL.

SEEDS Mo. Valley Seed Co.
 Established 1870.

The kind that produce results. Reliable northern
 grown, thoroughly tested and true to name. Field,
 Flower and Garden. Our specialties, Alfalfa,
 Clover and Timothy. Write for prices, Special
 Chick feed, Incubators, Poultry Supplies, all kinds
 Write for big catalog tree.
HORTICULTURAL SUPPLIES—We are the
 largest Horticultural Supply House in the west.
 Target Brand Arsenate of Lead and Dispar-
 one, a guaranteed exterminator of all leaf eating
 insects.
 Target Brand Quick Bordeaux, Target
 Brand Scale Destroyer, Meyers Celebrated
 Spray Pumps, Empire King Spray Pumps,
 Chemicals, all kinds for spraying.
 Write for free catalog telling how and when to
 spray.
110 S. 4th St., St. Joseph, Missouri

Horticulture

Blight in Plums.

EDITOR KANSAS FARMER:—Will you
 kindly tell me, through "The Old Re-
 liable," how to prevent blight in
 plums? The plum seems to puff up to
 a large size, and after a while dry up,
 but remain on the tree for some time.
 Sheridan County. SUBSCRIBER.
 The cause of the "puffing" of your
 plums is the fungus disease known as
 plum pockets or plum bladders, known
 to the botanist as "Exoascus Pruni."
 Treatment is largely remedial, con-
 sisting in destroying affected fruits
 and leaves, giving a thorough spray-
 ing of Bordeaux mixture 6-6-50 (6
 pounds copper sulfate, 6 pounds lime,
 50 gallons water) before the leaf buds
 open, and after the leaves are well
 grown a spray of Bordeaux mixture
 4-4-50. The destruction of the affected
 fruit is an important part of the treat-
 ment.
ALBERT DICKENS.

**Susceptibility of Shrubs and Trees to
 San Jose Scale.**

The following list, which has been
 compiled by Dr. Britton, of the Con-
 necticut State Experiment Station and
 is reprinted by the Geneva, N. Y., Sta-
 tion, shows as far as present knowl-
 edge permits, the relative susceptibil-
 ity of plants to the attacks of the San
 Jose scale. The first division contains
 the plants that are found to be badly
 infested. The second division in-
 cludes the plants on which the in-
 sect has been found, but in small
 quantities, causing little injury. The
 third division contains the plants
 which have not been found to be in-
 fested, though growing near badly in-
 fested species. Nurserymen would
 confer great benefits on their patrons
 by recommending the planting of the
 more resistant shrubs and ornament-
 als. Likewise prospective planters
 should select only the more resistant
 kinds.

PLANTS COMMONLY OR BADLY INFESTED.

Acacia sp., Akebia sp., Juneberry,
 trifoliolate orange, dogwood (C. alba
 baileyi and sanguinea), common cot-
 oneaster, hawthorn, English hawthorn,
 common quince, Japanese, or flower-
 ing quince, European purple-leaved
 quince, Japanese walnut, common
 privet, Carolina poplar, Lombardy pop-
 lar, almond, apricot, sweet cherry,
 sand cherry, purple-leaved plum, Eu-
 ropean plum, wild goose plum, beach
 plum, flowering almond, peach, Japan-
 ese plum, choke cherry, hop-tree, pear,
 sand pear, apple, crabapple, gooseber-
 ry, flowering currant, black currant,
 rose, willow, mountain ash, black
 choke-berry, snowberry, common lil-
 lac, Persian lilac, basswood or linden,
 Osage orange, American elm, and Eng-
 lish elm.

**PLANTS OCCASIONALLY OR RARELY IN-
 FESTED.**

Silver maple, Weir's cut-leaved map-
 ple, Norway maple, Actinidia sp.,
 horse chestnut, alder, Virginia creep-
 er, birch, cut-leaved white birch, box,
 chestnut, catalpa, Ceanothus sp., hack-
 berry, Cercidiphyllum sp., orange, dog-
 wood, Deutzia sp., persimmon, silver
 thorn, eucalyptus, burning bush, fig,
 Forsythia or golden bell, ash, honey
 locust, shrubby althaea, pecan, black
 walnut, English walnut, mountain lau-
 rel, globe flower or Japanese rose, Cal-
 ifornia privet, honeysuckle, mulberry,
 ninebark, white spruce, sour cherry,
 Photinia sp., Rhodotypos sp., sumac,
 smoke bush, locust, red raspberry,
 blackberry, dewberry, elder, sassafras,
 Sorbaria sp., spirea, arborvitae, vibur-
 num, grapes.

PLANTS NOT INFESTED.

Tree of Heaven, Amorpha sp., An-
 dromeda sp., Hercules' club, Dutch-
 man's pipe, papaw, groundsel tree,
 spice bush, barberry, trumpet vine,
 Carolina allspice, hornbeam, cedar,
 bitter sweet, button bush, red bush,
 leather leaf, fringe tree, yellow wood,
 sweet pepperbush, hazelnut, Daphne
 sp., weigela, moosewood, pearl bush,
 huckleberry, dyer's greenweed, maid-
 enhair tree, Kentucky coffee tree, sil-
 ver bell, witch hazel, English ivy,

hickory, hydrangea, gold flower, Ilex
 sp., Virginia willow, yellow jasmine,
 butternut, juniper, varnish tree, gold-
 en chain, larch, sweet gum, tulip tree,
 matrimony vine, magnolia, wax myr-
 tle, sour gum, iron wood, Paulownia
 sp., Pheledendron sp., syringa, pine,
 buttonwood, Potentilla sp., oak, Japan
 cypress, buckthorn, rhododendron, um-
 brella pine, Shepherdia sp., smilax,
 Japan pagoda tree, bladder nut, Ste-
 phanandra sp., Styrax sp., tamarix,
 bald cypress, yew, trumpet creeper,
 hemlock, Vaccinium sp., Wistaria sp.,
 prickly ash.

**OBSERVATIONS ON RESISTANT FRUITS AND
 PLANTS DESIRED.**

In New York, grapes, quinces, sour
 cherries, Kieffer pears, and the Field
 plum, are usually clean. Of the ap-
 ples, Russet and King have been
 found free of scale, though surrounded
 by badly infested trees of other varie-
 ties. The Northern Spy appears to be
 less resistant but seems to be less
 commonly infested than Greening,
 Baldwin, and Ben Davis. Observa-
 tions of the occurrence of the scale
 and its effects on different varieties of
 fruits, shrubs, and ornamentals are
 desired.

**Spraying Mixtures for the San Jose
 Scale.**

CIRCULAR FROM THE NEW YORK AGRICUL-
 TURAL EXPERIMENT STATION, GE-
 NEVA, N. Y.

**TO CONTROL SCALE FRUIT-GROWERS MUST
 SPRAY.**

This destructive pest is rapidly
 spreading into the leading fruit-grow-
 ing sections of New York. In locali-
 ties where well established, annual
 spraying for the scale is practised by
 the more progressive fruit-growers.
 There is no reason why fruit can not
 be grown profitably by the careful
 management of orchards and the in-
 telligent use of known remedies.
 Trees that are neglected or carelessly
 sprayed soon cease to bear profitable
 yields and die prematurely.

SOME HELPS TO SCALE PROBLEM.

In setting out new orchards, espe-
 cially in localities free of scale, plant
 only clean stock. Purchase trees only
 of responsible nurserymen. Become
 familiar with the appearance the
 scale, and watch trees closely for the
 first evidence of the pest. If suspi-
 cious bark is found, have the trees
 examined by the State inspector of
 the district, for there is much saving
 of time and money by the prompt
 treatment of the scale. In choosing a
 spray, select one of the remedies that
 are being used successfully by the
 progressive fruit-growers in your com-
 munity. Avoid untried sprays, except
 for experimental purposes on a few
 trees. Spray only profitable trees and
 remove trees that are past their prime
 or give little promise of yielding pay-
 ing crops. To facilitate spraying op-
 erations, plant only low-headed trees
 and prune systematically to keep the
 trees compact and even in size. In
 orchards too closely planted, remove
 enough trees to permit needed spray-
 ing operations. After failures to con-
 trol the scale in old apple orchards,
 top the trees gradually to reduce their
 height. Paint all wounds to assist
 healing processes. In applying the
 sprays make thorough applications so
 that the entire bark is wet by the li-
 quid.

THE BOILED LIME-SULFUR WASH.

Lump lime 20 pounds, sulfur 15
 pounds, water 50 gallons. Slake the
 lime with hot water and make a thin
 whitewash. Stir in the sulfur and boil
 mixture one hour. Add water to make
 the required amount of wash and
 strain the wash through a fine brass
 wire strainer into the spraying tank.
 Applications should be made while the
 wash is warm. Flowers of sulfur, and
 light and heavy sulfur may be used.
 This is the best spray for the average
 orchardist, and is especially recom-
 mended for the treatment of the scale
 and leaf-curl, the application being
 made as early as possible in the
 spring. Sulfur washes injure foliage
 and should only be applied to dormant
 trees.

COMMERCIAL MISCIBLE OILS.

A number of these proprietary oil

**How Good Food may
 Turn to Poison.**

DECAY is not digestion, you know,
 even when it takes place in the
 stomach.

Food decayed in the body
 after being eaten is as dangerous to health
 as food decayed before being eaten.

Food nourishes or poisons, just accord-
 ing to how long it remains in the Bowels
 undigested.

Most of the Digestion occurs in the
 thirty feet of intestines.

They are lined with a set of little
 mouths, that squeeze Digestive Juices into
 the Food eaten.

The Intestines are also lined with millio-
 ns of little suction pumps, that draw the Nutri-
 ment from Food, as it passes them in going
 through.

But, when the Bowel-Muscles are weak,
 the Food moves too slowly to stimulate
 the little Gastric Mouths and there is no
 flow or too little flow of Digestive Juice,
 to change the food into nourishment.

Then, the food decays in the Bowels,
 and the little suction pumps draw Poison
 from the decayed Food, into the blood, in-
 stead of the Nutrition they should have
 drawn.

Now, Cascarets contain the only com-
 bination of drugs that Stimulates these
 Muscles of the Bowels and Intestines just
 as a Cold Bath, or open-air Exercise, stimu-
 lates a Lazy Man.

Cascarets therefore act like Exercise.
 They produce the same sort of Natural
 result that a Six Mile walk in the country
 would produce without any injurious Chem-
 ical effect.

The Vest Pocket Cascaret Box is sold
 by all Druggists at Ten Cents.

Be sure you get the genuine, made only
 by the Sterling Remedy Company, and
 never sold in bulk. Every tablet stamped
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emulsions, known as Scalecide and Kill-o-Scale, etc., are now on the market. These sprays are simple to prepare for use, and are convenient preparations for the treatment of odd trees and small orchards. Spray in the spring as the buds are swelling, during a period of clear weather, using one part of the miscible oil to ten or fifteen parts of water. If the base of the new growth should, during the summer, show quite a little infestation, then spray again in the fall as soon as the majority of leaves have fallen.

CRUDE PETROLEUM.

Most efficient spray on scale but dangerous if used in excess on trees. Apply clear petroleum on old apples only on a sunny day as buds swell; and stop spraying when oil commences to run on bark. Only nozzles with fine aperture should be used. Resort to oil treatment for apples only advised after failure to control scale by sulfur wash.

HOME-MADE OIL EMULSIONS.

Dissolve one-half pound of soap in one gallon of boiling water. Remove vessel from near stove and add two gallons of kerosene. Pump mixture continuously through a spray pump until a creamy mass is formed. For a mixture containing 10 per cent dilute oil stock material with 17 gallons of water, and for a mixture containing 25 per cent oil, dilute with 5 gallons of water. The 10 per cent mixture may be used as a summer spray to check breeding of the scale, while the 25 per cent oil emulsion should be applied to dormant trees.

Crude oil emulsion may be prepared in the same manner by adding one-quarter point liquid carbolic acid (100 per cent straw color) to the boiling water, after which the crude oil should be added and emulsified. The 25 per cent crude petroleum emulsion may be used for the treatment of trees as buds are swelling.

Fruit in Lincoln County.

EDITOR KANSAS FARMER:—A correspondent inquired through your paper what to do with apples that continued to fall off. Some one answered him, saying the trouble with the apples was that they were not the right kind for Kansas.

My apples are continually falling off. Will you kindly tell me some varieties of apples, both early and late, that will do well in Lincoln County, Kansas? I would also like to know three or four kinds of peaches that will ripen one after the other, and are adapted to this section of the State.

Lincoln County. OLE NIELSON.

The following list gives a succession of reliable sorts:

Apples: Early Harvest, Red June, Chenango Strawberry, Maiden Blush, Jonathan, Grimes's Golden, Winesap, Missouri Pippin, Ben Davis, Gilpin.
Peaches: Greensboro, Champion, Alberta, Crosby, Salway, Heath Cling.

Report of the Official Entomologist for the Year 1906.

PROF. E. A. POPE NOE BEFORE THE KANSAS STATE HORTICULTURAL SOCIETY.

I have had unusual opportunity for orchard examination during the season past, arising from my inspection of fruit plantations in connection with the search for dangerous insects with which I am charged as entomologist of the State Agricultural Experiment Station; and while my investigation has not resulted in the discovery of any important pest out of the common ones, excepting in the case of the San Jose scale, noted later in this report, has placed me in possession of data that should be of interest to this society, which I wish to offer in the present connection.

As many of my orchard visits were made at the time that the crop was well in sight, or was being harvested, attention was forcibly called to the condition of fruit and tree with respect to injury due to the usual enemies, scab, black rot, codling moth, curculio, and various leaf feeding insects, and I have been much disappointed to find that there are yet so many orchardists that have not given attention to well established methods of the prevention of the work of these

and similar enemies to good fruit and remunerative prices.

By way of a preliminary statement of conclusions, I will say that everywhere the intelligent use of proper preventive means has brought ample success, and the failure to employ such means has brought unsalable fruit and disappointment in the business. And this difference has not been partial, but has been so decided that it seems impossible that there should remain men who read the abundant output of the horticultural press to so little advantage as do those who fall or decline to get good apples. If the proposition were still in the experimental stage, this indifference might be excusable, but it is quite the contrary.

The factors of poor health and little profit that have been most noticeable in Kansas orchards are several: Wrong position, or situation; poor soil; poor culture, and weeds; close planting, with non-pruning; insects, (codling moth, curculio, leaf caterpillars), and fungus diseases, (scab, black rot).

Wrong position is apparently a cause of failure in few cases. Orchards on high ground, or on low ground, in most cases succeed alike, if the situation has regard to the local conditions, especially those where the relation of high to lower ground is noted. In a few cases, orchards on low grounds surrounded by hills have proven unprofitable in spite of good soil and culture, through their susceptibility to late frosts. Such cases are not very common, as experience with other crops has apparently taught the planter to avoid this obvious danger. In a few cases, however, the distinction has been well marked within the same orchard situated on rolling land.

The drawback of poor soil is one not commonly found in the fruit regions of Kansas, where most soils are well adapted to the growth of the apple, and other tree-fruits. Most orchards, therefore, show a growth and character of tree that leaves little to be desired, and it has been rare, in my experience, to find soil alone the cause of ill success in fruit-growing.

Certain localities in the southeast, south-central, and central counties have thin soils of stiff, lifeless character that renders the distinctly unfit for orcharding. In some localities where orchards are planted with little profit, the soil is not deep, and it too closely underlaid with rock to permit of full healthy growth, or to enable the tree to resist occasional drouth. This defect is relatively so rare, however, that its extended consideration here is not necessary.

Poor culture is the occasion of more frequent trouble. The evidently prevalent opinion that the fruit-tree, because it is a tree, needs no more attention to cultivation than does the roadside elm, is one that can not be too strongly or too insistently combated, if marketable fruit is the object of the planter. Fruit, it is true, is produced under non-cultivation, but too much of it is that class of fruit that gives rise to the notion that the apple business is overdone, that is apple years the market is glutted, that orcharding does not pay, and similar delusions.

By culture no special system is meant, but some system must be adopted by each orchardist if success is to be attained. The method must be selected after a study of the particular soil and situation of the orchard. In the extensive orchards of Reno County, the long-continued use of the cultivator has been found to bring trouble because the light, sandy soil, when kept clean of growth, under the hot summer sun, reflects the heat to such a degree as to injure leaves and fruit. The mode of treatment under such conditions must therefore provide a permanent soil-cover to obviate this danger. In the absence of large or tenacious perennial weeds this is accomplished by the constant use of the mower, the cut herbage remaining on the ground as a mulch and source of humus. The health of some of the most profitable orchards in that region attests the logic of this treatment.

In another famous group of orchards, near Parker, some of the



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healthiest trees are found where the owner had followed level surface-culture till bearing time, and had then seeded the clay soil to red clover. This herbage, when established, was mowed regularly in season, and generally left lying on the ground, for the reason apparently that the stand was only moderate and hay was not considered the main crop. But in this orchard it was noted that the owner grazed both sheep and dehorned cattle, as he claimed with great advantage and with no appreciable injury. The condition of the orchard in general was to all appearance very satisfactory and the crop was all that could be desired.

In most orchards the mower seems to be in favor as an implement of orchard culture, and while on level ground I am convinced that the disk or cultivator is far better as a rule, it must be accepted that the use of the mower is greatly superior to no cultivation at all.

One of the most discouraging orchards that it has been my fortune to see is not far from Troy, where the soil and situation is ideal, as attested by the general tree-growth in neighboring plantations. In this orchard of 6 or 7 years of age, red clover is grown for seed. Through the work of pocket gophers the stand of clover was very poor, and permanent weeds had taken hold. The herbage growth had thus attained considerable mass and variety each summer before moving, with the result of greatly diminished tree-growth, and the encouragement to the greatest possible degree of the dangerous buffalo treehopper, which had fairly riddled the trees with egg-punctures. The condition of this orchard of forty acres was such that its ill health was evident at a distance. In such a case, complete recovery may easily be had by open culture until more age is attained by the trees, though owing to the slope of the land, and the danger of washing the soil should be bound by some favorable grass as soon as permissible.

I have seen a few orchards where the moderate pasturing of hogs was practised, and while such a method has its obvious disadvantages, I do not believe it the worst treatment to which an orchard may be subjected, and it as some enthusiastic advocates. There can be no question as to the influence of this method in reducing the sum total of insects, and windfalls are certainly good hog feed. The added fertility of the soil is also a good not to be overlooked. The objections to using the orchard as a hog pasture are some of them aesthetic, but they will none the less have their due weight with most fruit-growers.

The least defensible system of orchard treatment seems to me to be the complete let-alone system. I do not believe that it is wise to disregard so completely the requirements of neatness, practical conditions aside, as to allow the orchard ground to grow up without hindrance as a weed and brush thicket. Where sunflowers, horseweeds and sumac of two or more generations are all summer long as high as the trees it seems like an insult to the sensitive natures of brothers Jonathan and Grimes, as well as an evident encouragement to all the rusts, scabs, curculio, and other pests who seek darkness rather than light because their deeds are evil. I am glad to have seen that this mode of orchard culture has little advocacy, and I believe we are witnessing its decline.

Close planting is evidently another source of discouragement in orcharding. I have seen 160 acres of apple orchard where the trees set 20 feet apart and now about 20 years old, without pruning or training of any sort, form an impenetrable thicket. No treatment of tree or fruit is possible in this orchard. Fortunately there were no apples to gather, as it would have been impossible to get into the orchard with a wagon to haul them out. The tree growth in this orchard is certainly sufficient for any requirement. It can not be that the soil is lacking, yet it is absolutely unprofitable. Double the space between the trees, and treat the orchard as de-

manded by the conclusive experience of successful apple-growers and the owner should be making good money out of his plantation. But he now offers to lease at \$2.50 per acre, a high price to pay for the crop on the trees when I saw them.

A mile south of Sterling is a 40-acre apple orchard set 24 feet apart, the trees now being 20 years of age. Profitless to its former owner, this orchard changed hands three years ago, greatly to its advantage. The new owner started in to prune out the excess of wood, and most of us would think the life of the orchard endangered by the severe pruning it had received. However, it is now possible to get between the trees with a power sprayer, and the treatment has from the first seemed to import new life and vigor to the trees, while the good crops of salable fruit which the orchard has since exhibited have convinced the owner at least of the propriety of this method. It may be assumed however, that no system of pruning can offset the final disadvantage of too close orchard planting. It is practically certain that the alternate trees will not be removed in time, however conscientiously such removal is planned.

Much less objectionable is the method of close-planting in the row one way, which does indeed permit of most orchard operations after the trees are full grown, but I think that the conviction is growing among orchardists that even this method has its positive disadvantages. In estimating the true value of this method, allowance must be made for local conditions with regard to sun and wind, exposure to which in some places is as beneficial as it is injurious in others.

It has been the dogma of Kansas horticulturists for years that there is little need of pruning under the conditions of growth and environment in our apple growing regions. I believe that this is still true in large degree, if we are to choose between the severe formative pruning advised in the old text books by eastern writers, and the let-alone method. But observation upon the result of the two methods has forced me to adopt a middle ground, and to conclude that the proper standpoint with regard to pruning must be gained by the observant orchardist through a close and logical study of conditions in his own region, or perhaps even in his own orchard, each for himself. I am convinced that the non-pruning system, carried out literally, leads to grief, as thoroughly as does the method of the tree butcher. I note, however, that those orchardists who are unwilling to get something for nothing in the way of a fruit crop, are getting into the habit of pruning to the extent unmistakably indicated by their conditions, to the great advantage of their plantations in beauty, convenience, and both quantity and quality of fruit. Thus one orchardist has rejuvenated his forty-acre orchard by a severe heading up, or cutting out of lower branches on trees in their decline of life under the reverse treatment. Another, whose financial success, in which he is alone in his locality, puts the stamp of approval on his methods, practises a severe shortening-in which makes, so far at least, wholly for good in the quality and quantity of marketable product, as well as for convenience in orchard operations. Others, and there are several extensive orchardists in this class, are getting better prices for their fruit because of the smooth surface and high color secured by annual attention to the thinning out of the dense lower portions of the tree head.

That all of these have struck a proper method in their several circumstances is evidenced positively by their on results, and, under comparison, by the failure in some degree of numerous orchards, even in their own localities, where a strict non-interference with tree-growth is the established method.

INSECTS.

Coming now to those considerations that may seem more legitimately a subject of discussion in the report of

your entomologist, it is a cause of extreme regret that so many are yet uninformed or are unconvinced as to the advantage of modern methods of warfare on insect and fungus tree pests. I am satisfied that if the balance sheets could be published showing the returns of growers that I might specify in Reno, Morris, and Linn Counties, for example, in comparison with some that I might specify in Doniphan, Crawford, and Shawnee Counties, for example, that there would remain little need of argument. Those in the former group are instances of that class of men who do not fear a glut in the apple market because they are really not in competition with those who suffer from the low prices consequent on a full crop of fruit of the character that causes the glut. Their fruit, abundant, of fine size and color, thoroughly matured, and free from blemish, commands a good price in the market, whatever the crop. While that of their less energetic neighbors, though equally abundant, lacks in all the other qualities, and they are thus little better off in years of a full crop than they are in years of failure.

There are many apparently profitless efforts honestly put forth in the line of insect control, the failure under which is especially to be deprecated because of the unfortunate diminution of faith in the process. It is not unusual to hear man declare that after trial they have "lost all confidence in spraying," with no very good idea as to what may be included properly under that very broad term. Spraying is a handy and almost perfect mode of application of certain tree medicines of indispensible value. Arsenic will kill the apple worm, or the canker worm, or the tent caterpillar, or the potato beetle, or the grasshopper. Copper salts will protect the leaves and fruit against the spores of the destructive rots, scabs, and rusts. Is there any one so hardy as to deny these two propositions? Unfortunately there is still now and then one, yet their truth is as well attested as that manures on poor soils make plants grow more strongly.

The reasons for the failures of orchardists to gain success and consequent encouragement in their work in spraying, after giving the method as they think a fair trial, are not in all cases to be discovered. In many instances, however, I have been able to find the cause in wrong methods, in the lack of the requisite care in preparation, and in ignorance of fundamental facts, either defect being sufficient to render futile the application, though undertaken with the best of intentions.

It is undeniable that satisfactory results are much more apt to follow in the operation of an adequate machine, than in the use of a sprayer of insufficient capacity and delivery. A power-sprayer is more likely to bring success in the work than one operated by hand, for the reason that it does not tire, and proves more certain as a supply of the needed force. The operation of a hand spray pump is never too well done, especially in the hands of some one beside the owner of the trees; while the same opportunity for inadequate service is not present where an engine does the work. In the commercial orchard the hand sprayer certainly has no place.

While the preparation of the spraying machine mixtures should offer no difficulty to one naturally careful, and capable of reading clearly the readily available instructions for the work, it is yet true that careless hands will bungle even such simple directions as those under consideration. I asked one of the helpers of an orchardist whose voice was lifted against the use of Bordeaux mixture how his employer made the mixture, and was informed that after dissolving the bluestone in water, he took a piece of stone lime as large as he thought right and slacked it in a pailful of the bluestone solution, calling the mixture "Bordeaux." Under such careless methods it is not strange that disappointment should be the only result. Similar difficulty underlies many failures. When we shall have persuaded such operators to fol-

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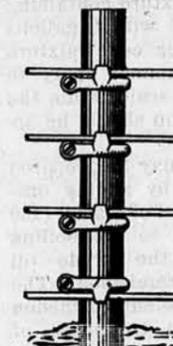
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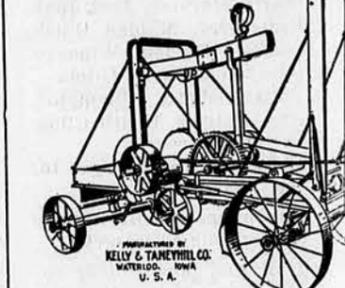


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ow direction much of the trouble with spraying will vanish. Too frequently there may still be found those who do not know that however excellent a certain combination may be against the enemies of a certain class, it may have no value whatever against those of another. Thus it occurs that the aid of "Bordeaux mixture" is invoked against the codling moth or the canker worm, or that of an arsenite against the fungus diseases of the tree. Yet the operator is persuaded that he has "sprayed," and that the practise is not only extensive but is also useless. Such experiences are still so numerous as to warrant a continual repetition of the first principles of proper spraying methods in our horticultural publications.

THE SAN JOSE SCALE IN KANSAS.

As most of the members of this Society are aware, since the date of my last report the San Jose scale has been discovered in our State under conditions which make it necessary that we recognize the established presence of this formidable pest among our plantations, and no longer rest in the complacent belief that we are specially exempt from the dangers of its spread.

The most important infestation is at Dodge City, where it was discovered through the horticultural interest of Mr. B. S. Williams, a resident of the city, who, becoming aware of the diseased condition of the fruit trees growing on his own grounds and those of his neighbors, sent to the Horticultural Department of the Experiment Station a twig, covered with what he thought to be a destructive fungus. The specimen was referred, on receipt, to the Department of Entomology, and the determination of the supposed fungus as the true San Jose scale on our part was later confirmed by Dr. Howard of the U. S. Department of Entomology at Washington, on the basis of specimens forwarded to him for examination.

As soon as the true nature of the attack was assured, the writer made a visit to Dodge City to determine the extent and conditions of the infestation. An examination of the locality showed several apple trees of ten years of age thickly incrustated with the insect, and in most of the residence lots of the city in that quarter the condition was the same, the fruit trees of all sorts showing the insect to be present in greater or minor abundance. Here and there was noted a tree of the apple, pear, or peach so thoroughly attacked that it was dead or dying, while others showed the presence of the scale in smaller quantities, permitting the relief of the trees if prompt measures were then taken for the destruction of the pest. Beside the sorts of fruit trees above named, inspection showed the following to be more or less infested: Native and cultivated plums of all varieties, the apricot, the plumcot, the grape, the currant, cherries of several horticultural groups, roses of several species; and among ornamental or shade trees the osage orange, the Russian mulberry, and in one case a small tree of the Carolina poplar or cottonwood.

So far as ascertained the scale did not occur on box-elder, black locust, honey locust, elm, althea, the honey-suckles, spiraea or Virginia creeper, though plants of these sorts, among others, were growing among or near infested fruit trees. On the whole, however, the infestation was as serious as might be feared anywhere, including within the limits of the area about dozen blocks in Ward 2 of the city, with scattered cases outside this general section. An attempt was made to locate the site of the original infestation, but without result, owing to the general and even distribution of the insect within the area indicated. It was found that suspicion could not be placed with likelihood of proof upon any nursery, as the trees have been largely purchased from agents, and the places where they were grown are not known originally, or were on record.



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If, after you have used that much of my paint, you are not perfectly satisfied with it in

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have not seen this insect, it may be described as a small sap-sucking louse or mite, active when first born, but seen becoming immovable on the bark, leaf, or fruit, and secreting then a flattened protective scale over its body, losing at the same time its more obvious insect structure, devoting its energies thereafter to feeding on the sap of the plant, and producing young in great numbers. In cases where the scale lice are in moderate numbers, they will occur in small colonies or groups, or scattered singly over the bark, presenting then no striking mark to the vision unless one is looking closely for them. When scattered in this manner on light colored bark or other green tissue, there is generally visible a somewhat reddened area about each insect on the surface of the plant, a feature which leads to their more ready recognition. The adult females are the largest scales, slightly irregular in their convexity, of a dull gray or lighter color, with a distinct boss or center of a different color and appearance. Young scales, also abundant at any season, are smaller, more distinctly circular, and of a darker color, often nearly black. All sizes occur together in the clusters, frequently so crowded that the true color of the bark is not visible for the scurfy covering consisting of the numerous insects.

In May, and at intervals thereafter, the females give birth to young, and these travel over the bark in search of unoccupied spaces, which they occupy and then begin the secretion of the protecting scale as above. With several indeterminate broods each season, the new growth is occupied almost as fast as made, and the tree is not able to outgrow its enemy. The injury to the plant is done by the abstraction of the sap from all its parts by the thousands of beaks throughout the entire growing season.

Owing to the form and feeding habits of the scale lice, the affective agents in their destruction are practically limited to the various washes and sprays that act as contact poisons or corrosives. Among these are crude petroleum, coal-oil, resin washes, and combinations of lime and sulfur among others. Several of these are open to the objection that while destructive to the insects they are also more or less likely to injure the tree. Others can not be relied upon to kill the insects in all stages, necessitating the frequent repetition of the treatment. If the trees are in leaf, perhaps as satisfactory a treatment as any is the application of a spray of moderately strong kerosene emulsion, previously preparing the trees by pruning off all that can be spared of the branches, to reduce the surface to be operated on. The application of this spray should be several times repeated during the spring and summer. This treatment will not be completely effective, but will serve as a temporary check to the spread of the young scales, until the winter treatment can be undertaken. This winter treatment, undertaken in mild weather any time during the dormant season of the tree, consists of a thorough wash or spray of the lime-

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sulfur-salt mixture found so satisfactory in Eastern orchards.

The presence of this serious pest in Kansas orchards, in several widely different localities, should warn us that our State should be no longer without the protection of an effective inspection and quarantine law controlling the sale and shipment of trees and nursery stock likely to transport this dangerous insect, and providing for the inspection of orchards generally, over the State.

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CONDUCTED BY RUTH COWGILL.

Coburn.

All hail the poet Coburn
Who scorns to write in rhyme,
And gives us some new epics
Divorced from tune and lime.

His numbers are idyllic,
His tropes and similes
Are like the dreamy music
Of summer birds and bees.

His pastorals are pleasing
And breathe of tith and toll;
His metaphors are fragrant
With odors of the soil.

He sings of King Alfalfa,
The Kansas cow and steer;
He sings of hogs and horses,
And proud old chanticleer.

He tells the thrilling story
Of wheat and corn to burn,
Of Kafir-corn and sorghum,
And other things in turn.

Then takes a new departure
And in a merry sport
Indicts the weather croakers
And hales them into court.

The men who see a blizzard
In every fall of snow;
The men who rear of sizzards
When summer breezes blow,

The men who slander Kansas
When any bit of drouth
Comes creeping up from Texas
Or some place further south,

The men who see disaster
And ruin in the floods
That start the apple blossoms
And wake the sleeping buds;

The men who prate of cyclones
When some delightful breeze
Comes dancing through the cornfields,
To kiss the greening trees.

Then with a merry twinkle
In his poetic eye,
He hints at some resources
That we might safely try.

If found too dry for farming,
We need not call a halt,
We have some beds of gypsum,
A pinch or two of salt,

A little lead and spelter,
Some stucco and cement,
Some coins held by the bankers
Unloaned, unlost, unspent,

And if too wet for farming,
We still would have some grass,
A little coal and cordwood,
A little oil and gas.

And if the trusts should pinch us,
We still need not repine,
For Lansing might hand over
Some bricks and binding twine.

To prove that here in Kansas
Beside the helpful hen
We have a large contingent
Of very helpful men.

So let us still have courage,
Nor say our lot is hard,
And fill each foaming bumper,
For our good Kansas bard.

A stoup of sack for Coburn,
And lest we should forget,
And go about complaining
That it's too dry or wet,

Let's chloroform the croakers,
And Coburnize the crowd,
And sing his Kansas anthems,
And sing them long and loud!

—Henry W. Roby.

Borrowing.

The advice of Polonices to his son, in Shakespeare's Hamlet, "Neither a borrower nor a lender be," savors a little of selfishness and exclusiveness. To know that one has a neighbor to whom one may go for something in an extremity and feel welcome is a satisfaction. It increases the feeling of neighborliness and brotherly love. But to take advantage of this kindness and through thoughtlessness, indolence, or lack of proper foresight to neglect to provide the needs, and depend upon the neighbors to furnish them, is to make oneself a nuisance to the neighborhood—make one slothful and rob one of all self-dependence, "For loan oft loses both itself and friend, and borrowing dulls the edge of husbandry."

To him who would borrow of you, hand out—generously and heartily—but never borrow except in emergencies. Sometimes, in sickness, or in case of accidents it is necessary. Something may be unexpectedly needed—something about the farm machinery may break or give out that would greatly delay the work—then it is gratifying to know that your neighbor will gladly and without grudge let you have the needed article. Show your appreciation by taking the best of care of it and return it promptly and in good condition.

Consideration for others should mark all our actions and dealing. To fall to provide for our own needs and depend upon the neighbors for them is to shirk. Some people are always borrowing anything their neighbor has and they have not—from a shoestring to an automobile. Such people are the ones who never return the borrowed articles, and are the ones whom the neighborhood are glad to see move out. In borrowing or lending remember the golden rule.

I am reminded of a story I heard told about Mark Twain. He disliked very much to loan his books. Books are so frequently lost by loaning and few people like to loan them. They are like friends, and one would almost as soon part with a friend as a beloved book. Mark Twain had a neighbor who had a tendency to borrow whatever he took a fancy to and was not always careful to return promptly. This man asked the loan of one of his books, to which the humorist replied, "You are welcome to the book but I never let my books leave the house." Some time after Mark Twain asked this neighbor to let him borrow his lawnmower. "Certainly," he replied, "but I do not like to have it taken out of the yard."

There are some things which one should never borrow—a tooth brush, a comb and hairbrush, and trouble. This last-named thing is something one does not want but is most often borrowed. Some people have very little trouble except what they borrow, but they keep themselves miserable all the time by borrowing it. If the weather is warm and pleasant, they are sure it is only a weather breeder and that it will be followed by a cold snap which will kill all the fruit. If it rains, they fear a flood and a corn-crop failure; if it does not rain for a while, a drouth is in sight; if times are prosperous, it is only a forerunner of a financial crisis. They are afraid of an epidemic of disease; of cyclones, and of comets; and thus they go through life, missing its joys because all their time is taken in worrying about the things that might happen.

A Red, White, and Blue Design.

EVELYN PRINCE CAHOON, CHANUTE, KANS.

Where is your patriotism?

Why not symbolize it by having a red, white, and blue flower bed as a certain Grand Army man has.

A walk leading to a pleasant seat in the garden is bordered on one side by an old-fashioned "ribbon bed," as they used to be called—that is a border in stripes, each stripe a distinct, low-growing flower.

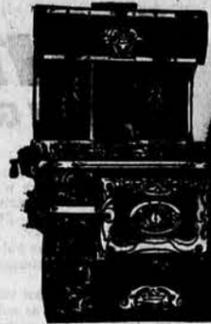
The thing to be careful of is that the plants grow to equal height and blossom at the same time. Plant a border of blue lobelia which you have previously started in the house. Let the next row be white alyssum which you plant in the open ground. The third row should if possible be red phlox, but you must start it in the house in order to have it in bloom in time. If you can not count on phlox of the distinct red color, of course red geraniums can be used, but you get no such mass of red as you do with the phlox. Red portulacca will do.

Don't hesitate to use the shears every day or two so as to keep the surface and the lines even.

At the end of the walk is a seat under an arch of blue and white morning-glories (there might also be red ones). Before the seat is a circular bed. (It would have been prettier if a star of red, white, and blue.)

It is six feet across. A mass of scarlet salvia three feet in diameter is in the center. Around this are white candytuft and white petunias covering the whole bed except the low-growing border of blue lobelia.

To make a star bed a circle of the



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desired diameter should have been drawn by driving a stake in the ground at the middle point of the bed, fastening a cord loosely to it with a marker fastened on it just far enough away to mark around this center a circle of the right size.

Having gotten the circle, a piece of twine long as its circumference should be divided into five parts. With this as a measure, mark off the circumference into five parts. At each mark will be a point of the star.

Lines drawn between alternate points will complete the star.

Pansy Culture.

The bright little pansy face which greets one from its flower bed is a flower loved by all. It is called "Heart's Ease" and is only the big sister of the humble little violet. It is wise to buy only the best seeds, for there is a vast difference between the fine and hybrid species. It is best to start pansies in the house, and this is how one woman starts her young plants, and they are always large and beautiful. She bakes the dirt in the oven, which kills all the weed-seeds and tiny bugs in the soil. Then this is sieved, mixed with sand, then shallow cigar boxes are filled with the mixture. Pansy-seeds are sown, but in this case it is best to cover them slightly with the soft earth and moisten slightly by absorption from the bottom of the box or the seeds may all sprout in one place. As they grow and develop, select only the strongest for the flower beds. To make pansies flourish they should be sheltered from all but the morning sun, blossoms must be picked each day, for it is earnest in propagating its own species. They like moderately rich garden soil, and repay any kindness shown them in beautiful flowers which blossom until the untimely kiss of Jack Frost kills them.—Woman's Daily.

Why the Trick Failed.

A conjuror was exhibiting in Nashville, and prepared in the usual way for the well-known trick of passing a marked coin into the center of an uncut orange.

He found an intelligent urchin, and promised to pass him into the show provided he agreed to come on the stage at a given signal. Of course the urchin assented. The boy was provided with a marked dollar, and when the curtain rose he was in the front row.

The Professor proceeded to borrow a dollar in the audience, marked it similarly to the one in the urchin's pocket, and, after some flourishes, passed it into the orange, from which he extracted it.

"Now," he said, "I'm going to ask some member of the audience to step on the stage, and then I'll pass the dollar into his pocket without going near him."

The youngster stepped up; the conjuror made the usual flourishes: "Now, my boy," he said, "put your hand in your right-hand trousers pocket and give me the dollar."

The lad looked sheepish, but he dived his fist down. Then, to the horror of Hertz, he produced a handful of silver and said: "I've only got ninety cents of it left, sir."

Correction.

In last week's KANSAS FARMER the name of the writer of the story for the Little Ones was omitted. It was written by Mrs. A. D. Gray, who is writing a series of nature stories for this column.

In the club program the author of "Sonny" is given as Ruth McHenry, and should be Ruth McHenry Stuart.

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The Young Folks

The Comet.

He Comet! He is on his way,
And singing as he flies;
The whizzing planets shrink before
The specter of the skies;
Oh! well may regal orbs burn blue,
And satellites turn pale,
Ten million cubic miles of head,
Ten billion leagues of tail!

On by whistling spheres of light
He flashes and he flames;
He turns not to the left nor right,
He asks them not their names;
He spurns from his demoniac heel—
Away, away they fly,
Where darkness might be bottled up
And sold for "Tyrian dye."

And what would happen to the land,
And how would look the sea,
In the bearded devil's path
Our earth should chance to be?
All hot and high the sea would boil,
Full red the forests gleam;
Thought I saw and heard it all
In a dyspeptic dream!

Saw a tutor take his tube
The Comet's course to spy;
Heard a scream—the gathered rays
Had staved the tutor's eye;
Saw a fort—the soldiers all
Were armed with goggles green;
The cracked the guns! whizz! flew the
balls!
Bang went the magazine!

Saw a poet dip a scroll
Each moment in a tub,
Read upon the warping back,
"The Dream of Beelzebub;"
He could not see his verses burn,
Although his brain was fried,
And ever and anon he bent
To wet them as they dried.

Saw the scalding pitch roll down
The crackling, sweating pines,
And streams of smoke, like water-
spouts,
Burst through the rumbling mines;
Asked the firemen why they made
Such noise about the town;
They answered not—but all the while
The brakes went up and down.

Saw a roasting pullet sit
Upon a baking egg;
Saw a cripple scorch his hand
Extinguishing his leg;
Saw nine geese upon the wing
Towards the frozen pole,
And every mother's gosling fell
Crisped to a crackling coal.

Saw the ox that browsed the grass
Write in the blistering rays,
The herbage in his shrinking jaws
Was all a fiery blaze;
Saw huge fishes, boiled to rags,
Bob through the bubbling brine;
And thoughts of supper crossed my
soul;
I had been rash at mine.

Strange sights! strange sounds! O fear-
ful dream!
Its memory haunts me still,
The steaming sea, the crimson glare,
That wreathed each wooded hill;
Fanger, if through thy reeling brain
Such midnight visions sweep,
Spare, spare, O, spare thine evening
meal,
And sweet shall be that sleep.

—Oliver Wendell Holmes.

Jack's Mother.

MARION SEWELL.

Although it was the first of March
The ground was covered deep with
snow, and a bitter, cold wind was
blowing.

The housewife, who was a great lov-
er of her feathered friends, hurried
rough her breakfast, and donning
her hood and cloak started out with bas-
ket on arm to give the turkeys, chick-
ens, and geese their morning meal.
Arriving at the barn she went from
the grain bin to another, for she be-
lieved in a balanced ration. The gran-
ary where oats were kept was the last
she visited, and upon opening the door
she noticed that the housewife was sur-
prised to hear faint chirping cries
which came from somewhere in the

interior darkness. Reaching a garden
rake from a nearby nail she carried
her investigation further, and brought
to light a white hen frantically trying
to shelter on the teeth of the moving
rake five very small and hungry
chicks. After one look at the helpless
family, the housewife gathered them
all into the folds of her ample apron,
and soon they were enjoying a com-
fortable meal in front of the small but
energetic stove in the old blacksmith
shop.

Of the five chickens, four were
black and one was perfectly white.
Their snowy mother, astonished at
her good fortune, walked proudly
about, picking at one tiny head and
then another, trying to assure herself
that she was not living in a dream.

But the cold days continued, and
there came no sign of spring. So in
spite of the fire in the little stove, and
in spite of biddy's protecting wings,
the baby chicks dropped off one by
one until only two remained, a black
and a white. The children called
them "brands from the burning," but
big brother Ross, who was a wit, said
they were "brands from the freezing."
Anyhow the poor downy balls clung
persistently to life, and when at last
spring did come they were ready to
go out into the sunshine, no longer
tender, insignificant things, but feath-
ered, bright-eyed, and eager, and their
white mother was justly proud of
them.

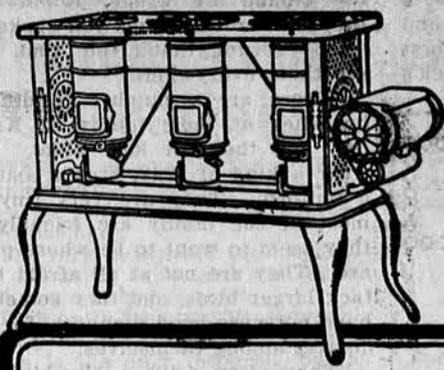
The children named them Jack and
Jill. After long discussion it was
agreed upon that the black chicken
would be Jack, the white one Jill.
The faithful biddy that meekly and
untiringly scratched for them was
called "the old white hen," as there
was no other fowl on the place with
plumage of the same color.

The happy pair of chicks continued
to grow and thrive, and each was
beautiful in its own way. The only
drawback to perfect satisfaction was
in regard to their names, for Jill
turned out to be a magnificent cock-
erel, and plump, top-knotted Jack was
the best-laying pullet in the henery.
It was too late to mend matters now,
so the two remained Jack and Jill.

While Jack and Jill were growing
up "the old white hen" overlooked
their diet and education, and even af-
ter they reached maturity she did not
cease her ministrations. She scratched
the hard places, selecting the fattest
bugs and worms for their daily menu.
She picked from trees and vines the
most luscious cherries and grapes and
fed them to her offspring, eating the
dried and wilted ones herself. And
best of all she instructed Jill in the
virtue of peace, for he was never
known to engage in combat, always
being able to find the high places on
the fences when matters appeared at
a crisis. She likewise taught him to
modulate his shrill crow, and he be-
came an ornament instead of a nu-
isance in the barnyard.

But alas! He was fated to die
young. When the cholera came
sweeping over chickendom poor Jill
was among the first to fall. After
that "the old white hen" seldom left
Jack's side. Jack, who had always
been a pet, followed members of the
family about the yard, and would even
come into the house in search of
crumbs, and "the old white hen," not-
ing this familiarity, grew gradually
tamer and tamer until one could hard-
ly walk for her constant attendance.
She became especially attached to big
brother Ross and would fly upon his
shoulders and look into his hands and
his pockets for bits of food which he
had provided for her. In due time she
became known only as "Jack's
mother."

One day about three years after the
advent of Jack and Jill, the housewife
was crossing the yard when her foot-
steps were arrested by sounds of con-
fusion among the swine. A race was
in progress; one long black hog was
considerably in advance of the others
and from the agitated way he was
pursued it appeared that he was car-
rying off some coveted prize. The
housewife caught sight of something
white in the hog's mouth and her
heart sank. Rushing to the scene of
action she dispersed the crowd, and



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came upon a pile of white feathers; a little further on lay the limp and gory carcass of a hen. Her worst fears were realized. It was "Jack's mother!"

The Little Ones

A Lonesome Child.

I wish I was not at home alone,
There's no one left to play,
Because the other boys have gone
To stay at school all day.
I followed them a little way,
To peep in at the door,
But teacher said I could not stay
'Cause I was only four.
I wish I could! I'd not be late
Like lots of little boys;
I'd rather have a sponge and slate
Than all my baby toys.
I'd love to sit and spell and write
And study 'rithmetic.
O dear, I guess I'll try my best
To grow up very quick!
—Alice Van Lee Carrick, in Youth's Companion.

The Downy Woodpecker.

ANNA DEMING GRAY.

It was almost two weeks before I went up into the woods again, but I had thought often of Robin. When I reached the place where I had first seen him, there he sat on the big log, his hands clasped about his knees, his head tipped sideways, listening, and looking with pride at the work he had just finished. On five different trees, he had nailed as high as he could reach, small starch boxes.

"It's gettin' to April," said Robin, "and I'm gettin' some houses ready for the bluebirds. And say—I'm goin' to school now—I've been in a week. And I know more things!"

"That's good," I said. "And what shall I tell you about this time?"

"Woodpeckers," said Robin, promptly. "There was one here just a second ago. And what do you think? I asked that teacher one day if we couldn't leave off the geog'fy lesson and all come up here, and learn somethin'. And she said, 'Nonsense, Robin! Get down to work, at once.' But I don't think much of her any way. She's got a whole bird on her hat. Yes, sir-ee, sewed on—head and all. It looks crazy—you ought to see it. G'won with your woodpeckers."

"Well, Robin, that happens to be a rather large family, in Kansas. There are six different kinds, I think it is, here. I'll tell you about the Downy woodpecker, because I think he is the most interesting, and we have not time for them all. He is the jolliest little fellow, and he works most of the time too. He is black above, with a white band down the back. There are two black stripes on the sides of his head. He is white beneath, and the two outer tail feathers are white, with bands of black at the ends. The male has a bright red top-knot.

"This kind are more friendly than some of the family, and do not seem much afraid of men. They like to get on old apple-trees, where insects have lodged their brood between the bark and the wood. Then they work hard for sometimes an hour at a time. The muscles of his neck are very strong and he can make a good deal of a racket for such a little fellow. He goes bobbing about, and pecking away, and every little while he gives his one note—'Chink!' 'Chink!'—which he repeats very often.

"He loves the orchard best, and no other bird drives away from the apple trees, so many harmful vermin, as this little Downy woodpecker. He makes his nest in the decaying limb of some tree.

Here he digs out a tiny, round hole, big enough to let his body in; then he digs down for a few inches, and his nest is made. The eggs are pure white.

"Gee! I wish I could say it off that way," said Robin. You know more than I thought you did at first. My sister Nan says that most likely you make it up as you go along. Do you?"

"No indeed, Robin, your sister Nan is wrong, for all I have told you, I read in a book, by a man named Goss. He knew more about Kansas birds, than any one else has known since."

"Those little fellows over there" on

the ground are wrens, Robin. Are they the 'browny' ones you spoke of?" "Yep—Yesum, that's the kind. You see them everywhere."

"There are a number of different branches of their family in Kansas too, and they all look alike. They wear a kind of gray, brown coat like a uniform. They are very tiny and most of the family are friendly, for they seem to want to be where people are. They are not at all afraid to attack larger birds, and they sometimes have not very good manners, for they quarrel among themselves.

"They often drive a blue-bird or a martin out of a box, and take the box for themselves. They go about together in large numbers. In the early part of the season, they sing their musical little song all day. Boxes should be put up for them, as early as March. They have from seven to nine eggs, of a pinkish white color."

"There's a kind of yellow and black bird up here," said Robin, "and gee! but he can sing too!"

"I know who he is," I said, "and I'll tell you about him to-morrow, if you'll come after school, and help me make my pansy bed."

"All right, sir!" said Robin, and he was off again, whistling, across the pasture.

How Japan Does It.

Japan owns its own railroads, or most of them, and they are operated for the public benefit.

Said Y. Kinoshita, traffic manager of these lines:

"Passenger rates, which are the same as on private roads, are based upon the distance traveled, according to the following table:

"Eight-tenths of a cent a mile, under 50 miles.

"Seven-tenths of a cent a mile, 50 to 100 miles.

"Six-tenths of a cent a mile, 100 to 200 miles.

"One-half cent a mile, 200 to 300 miles.

"Above 300 miles the rate is four-tenths of a cent a mile.

"Under Government ownership and operation of railroads we get much cheaper service in both freight and passenger traffic than you get in America, while in Japan it costs much more to construct railroads than in this country.

"The actual cost of construction and full equipment, including rolling stock, is about \$40,000 a mile in Japan. Yes, I know your roads are capitalized for over \$60,000 a mile, but more than half of that is what you call 'watered stock,' which is based on the ability to demand high rates, and not on the actual cost of construction and operation.

"Japan is a mountainous country, making the cost of railroad construction much greater than here, but with all our steep grades, costly bridges, cuts and tunnels our roads, including equipment, cost only about \$40,000 a mile.

"We also have cheaper freight rates than in America. The average freight rate in Japan, nearly all hauls being what you would term short hauls, is about 1 cent a mile for a ton of merchandise.

"There is no such thing as 'watered stock' in the railroads of Japan. The Government would not permit it under any circumstances. The passenger and freight rates are fixed to return a reasonable rate upon the cost of construction and maintenance, the Government roads and private roads as well earning from 7 to 8 per cent.

"The Government issued 4 and 5 per cent bonds, which were sold on the market at par. With this money the Government roads were constructed. As the roads earn from 7 to 8 per cent they will soon pay for themselves."

This, remember, is in Japan, commonly regarded as a half-civilized country.

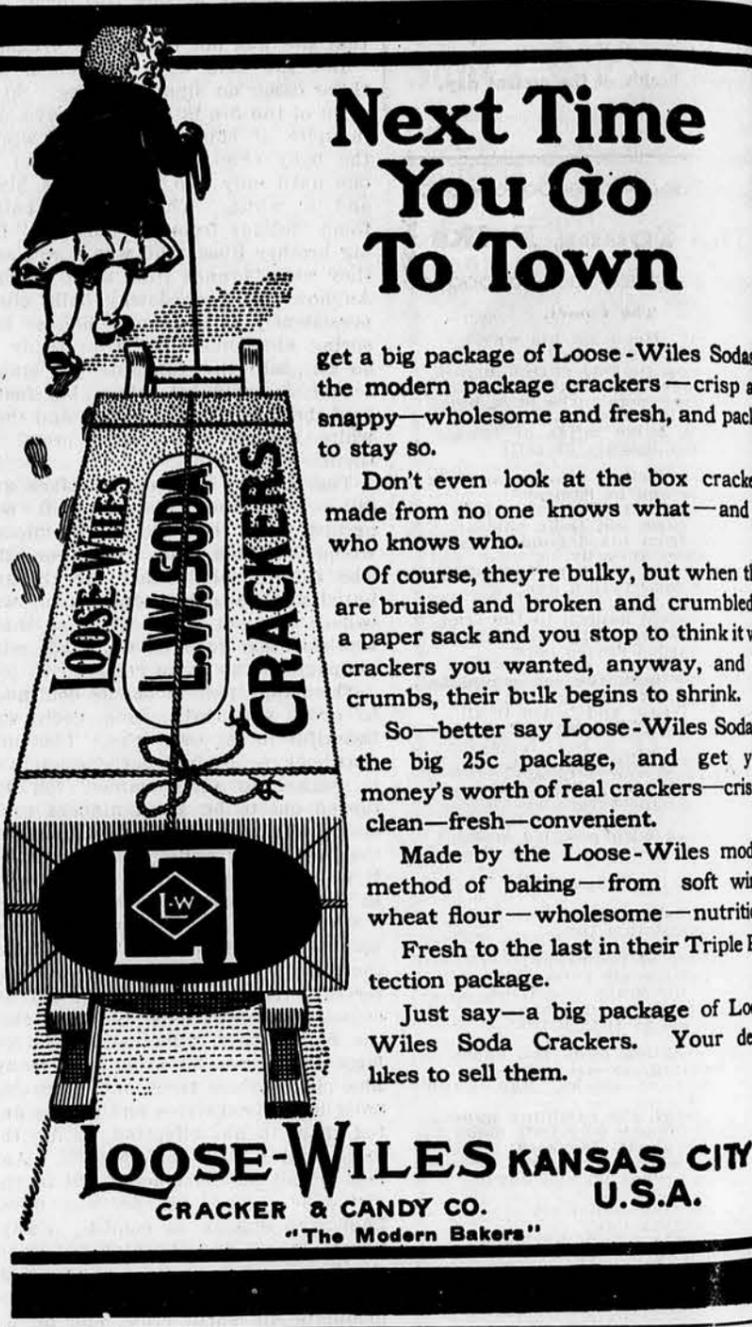
Here we are overtaxed that a few families may spend money lavishly in Europe.

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Club Department

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- Mrs. N. I. McDowell, Salina
- Mrs. W. D. Atkinson Parsons
- Mrs. H. E. Asher, Lawrence
- Mrs. Grace L. Snyder, Cawker City

Our Club Roll.

- Senior Club, Potwin, Kansas, (1903).
 - Women's Literary Club, Osborne, Osborne County
 - Club, Logan, Phillips County (1903).
 - Scientific Club, Osage, Osage County
 - Social Society No. 1, Minneapolis, Ottawa (1888).
 - Club, Highland Park, Shawnee County
 - Club, Phillipsburg, Phillips County (1905).
 - Senior Club, Ford, Ford County (1906).
 - Valley Women's Club, Iola, Allen County
 - Side Forestry Club, Topeka, Shawnee County (1903).
 - Club, Grant Township, Reno County
 - Reserve Society, Rosalia, Butler County (1906)
 - Hour Club, Wakarusa Township, Douglas (1899).
 - Lady Farmer's Institute, Marysville, Marshall (1902).
 - Country Club, Anthony, Harper
 - Embroidery Club, Madison, Greenwood (1902).
 - Reading Club, Cawker City, Mitchell (1903).
 - Club, Russell, Kansas.
 - Sunflower Club, Perry, Jefferson County
 - Club, Sterling, Rice County (1904).
 - Reading Club, Osage County.
 - Patrol Helpers, Madison, Kansas (1906).
 - Side Study Club, Delphos, (1906).
 - Scientific Club, Berryton, Shawnee County
 - Improvement Club, Vermillion, Marshall (1903).
 - Club, Columbus, Kansas (1897).
 - Reading Circle, Nemaha County.
- Communications for the Club Department be directed to Miss Ruth Cowgill, Editor (Department.)

Forestry.

A circular issued by the chair of the forestry committee of the National Federation of State in the Union, whether wooded or destitute of trees forests should have intelligent laws providing for a due protection of forest area.

It is a field of usefulness in which women may wisely exert themselves for the welfare of the Nation and their own States by spreading information and shaping public sentiment. The formation of a State policy requires expert knowledge of conditions, which can be obtained at expense from the forest service at Washington, which cooperates States seeking its aid in defining and executing such a policy, and its should be sought by State Federations of women's clubs. Further information regarding the scope, methods, and value of this Department may be obtained by sending to the Forest Service, Washington, for Circulars Nos. 35 and 36, and by correspondence.

In all forestry meetings there should be a definite presentation of the most vital subject which affects the health of the people, the amount of distribution of rainfall, thus controlling the freshets and corresponding conditions of drouth, equalizing the climatic conditions of the country, and providing for the constant and increasing demand for forest products.

A Friendly Woodchuck.

Early last spring a woodchuck with her black nose from the mouth of the burrow in which she had spent winter, and blinked her little round eyes in the sunlight. Then she came out and lay basking on the hard earth before her doorway. She looked very weak, and she certainly dreadfully thin. Her head hung loosely on her bony neck, and when she moved it was with a labor not usually observed in woodchucks. The fact is that she had but just awakened from an all-winter sleep, as she had fasted since the previous October she was not only drowsy but much as anything else which she could do. The evident weakness of her head as she moved about a little, and her head in different directions, it could be seen that she was struggling with every movement. By and by she turned around, putting her head and shoulders into the burrow, began raking out her forepaws all the earth, leaves and grass with which she had blocked the entrance in the fall. With this she came many living things—beetles, a hornet, and a large frog, all of which had been

sleeping away the winter at the woodchuck's door.

After she had made a neat pile in front of the burrow, and covered it up with fresh loam from the tunnel itself, the woodchuck had strength to go off in search of some food. There was very little to get just then, for the winter had barely gone, but she found a little patch of green clover on the sunny side of a large rock, a tuft or two of coarse grass near a spring, and with these and a few mouthfuls of bark from a nearby tree she managed to make a moderate breakfast. Then she returned to the burrow and stayed there for two days. By that time the grass had grown considerable and the woodchuck had less difficulty in getting a meal. And every morning after food became more plentiful; the clover appeared in larger and thicker patches, and gradually the wrinkles in the grizzled skin of the groundhog began to disappear.

One morning, after the little rodent had had her morning meal of clover, and she was taking a sun bath on the mound of earth in front of her doorway, some small object struck the mound about six inches in front of her face, and threw a pinch of the dirt sharply in her eyes. She did not know what the trouble was, and she did not stop to find out, but pitched headfirst into the burrow and stayed there. As she disappeared, a small boy, brandishing a Flobert rifle and followed by a little yellow dog, jumped from behind a hillock and ran up to see how near he had come to the 'chuck. He pulled a grimace when he saw where his bullet had pitted the earth, reloaded his weapon, and went back to his hiding place. But the woodchuck, not being quite a fool, remained where she was safe until the boy became tired of waiting and came back to the hole, the yellow dog still at his heels. The boy now picked up the dog and put its nose to the mouth of the burrow, and after a few words of encouragement the cur, which had more assurance than wisdom, plunged into the black hole. The boy sat down on the mound of earth and yelled "Sic 'em Prince!" and for about a minute no doubt Prince was doing as he was bid. After that, it seems that the woodchuck did most of the "sicking," for the dog backed out of the burrow with two terrible cuts on his head, and howling in a most unprincely manner. Then, tucking his tail as far between his legs as he could get it, he made for home by a short cut and at his very best pace.

Not long after, the woodchuck appeared at the mouth of the burrow with a family of five little ones. They had been born some time before, but this was their first appearance in the open. They were pretty, dark-eyed, soft-coated little fellows, ready to topple back again out of sight at a sign from their mother. Every morning now the whole family might have been seen moving through the grass to the spots where the clover grew the thickest. For a short time they lived in peace, but one evening they made themselves a powerful enemy by journeying into the next field and eating off close to the ground, three long rows of young peas. The owner of the peas said very little, but he drove to town and brought back a stick of dynamite, which he thrust far into the burrow. A minute later there was a muffled boom, and the farmer went off, satisfied that he would not be bothered again by that family of woodchucks. But in the evening a cautious gray head was thrust from the mouth of the hole, and soon our old woodchuck crawled from her home and made off slowly across the field. The dynamite had killed the young ones, but the mother had been only stunned. She went directly to an old burrow which she had occupied two years before, and next morning there was a large heap of fresh earth in front of it. She lived there quietly until the latter part of the summer, when, returning after an absence somewhat longer than usual, she found the entrance to her home barred by a snarling black head, with a white stripe down the front. The premises had been seized by a skunk, and the woodchuck was obliged to seek a residence elsewhere. She started to dig a fresh tunnel on the other side of the field and for hours she threw out the soil with her strong claws. The following afternoon she was still at work, when the figure of a man, in brown overalls, crept under the brow of the hill and lay down behind a rock at the top. For half an hour the woodchuck worked on; at last she appeared at the doorway for a breathing spell. A little curl of white smoke leaped from behind the rock, there was a sharp report and the woodchuck dropped back into a newly made grave.—N. Y. Sun.

Women Avoid Operations

When a woman suffering from female trouble is told that an operation is necessary, it, of course, frightens her.

The very thought of the hospital, the operating table and the knife strikes terror to her heart.

It is quite true that these troubles may reach a stage where an operation is the only resource, but a great many women have been cured by Lydia E. Pinkham's Vegetable Compound after an operation has been decided upon as the only cure. The strongest and most grateful statements possible to make come from women who by taking



MISS ROSE MOORE

Lydia E. Pinkham's Vegetable Compound

made from native roots and herbs, have escaped serious operations, as evidenced by Miss Rose Moore's case, of 307 W. 26th St., N. Y. She writes:

Dear Mrs. Pinkham:—“Lydia E. Pinkham's Vegetable Compound has cured me of the very worst form of female trouble and I wish to express to you my deepest gratitude. I suffered intensely for two years so that I was unable to attend to my duties and was a burden to my family. I doctored and doctored with only temporary relief and constantly objecting to an operation which I was advised to undergo. I decided to try Lydia E. Pinkham's Vegetable Compound; it cured me of the terrible trouble and I am now in better health than I have been for many years.”

This and other such cases should encourage every woman to try Lydia E. Pinkham's Vegetable Compound before she submits to an operation.

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Women suffering from any form of female weakness are invited to promptly communicate with Mrs. Pinkham, at Lynn, Mass. From the symptoms given, the trouble may be located and the quickest and surest way of recovery advised.

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- DAIRY BARN
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- CARRIAGE HOUSES AND HORSE BARN
- CORN HOUSES AND CRIBS
- ICE HOUSES

- ICE HOUSES AND COOL CHAMBERS
- DAIRY HOUSES
- CHEESEMAKERS AND CHEESE FACTORIES
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Dairy Interests

Holstein-Friesian Cattle.

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SUPERINTENDENT ADVANCED REGISTRY
HOLSTEIN-FRIESIAN ASSOCIATION
OF AMERICA.

PART SECOND.

POINTS IN FAVOR OF THE HOLSTEIN-FRIESIAN CATTLE.

Owners and breeders of Holstein-Friesian cattle base their claims for the superiority of this breed over all other dairy breeds mainly on the following points: First, that the Holstein-Friesian is a large, strong, vigorous cow, full of energy and abounding in vitality; second, that her physical organization and digestive capacity is such that she is able to turn to the best advantage the roughage of the farm, converting the same into merchantable products; third, that she yields large quantities of most excellent milk, fit for any and all uses and especially well fitted for shipping purposes; fourth, that heredity is so firmly established through her long lineage that she is able to perpetuate herself through the production of strong, healthy calves; and fifth, that when for any reason her usefulness in the dairy is at an end, she fattens readily and makes excellent beef.

While men usually engage in the dairy industry for the profits directly and indirectly to be obtained, and not for the health's sake or for the pleasure therein, yet the aesthetic side of any business should not be lost sight of; for in the breeding of Holstein-Friesians all of these objects may be attained, the owner deriving such pleasure and satisfaction from the ownership of fine animals as can in no way be measured in money.

It is a self-evident fact that the Holstein-Friesian is a large, strong, vigorous cow, and needs no demonstration; but many persons have never stopped to consider the value of this vigor and vitality in a cow. Would a man select a small, weak, puny human nurse for his infant child, and if he should do so, would he expect the child to thrive and grow strong and vigorous on her milk? But in what respect does the need for vitality in the cow differ from like need in the human nurse; is she not the widely chosen foster-mother of the human race? How careful, then, should we be in the selection of this foster-mother.

Nature looks keenly to the welfare of her children; and it is incontrovertible that she has seen to it that the milk of the human mother is such as is best fitted for human race. By analogy, then, that breed of dairy cattle which produced milk nearest in its constituent parts to human milk produces milk best fitted for the consumption of man; while a milk illy balanced as to fat content, as compared with human milk, is unsuited to the best development of mankind. Of all the dairy breeds, the milk of the Holstein-Friesian most nearly approaches that of the human mother; and it is therefore especially fitted for the use of infants, children and invalids, giving health and strength to all. As human milk is not high in average per cent of fat, so Holstein-Friesian milk, in approaching it, does not as a rule contain as high a percentage of fat as does the milk of some of the smaller dairy breeds which yield milk in very limited amounts; but, owing to the very large average quantity of milk yielded by it, no breed excels the Holstein-Friesian in production of butter-fat.

It has been stated by some who have not well considered the matter, that the value of milk is measured by its fat content; but this is only partially true even in butter making. From a nutritive standpoint, the fat is the least valuable of milk; it is the solids not fat that give it its value. The milk of the females of the horse and ass, herbivorous animals whose muscular development is of prime importance, is very low in per cent of fat;

yet the health, strength and activity of their progeny is noted. Swine are universally known to have the strongest of digestive powers in the utilization of all food; yet the experiments at the Connecticut Experiment Station show that even the pig can not thrive on milk containing an excess of fat. Holstein-Friesian calves that are suckled by their dams thrive amazingly; and it may be safely assumed as a fact, that the milk of any dairy breed which can not safely be fed to the young calf is not suited for human consumption.

The globules of fat suspended in the milk serum of the Holstein-Friesian cow are small, and do not as readily separate and rise as cream as do the fat globules of the milk of some other dairy breeds, thus making Holstein-Friesian milk ideal for consumption as whole milk and for shipping purposes; while, as the modern centrifugal separator will readily extract the fat from any and all milk, it is in no way inferior for cream-selling and butter making. Also, if for any reasons it be necessary to increase the per cent of fat in the milk, in order to reach any standard thoughtlessly required by the laws of the State, milk may be standardized to any per cent of fat by the use of any separator.

Owing to her large frame, her vigor and digestive powers, the Holstein-Friesian cow in unequalled in the ability to convert farm roughage into money value; and she belongs to that class of large cows which the Wisconsin Experiment Station found, after years of experience, to be the most profitable for the dairy farmer. She is of hardy constitution, not readily susceptible to tuberculosis and other bovine diseases, and will thrive under adverse circumstances to which a smaller, weaker breed would succumb. Her calves come strong and vigorous at birth, often weighing in excess of 100 pounds; and, owing to the milk being especially fitted for making the best animal growth, make the best and most profitable veal. It is the special function of the Holstein-Friesian cow to produce milk, and while in milk she can not be readily fattened as she devotes all her surplus food to profitable milk production; yet when dry her great assimilative powers are still available, and enable her to take on flesh rapidly, and so make excellent beef.

The time is fast approaching when even the Western farmer can not afford to keep a cow mainly for the calf which she produces; as in such case the handicap against beef production is too great. When a calf takes practically all the milk its dam yields, it starts out in life with a mortgage upon it to the value of the cost of keep of its dam for one year; and this debt, as well as the cost of raising, must be repaid out of the selling price before there can be any true profit in the beef. If the owner of such cows plan to milk them, run the milk through a separator, sell the butter-fat to the calves, he introduces the labor factor and finds himself a full fledged farmer-dairyman, with all the labor incident to dairying, and cows that will hardly yield enough to pay for the extra work. Over and above all labor and the cost of keep, the average Holstein-Friesian cow will show a nice profit on the butter-fat she produces; while the skim-milk will not only rear her own calf, but a couple of litters of pigs besides.

An ideal beef form has been created in the mind of the public, and a false prejudice engendered against anything that does not agree in form with that ideal. At present this unjust prejudice militates against the dairy-bred steer on the hoof, even though he be as well reared as the beef steer; although when it comes to the final show down at the block, the difference between the two is not great. Rear a Holstein-Friesian steer as a Shorthorn is reared, and he will indeed be an expert judge who can distinguish the beef when it is placed before him at the table; while repeated tests at the block have proved that the per centage of choice cuts is nearly as large in the one case as in the other. As

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It is the only machine that has a combination of the Hollow and the Disc bowl. That means double capacity or a smaller bowl for the same amount of work. That insures easier turning, less wear, easier cleaning and better cream—it doesn't break the large fat globules.

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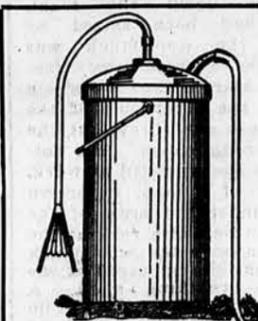
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This apparatus forces a deadly gas through their runways and is warranted to kill gophers within 100 feet of operation. With it a man can clear from five to six acres of gopher-infested land in a day at a cost of twenty cents per acre. The poison we use can be gotten at any drug store. Satisfaction guaranteed or money refunded. Complete outfit for \$5.

Flint Saunders, Lincoln, Kans.

Mention the Kansas Farmer.

April 4, 1907.

all-around breed, and the one approaching the nearest to the long-dual purpose animal, the Holstein-Friesian is unsurpassed. Aside from the aesthetic point of view—the personal satisfaction one derives from the possession of fine stock, there is decided financial advantage in the breeding of pure-bred Holstein-Friesian stock. It costs little more to keep than does common or grade stock, and the returns on the investment and the food consumed are so much greater in proportion that there is no comparison. By the use of good, pure-bred Holstein-Friesian and the rearing of his heifer calves from common or grade cows, one may be reasonably sure that the calves so reared will so far surpass the dams in productive capacity that the excess will many times reimburse the owner for the cost of their sire, and nothing of the increased selling price of the cows themselves; but by the use of pure-bred Holstein-Friesian is also, the danger of failure in producing a fine female animal almost vanishes, and one may be nearly certain that every female dropped will only prove valuable in the dairy, that she will also prove valuable as a producer of pure-bred dairy stock of both sexes. For, aside from the product, there are two other sources of income in the pure-bred Holstein-Friesian dairy,—one from the calves, the other from the surplus sale stock. There is a constant demand for good pure-bred Holstein-Friesian bulls for the improvement of the common dairy herds of the country by crossing, and for the further improvement of grade herds by higher grades, while anything especially good is sought by the breeders of pure-bred stock. The less valuable surplus females find a welcome place with the herd-dairyman, the more valuable foundation stock for new pure-bred herds while the best are eagerly sought by established breeders to strengthen their breeding herds.

The system of advanced registry developed and established by the Holstein-Friesian Association places all breeders on a par, rendering it very easy for any breeder to establish the value of a pure-bred cow, just as the milk test will establish the value of a racing-bred horse, and the expense is moderate. The association not only charges nothing for the entry of a cow and her record in the advanced register, but to encourage the breeder in that direction it pays out every year large sums of money in prizes; the chance for the winning of prize being open to every owner of a Holstein-Friesian cow. Neither do the State Agricultural Colleges make any charge for their oversight in the matter of making these records, their charge being for the time and necessary expenses of their supervisor in going out to oversee the testing; and several cows may be under test at the same time, the expense per animal being made light. A little over two years ago the Holstein-Friesian Association increased the efficiency of its system by the authorization of official records to be begun not less than three months after calving; and many breeders are taking advantage of this to show the staying qualities of their cattle, the results proving very satisfactory indeed. Prizes are awarded for the best record made in the three-year seven-day division, in the three-year division, and in the eight-year division; and any breeder may win three prizes in each division, or prizes in all.

A limited article of this kind, it is only possible to touch upon the more important points of the Holstein-Friesian breed, and I would refer interested breeders to the Holstein-Friesian Breeder's Book, sent free by Secretary F. Houghton, for more detailed information; but from my own individual experience with this grand dairy breed, extending over a period of more than twenty years during which time I have been a breeder of these cattle, I can affirm that, either as an all-around dairy breed or for any special purpose in dairying, when the returns from all sources are counted I know of no breed superior to the Holstein-Friesian.

The Empire PROVES Its Claims!

We do not "claim" everything; we do not try to make you think that you will go into bankruptcy, if you do not buy the

Improved Frictionless EMPIRE Cream Separator



but what we claim for it—the machine itself proves.

It's the sort of machine that appeals to men and women who are seeking real worth and substantial merit—the best value for their money—men and women who cannot be misled but who want cold, hard facts.

If you want the separator that will make the most dollars for you, we ask you to let us PROVE to you that

The Empire turns most easily. The Empire requires fewest repairs.

The Empire is most easily washed. The Empire lasts the longest.

The Empire gets the most good cream.

It is well worth your while to investigate—to put aside all prejudice—to give an impartial hearing to the Empire's claims of excellence. Other Cream Separators do good work, of course, but the Empire does the best work, and you want the best!

Send for new catalogue and proofs. No matter what separator you are using, you will be interested in the Easy Running Improved Frictionless Empire.

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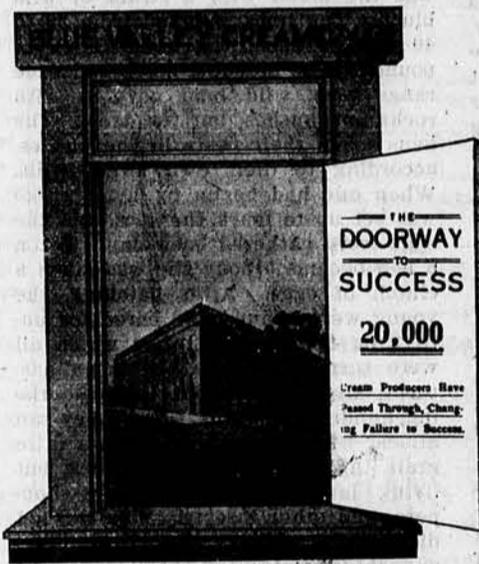
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made glad by the adoption of the Individual Shipper's System. They get all there is in it—no middle man—no unnecessary expense. The results are satisfactory to them, and as others learn of the profit in this plan they adopt it. Our list is increasing daily.



Are you milking cows?
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Write to the "Pioneers" of the system that pays the highest price.

BLUE VALLEY CREAMERY COMPANY

ST. JOSEPH, MISSOURI.

sian; while for veal and the supplying of good, healthy, nutritious milk to cities and villages, there is no breed that can approach it.

Short on Cheese.

To one reading Gensus bulletin No. 64, recently issued by the Department of Commerce and Labor, it would look as if there was something radically wrong in conditions in this country. The bulletin has to do with the condition regarding butter, cheese, condensed milk, flour, and grist mill products, according to the census of manufactures in 1905. With our vast extent of agricultural lands, it would seem that we ought readily to produce all the cheese needed for home consumption, and leave a very large sur-

plus for export. The figures taken for 1905 are compared with those taken in 1900. The bulletin might have been a little more specific, and considerably more lucid, had proper attention been given to its preparation, but it is specific and clear enough for us to learn that while the production of butter increased 26.5 per cent during the five years, it was almost wholly consumed at home. The domestic supply must have met the domestic demand for the total value of butter imported in 1904 was only \$34,764. It is a great thing to supply wholly our own market, but it would be still better if we could produce a surplus to sell in foreign markets. The increase in the demand for many of our products has outstripped the increase in population, a

result of the unexampled prosperity the country has enjoyed for the past ten years, and with this increased demand has come an increased production, but increased facilities have not brought such an increase in production as to permit us to reach out for foreign markets on some of our products. This is a matter of the moment for our dairymen.

Take cheese as an example. The increase in the quantity of cheese manufactured in 1904 over that of 1900 amounted to 35,172,540 pounds, but in the same time the importations of cheese grew from 13,185,990 pounds in 1900 to 22,707,103 pounds in 1904. The increased production amounted to 12.5 per cent, while the increase in importations was 60 per cent. The United

PLYMOUTH ROCKS.

WHITE P. ROCK EGGS—\$1 per 15, \$4.50 per 100. Lizzie Griffith, R. 2, Emporia, Kans.

BRED AND W. P. ROCK EGGS—Hawkins Bradley strains; 15 for \$2, 45 for \$5. Chris Bear, Route 9, Ottawa, Kans.

ANGLET BARRED P. ROCK EGGS—\$1 per set of 15; \$4 per 100. Mrs. R. Kingham, Route 3, Center, Kans.

BARRED P. ROCKS EXCLUSIVELY—Super-laying strain, voted for size and quality. Seven years careful breeding. Eggs \$1 per 15; \$1.75 per 100. E. J. Evans, R. 4, Fort Scott, Kans.

BLUE BARRED ROCKS—Large, vigorous, farm stock, \$1.50 per 15; \$5 per 50; \$5 per 100. Minnie Clark, Route 9, Lawrence, Kans.

BARRED ROCK EGGS—\$1 per 15, \$5 per hundred. Mrs. R. L. Parker, Lincoln, Kans.

BIG BARGAIN—Choice B. P. Rock females. "Molly Bros." \$15 per dozen. H. A. Wattles, Pacific Express, Bayville, Kans.

BARRED PLYMOUTH ROCKS EXCLUSIVELY—Eggs \$1 per 15, \$1.50 per 30, \$4 per 100. T. B. Don, Route 7, Osage City, Kans.

BARRED PLYMOUTH ROCKS are the best of Watham's strain. Second prize cockerel at Topeka, Kans., 1907. Three grand yards. Cockerel pullet mating; scores up to 98. Eggs \$1.50 per 15, \$4 per 100. Mrs. Jas. Fringle, Emdale, Kans.

BARRED PLYMOUTH ROCKS EXCLUSIVELY—Farm range. \$4 per 100; \$2.50 for 50, and 75 cents for 15. Mrs. Lovelace, Muscotah, Kans.

BARRED PLYMOUTH ROCKS as good as the best. Eggs 50 cents for 15. Write D. N. Hill, Route 9, Kans.

FOR SALE—Pure-bred B. P. Rock eggs. 75 for 15 or \$3.50 per hundred. Hillcrest Fruit Poultry Farm. Address A. C. Merritt, North Topeka, Route 4; Ind. Phone 4361.

WHITE PLYMOUTH ROCK EGGS FOR \$3 per prize-winning pens, line bred, large size and white. Also one M. B. gobbler for sale. I take the express charges. J. C. Bostwick, Hoyt, Kans.

CUBATOR EGGS from prize-winning Whites and White Wyandottes at \$5 per 100. W. L. Topeka, Kans.

OFF ROCKS—High scoring, vigorous, farm bred, bred for size and laying qualities. Eggs \$1 per 15, \$5 per 100; circular free. Sunny Slope Poultry Farm, Box 406, Eflingham, Kans.

BARRED ROCKS my specialty; a fine lot of eggs from prize winners for sale reasonable. Heber, Neosho Rapids, Kans.

Wingo Hill Barred Rock and Scotch Collie Farm. My first prize winners in Kansas and Oklahoma. 15 females scoring 91 to 94 1/2 by McClave, Emma Hemlock. Hens and eggs to order. Pedigree Collies from imported prize winners. Fine stock for sale. Mrs. J. T. Woodford & Son, Central, Wichita, Kans.

WHITE PLYMOUTH ROCKS. Largest and whitest in the west. Line bred for egg production; Kansas State Show '07 I won cockerel, 2d pen, 3d, 4th hen; Anthony, '06 1st hen 96 1/2, 1st pen 91 1/2, 1st pullet 96 1/2 for egg prices. Chas. C. Fair, Sharon, Kans.

LINDAMOOD'S BARRED ROCKS. Surely please you. High scoring prize-winners. Mated now. Send your orders early. No eggs May 15. From pens \$2 per 15, from flock \$3 per 15. Send for circular. Long distance phone Wal-C. C. Lindamood, Walton, Kans.

BARRED PLYMOUTH ROCKS EXCLUSIVELY (Bradley Strain.) Mated-mating pen headed by a 93 1/2 point cockerel. Mated-mating headed by a 93 point cock. The female score from 90 to 93 1/2. Hatching extra strong. \$1.50 per 15, \$7.50 per 100. Mrs. Chas. Osborn, Topeka, Kans.

EGGS! EGGS! Feel confident from the Steel Blue Barred Plymouth Rocks will be produced some prize-winning chicks for you, whether you wish them for your birds or on the farm. Let me have your order the chicks will speak for themselves. It costs more to raise fine birds than inferior ones, and extra small expense of starting should not be considered for the results and satisfaction you would get from this Famous Strain would overcome all. Write for catalogue, it's free. JOE B. BRE, originator and breeder of the renowned Blue Barred Plymouth Rocks, Mexico, Mo.

BUFF PLYMOUTH ROCK EGGS. Have bred Buff Rocks exclusively for six years; purchased eggs and birds from the best blood I find in the west and now have as fine a lot of eggs as I ever saw. I took both first and second on the Republic County fair last fall. Eggs from 2d prize birds \$2.50 for 15, \$6 for 45, \$10 for 100. Eggs from 1st prize birds \$1.50 for 15, \$3.75 for 45, \$6 for 100. STEPHENS, Munden, Kans.

White Plymouth Rocks EXCLUSIVELY. Good to Eat. Good to Look At. P. Rocks hold the record for egg laying over 100th variety of fowls; eight pullets averaging 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 \$2 per 15; \$5 per 45, and I prepay express to express office in the United States. Yards at Lawrence, adjoining Washburn College. Address THOMAS OWEN, Sta. B. Topeka, Kans.

BARRED PLYMOUTH ROCKS EXCLUSIVELY. EGGS \$3 per 15, \$5 per 30. Get the Best Start Right. T. Divinia, R. 2, St. Joseph, Mo.

BRAHMAS. LIGHT BRAHMAS. Two winners—two firsts, two seconds at State Show 1907. Cockerels \$2, eggs \$1.50. John, Route 1, Oatville, Kans.

Light Brahma Chickens. Pure bred cockerels for sale. Write or call on Foster & Son, Eldorado, Kas., Route 4

taken away she will teach all the rest of the hens to eat eggs. If the habit is common among the flock, the best remedy we know of is to furnish dark nest boxes and plenty of them, or provide them with a nest box, the bottom of which should be cushioned and padded, having a hole in the center large enough for the egg to roll down out of sight underneath.

Profitable Poultry Culture.

That poultry culture on a large scale can be made profitable is clearly proven by the scores of extensive plants scattered throughout the country that are yielding a nice income to the owners—not only paying a handsome profit on the investment, but a good, substantial bonus besides. That poultry culture on a large scale is not always profitable is proven by the failure of a number of extensive plants that are to-day abandoned or converted into something else. In discussing the subject of poultry culture from a financial standpoint the optimist is apt to refer only to those which have been successful, while the pessimist alludes only to the ones that have proven failures. There are two sides to every question, and the one under discussion is no exception.

We were somewhat amused at the statements of a gentleman who happened into our office several weeks ago and who, after an introduction by a mutual friend, volunteered the information that there was absolutely nothing in the poultry business and that no one had ever made a financial success of it, while on the other hand, thousands of dollars had been lost by those who had ventured into it. We simply sat back in our chair and let the gentleman talk until he had finished his story, and then we asked him how many poultry plants he knew of that had proven failures and cost their promoters "thousands of dollars."

"Why," he said, "there are lots of them. Look at the — plant," mentioning a plant in Illinois. "Mr. — spent seven or eight thousand dollars trying to make a success of that plant, but finally had to give it up a couple of years ago."

We happened to know something of this plant and asked our caller if Mr. — had ever made a success of anything else that he had undertaken. We then asked him if he had ever visited this plant and whether he knew anything about how the plant was conducted, the quality of the stock, the sanitary conditions, the business methods, etc. He answered in the negative, but reiterated his statement that Mr. — lost several thousand dollars in a few years.

We happened to know that this plant was not conducted along business lines and that the sanitary conditions prevailing twelve months in each year were such that the stock was diseased and in such an emaciated and enervated condition that it was almost impossible to keep the breeders alive long enough to produce any chicks, and then it was next to impossible to raise the chicks to maturity, as they lacked vigor and stamina, were lousy and altogether miserable. We enlightened our caller as to the conditions existing at this plant, and then asked him to name another plant that had been a failure. This he couldn't do, but he said he understood that there were plenty of others and that no one had made a financial success of poultry culture.

It so happened that we had in our bindery several thousand copies of the catalogue we printed for Mr. U. R. Fishel, of Hope, Ind., and we got a copy and showed it to our pessimistic friend, at the same time telling him something of the history of Mr. Fishel's success as a breeder of White Plymouth Rocks, how he started a little more than a dozen years ago with fifteen hens and a cock bird, for which he paid \$15, and how he had built up a business from this small beginning to a magnitude that was surprising. We told him that to-day Mr. Fishel had 120 acres devoted to White Plymouth Rocks, and that he raised annually something like 8,000 birds, and

WYANDOTTES.

WHITE WYANDOTTES ONLY—15 eggs \$1. H. F. Brueggemann, R. 2, Herington, 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.

WHITE WYANDOTTES—Pen No. 1, score 94 to 98 1/2 by Atherton. Eggs \$2 per 15. 100 others bred to lay high scoring eggs \$1 per 15; \$4 per 100. J. L. Moore, Eureka, Kans.

WHITE WYANDOTTES—White P. Rocks and Rose C. B. Minorcas. Wyandottes and W. F. Rock eggs, 15 for \$1; Minorcas eggs, 15 for \$1.50. Eggs for hatching from high-class poultry. R. F. Meek, Hutchinson, Kans.

WHITE WYANDOTTE EGGS from choice matings; \$1.50 per fifteen. W. Arts, Iarned, Kans.

Pure-bred White Wyandotte cockerels, unsexed, \$1 each. Emma Coppedge, Norcatur, Kans.

WHITE AND S. L. WYANDOTTES, and White Holland Turkeys. Only male stock for sale. Good birds at reasonable prices. Write R. Boyd Wallace, Stafford, Kans.

White Wyandotte Eggs per sitting \$1, or 100 for \$5. Mrs. E. F. Ney, Bonner Springs, Kas.

WHITE WYANDOTTE eggs \$1.50 for 15 from choice pens, \$5 per 100 from selected free range stock. Indian Runner duck eggs \$1.50 for 11; Mammoth White Holland turkey eggs \$1.50 for 9; White African guinea eggs \$1.50 for 17; a few pairs of guineas yet for sale. Order now. Mrs. L. D. Arnold, Enterprise, Kans.

The Great Winter Laying Strain of Silver and White Wyandottes and Buff Plymouth Rocks. Eggs \$1.50 per 15. Address D. A. Chacey, Leavenworth, Kans.

Hammer's White Wyandottes. Eggs from first pen \$2 per 15; from second pen \$1.50; from flock at large \$1 per 15; \$5 per 100. My strain is noted for eggs. Lewis A. Hammer, Clearwater, Kans.

BUFF ORPINGTONS. SINGLE COMB BUFF ORPINGTON AND BLACK MINORCA EGGS for setting, \$1 for 15. A. J. Stratton, Reading, Kans.

S. C. BUFF ORPINGTONS—Cook strain. Eggs, 15 for \$1.50. Fred and Eddie Stark, R. 7, Abilene, Kans.

S. C. BUFF ORPINGTONS—Eggs from the Cup-winners at the biggest show in the country at a low price. Write for prices Frank Hill, Sabetha, Kans.

S. C. BUFF ORPINGTONS EXCLUSIVELY—Eggs \$1.50 per 15. Mrs. Duncan, Valley Falls, Kans.

BUFF ORPINGTONS AND BUFF LEGHORNS—Won first pen State Show; catalog free. W. H. Maxwell, 1924 McVicar Ave., Topeka, Kans.

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

BUFF ORPINGTONS EXCLUSIVELY—Eggs from prize-winners \$2 a sitting. Mrs. A. Wessner-Davis, Douglas, Kans.

S. C. BUFF ORPINGTON EGGS—From pens headed by high-scoring cockerels; \$1.50 per fifteen; \$2.50 per thirty, \$3.75 per fifty. Range eggs 50 cents per fifteen, \$3 per hundred. Nellie E. Lyons, Berryton, Kans.

S. C. Buff Orpingtons—EXCLUSIVELY.—Winners at four shows. Bred for winter layers. Eggs for sale. Send for free circular and show winnings. R. D. Hungerford, Canton, Kans.

BLACK LANGSHANS. BLACK LANGSHAN EGGS from fine stock; \$1.50 for 15, or \$7 per 100. Mrs. Geo. W. King, R. 1, Solomon, Kans.

BLACK LANGSHAN EGGS—\$1.50 per 15. From World's Fair winning strain. Mrs. E. Forward, Bayneville, Kans.

Black Langshan Eggs—FROM HIGH SCORING FLOCK.—\$2 for 15. \$3.50 for 30. MRS. C. S. CROSS, Fair Acres Farm, Emporia, Kans.

BLACK LANGSHANS. Of best breeding. Eggs for sale at \$1.50 per 15 or \$2.50 per 30. Mrs. E. S. Myers, Box 174, Chanute, Kans.

BLACK LANGSHANS. My birds are prize-winners. Choice cockerels and pullets for sale; eggs \$1.50 and \$2. Satisfaction guaranteed. W. M. Tipton, Route 5, Wellington, Kans.

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Our stock won more premiums and specials at Hutchinson State Fair, Great Bend, Salina, Wichita State Poultry Show and Nickerson than any breeder in the west which is positive proof that they are

"Better Than Any."

Buy eggs from these birds, improve your flock and win the prizes at the coming shows. Safe arrival and fertility guaranteed. Prices, \$1, \$2 and \$3 per 15; \$5, \$10 and \$15 per 100.

We More Than Please Marker Bros., Great Bend, Kans. Satisfaction Guaranteed

Our fully illustrated and prize-winning poultry is now ready. Send for it today; it's free. We have 75 fine and big young Mammoth Bronze turkey toms for your breeders; get one quick; \$4 to \$8 each.

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RHODE ISLAND REDS.

NEOSHO POULTRY YARDS. Rose Comb R. I. Reds—Score from 90 to 94 1/2 points. Seven years experience with this breed. Eggs for hatching. Prices reasonable. J. W. Swartz, Americus, Kans.

RHODE ISLAND REDS—Cockerels, P. C. B. I. Reds from prize winners. Red to the skin. Eggs in season. Good Hope Fruit & Poultry Farm, Troy, Kas.

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

S. C. RHODE ISLAND REDS—Won at State Show, 1907, 1st, 2d, 4th. Eggs \$1.50 per 15, \$5 per 100. Mrs. D. A. Sheaks, Walton, Kans.

Rose Comb Rhode Island Red eggs for sale. Circular free. G. D. Williams, Inman, Kans.

R. C. B. I. Reds—Pure-bred cockerels for sale \$1 each. A. L. Scott, Route 1, Iarned, Kans.

FOR SALE—Rose Comb Rhode Island Red chickens. High grade Red Polled bull calves. J. W. Poulton, Medora, Kans.

GOLDEN RULE FARM. R. C. Rhode Island Reds. Won fourteen prizes on our Reds at the two great Kansas State Poultry Shows January 1906-7. No stock for sale. Eggs for hatching. Egg circular free. A. D. Williams, Minneola, Kans., (formerly of Inman, Kans.)

Rose Comb Rhode Island Reds PRIZE WINNERS. Eggs from select matings, average score 92 points. The second and third pullet and third hen at State Show 1906, and first cock and first, second and third pullet at Topeka 1907, are in these matings. Eggs, \$2 per 15. Pen No. 2, males score 91 1/2 and 91 points. Select unsexed females; eggs \$1.50 per 15. Utility pen, all good, pure stock; eggs, \$1 per 15. Special prices on large quantities. A few good cockerels yet for sale. LEON CARTER, Asherville, Kans.

SALMON FAVEROLLES. Salmon Faverolles are unexcelled as layers both winter and summer as broilers on account of early maturity and quality of flesh. Weight, hens 6 to 7 lbs., cocks 7 to 8 1/2 lbs. Eggs \$2 for 15. A. R. Alsworth, Newton, Kans.

SILVER SPANGLED HAMBURGS. Silver Spangled Hamburgs. Good stock cheap. Am overstocked. Hens, pullets, and cockerels, \$1 to \$1.50. Egg circular free. My birds win at all state shows and fairs.

MRS. FAY FINKLE, Galva, Kansas

TURKEYS. MAMMOTH WHITE HOLLAND TURKEYS. Eggs for sale from a long strain of prize-winning hens mated to a 4 pound yearling tom. First prize winner at Missouri State Fair. 10 eggs for \$5. Address Mrs. Forest Nave, Lexington, Mo. Rural Route 2.

FOR SALE—White Holland toms \$8.50. White Wyandotte eggs \$1 per sitting, \$5 per hundred. Mrs. R. F. Ney, Bonner Springs, Kansas.

WHITE HOLLAND TURKEY EGGS—\$1.50 per nine, \$4.50 per thirty. Inquiries promptly answered. T. J. Sweeney, St. Marys, Kans.

SCOTCH COLLIES. COLLIE PUPPIES—Two litters richly bred, eligible to register. Parents are workers. Pedigree with each sale. M. S. Kohl, Benton, Kans.

PURE-BRED White Scotch Collie Puppies for sale. C. Q. Smyth, Box 653, Ponca City, Okla.

Scotch Collies. Fifty-seven Collie puppies just old enough to ship. Place your orders early, so you can get one of the choice ones. Walnut Grove Farm, Emporia, Kans.

BLACK MINORCAS. IMPORTED, S. C. BLACK MINORCAS—The world's greatest laying strain. Eggs \$1.50 per 15. Hens \$2. Circular 5 cents. Address George Kern, 817 Usage St., Leavenworth, Kans.

Our Fully Illustrated Catalogue of high-bred and prize-winning poultry is now ready. Send for it today; it's free. We have 75 fine and big young Mammoth Bronze turkey toms for your breeders; get one quick; \$4 to \$8 each.

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LEGHORNS.

S. C. BROWN LEGHORNS—8 first premiums at three shows the past season. Eggs \$1 per 15. Cedar Hill Poultry Farm, S. M. McHarg, Wakita, Grant County, Okla.

ROSE COMB BROWN LEGHORN EGGS FOR SALE. Bred for years from the best egg laying strain. Write for prices. Bertha Gresham, Bucklin, Kans.

S. C. B. LEGHORN EGGS, 30 for \$1; 100 for \$3 Mrs. P. E. Town, Route 3, Haven, Kans.

S. C. W. LEGHORN AND W. WYANDOTTE EGGS from high scoring stock. \$1 per 15; \$5 per 100. W. H. Turkey eggs, \$1.50 per 9. A. F. Hutley, R. 2, Maple Hill, Kans.

ROSE COMB BROWN LEGHORNS. ALSO BARRED ROCKS—Best selected and fresh eggs \$1 per 15, \$5 per 100. Leghorn cockerels \$1. Bertha Evans, Lyons, Kans.

S. C. BROWN LEGHORNS—Best laying strains in the west. Eggs for hatching, \$1 per 15. Special prices on large lots. L. H. Hastings, Route 1, Quincy, Kans.

ROSE COMB BROWN LEGHORN EGGS—From stock scored to 98 by Rhodes. \$1 per 15, \$4 per 100. Exhibition pen cockerel breed \$2.50 per fifteen eggs. Frank Dunable, Clay Center, Kans.

ROSE COMB BROWN LEGHORNS EXCLUSIVELY—Farm raised. Eggs \$1 per sitting of 15, per fifty \$2, per hundred \$3.50. Prompt shipments made. F. H. Mahon, Route 3, Clyde, Cloud Co., Kans.

S. C. BROWN LEGHORN EGGS \$5 per hundred from birds as good as show birds but on free range. Mrs. W. J. Grist, Ozawie, Kans.

THEY LAY; THEY PAY—S. C. White Leghorns. My pen is of the finest in the west, headed by Van Natta's greatest World's Fair winners; eggs \$1.25 for fifteen, \$5 per hundred. E. Boltwood, R. 3, Ottawa, Kans.

S. C. WHITE LEGHORNS. Stock and eggs for sale. Eggs \$1 per 15. Prize winning egg stock, Leghorn egg man. W. C. Watt, Walton, Kans.

SINGLE COMB BROWN LEGHORNS—Best laying strain in the world. Eggs \$1 per sitting, 3 sittings \$2.50, \$5 per 100. Everett Hayes, Hiawatha, Ka.

PURE SINGLE COMB BROWN LEGHORN EGGS, 30 for \$1, 100 for \$3. Jos. Caudwell, Wakefield, Kans., successor to F. P. Flower.

FOR SALE—Single Comb White Leghorn cockerels. Wyckoff laying strain. Price, 75 cents and \$1. Henry Martin, Newton, Kans.

ROSE COMB BROWN LEGHORN EGGS—15 for \$1.50, 30 for \$2.50, 100 for \$4. Mrs. John Holshey, Bendena, Kans.

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

SINGLE COMB WHITE LEGHORN cockerels, \$1 each; two or more 50 cents each. Fine, white, pure, thoroughbred birds. Also a few Barred Plymouth Rocks, barred to the skin, fine, pure and vigorous; hens, cocks and pullets \$1 each, two or more, 80 cents each. All of our customers are very well pleased. We will make reductions on large lots. Meadow Poultry Farm, Centerville, Ill.

Buff Leghorns Pure-bred eggs \$1.25 per 30, \$3.25 per 100. J. A. Reed, R. 3, Wakefield, Ka.

Oberndorf's S. C. W. Leghorns Won 18 prizes and silver cup at Kansas City, Mo., Poultry Show 1907. Birds and eggs for sale. Also B. P. Rock eggs, best strains. Send your orders now. Eleanor Fruit and Poultry Farm, Centralia, Kans., A. Oberndorf, Proprietor.

STOCK AND EGGS.

Silver Sp. Hamburgs: 1 cockerel, 1, 2, 3, 4 pullet, 1 pen. at great Wichita show. S. C. W. and Brown Leghorns; Black Minorcas; 15 eggs Blue Ribbon pens \$5, 3d best \$2; utility pens headed by high scoring males \$1.00; M. Bronze turkey eggs \$2 per 9, selected 50c each. Vira Bailey, Kinsley, Kans.

STAY WHITE

S. C. W. Leghorn and Buff P. Rock eggs \$1 per 15. At Nickerson show 1907 (Helmick judge) I won incubator on highest scoring cock, cockerel, hen, pullet in Mediterranean class. On Rocks took 1 cock, 1, 2, 3 hen. Mrs. J. W. Cook, R. 3, Hutchinson, Kas.

Galva Poultry Yards

R. C. White Leghorns and White Wyandottes; 30 prizes in 3 shows. Eggs \$1, \$1.50 and \$2 per sitting. J. Ditch, Galva, Kans.

Now is the Time to Get Your Eggs for Hatching

From

W. S. Young, McPherson, Kans.,

the old reliable breeder of Rose Comb and Single Comb White Leghorns and White Wyandottes, in all their purity. The greatest egg-laying strain in the West.

S. C. W. Leghorns

I have over 200 selected hens, snow white, deep bodied and bred for large egg production, mated with show bird cocks. My flock has farm range. Eggs 15 for 75 cents, 30 for \$1, 100 for \$3. I replace all broken eggs.

Mrs. Neva Love, Formosa, Kans.

Pride of Nebraska

The Greatest Incubator on the Market...

Waste heat runs brooder. The only brooder that will raise chicks after they are hatched. One lamp runs both. Write at once for free catalogue to

Mrs. Tim Hartnett, Sutton, Nebraska

even then was unable to supply the demand for his stock. We told him that while Mr. Fishel had started with practically nothing, he had paid \$6,500 for this 120-acre farm, had built a handsome residence, and spent thousands of dollars in other improvement, that everything was paid for and every dollar had been made from the poultry. We told him that Mr. Fishel's sales the first year amounted to a little over \$150, and that at the present time his sales are said to exceed \$30,000 a year.

Our friend listened in amazement. It was a revelation to him. He had been familiar with only the other side of the question. We then called his attention to Mr. Fishel's catalogue, the finest and most elaborate catalogue ever issued by any poultryman or livestock breeder of any kind.

Thinking that perhaps our friends would think that this was the only case of the kind we knew of, we next told him of a White Leghorn breeder in New York who had become independently rich during the past fifteen years on a 20-acre farm. We visited this farm a year ago and have it from the owner himself that he has made every dollar he will ever need—and in fact has all the money he cares for. "And," he added, "my chickens made every dollar of it for me." He is still in the business, but says he is ready to sell out and take it easy the rest of his life, whenever he can find a buyer.

Then we told our caller of another New York farm that was saved from a sheriff's sale by the poultry. The farm was heavily mortgaged, and although the owner worked early and late (he was a general farmer), it seemed impossible for him to get money enough out of his crops and his sales of live stock to keep up the interest and pay the mortgage. He says himself he had concluded that he must surely lose the farm, as at the end of the year he was not much better off financially than he was at the beginning of the year.

He had an adopted son who in some way became interested in poultry and asked his foster father to get him some pure-bred fowls. The request met with a prompt denial, as the old gentleman figured that it would only be an added expense and they could not afford it. The boy was persistent, however, and finally his father told him that he would get him the chickens (Single Comb White Leghorns), but that the boy must build his poultry-house out of old material lying around the farm, and that he must pay for every pound of grain he fed them. This the boy consented to do, and in due course of time the birds arrived. This was three years before the mortgage was due. The next fall the boy announced that he was going to put up a larger poultry-house, and when his father protested on account of the expense, his son promptly informed him that he had the money to pay for it, and he went ahead. The next year he put up a still larger house. By this time he had a large flock of chickens and had an established trade that brought him in a nice income. He weighed out and paid for all the grain he fed his fowls, paid all his other bills, and was acquiring a nice bank account.

Finally the three years elapsed and the mortgage would be due in a couple of weeks. Father and mother sat down and talked matters over one evening and after doing a little figuring found that they did not have within two thousand dollars of enough to meet the mortgage. "Well, mother," said the father, "it seems wicked that we must lose the farm after working as hard as we have for so many years, but I don't see any help for it." Then it was the boy's turn. "How much money do you need, father?" said he. "A little over two thousand dollars," answered the father. "Well, I can let you have that much," answered his son. "You! What are you talking about?" questioned the father. "Why, yes, father, I have more than that saved up and you are welcome to it. I made it from my poultry," said the son. And, sure enough, this foster-son, now a young man, had saved

INCUBATORS AND BROODERS.

THE SAFETY HATCH INCUBATOR



Leads for 1907 because it has not been cheapened in quality. The copper hot water heating system is perfect. Simple end regulator with double brass thermostat. Double cases packed with a fibrous material filled with innumerable dead air spaces. Double clear table top packed the same as the walls. The cloth nursery tray, so nice for newly hatched chicks to rest on. Two doors, one of glass, the other solid lumber. Easy to clean safety lamp. And guaranteed perfect ventilating system. No better machine can be built at any price. Others claim the best hatches, but we get the largest averages and healthiest chicks. We pay the freight. Our 1907 catalogue tells it all. It's free. Address

THE CLAY CENTER INCUBATOR CO., CLAY CENTER, KANSAS.



HATCH-ALL Incubators and Brooders

will last, are easy to run, have deep nurseries, triple walls, solid copper tanks, and if they don't work we take them back. You run no risk because they have been tested in every state in the union.

Look in Kansas Farmer of Dec. 27, where we take a full page to explain these machines and how they are made.

THE 1907 CATALOGUE NOW READY. Don't hesitate to ask for it. We are glad to send it. **HEBRON INCUBATOR CO., Box 12, Hebron, Neb.**



Missouri Queen

Incubator-Heating System absolutely the best. Record of hatches unequalled. Only machine made that has heat in the corners. Try it for 90 days and if you are not satisfied return and get your money. Catalog free. Write today. Reference: Any bank in Princeton.

W. P. SHEETS, Manufacturer, BOX 562, PRINCETON, MO.

\$7.00 Freight Prepaid, **120 EGG** Buys the Best Incubator Ever Made. **\$4.50 Buys the Best 100-Chick Brooder.** Both Incubator and Brooder, if ordered together, cost but \$11.00. Double cases all over; best copper tank; hot water; self regulating; satisfaction guaranteed. Our book, "Hatching Facts," tells all about it. Mailed free. Write for it. **Belle City Incubator Company, Box 18, Racine, Wisconsin.**

INCUBATORS ARE MONEY-MAKERS The "Sure Hatch" kind pays best, because it's sure. It's the kind that runs itself with the least oil and gets the most chickens. For ten years the **SURE HATCH INCUBATOR** has been a leader, without an equal in construction, appearance, results produced or low prices. 120,000 in use. We Pay Freight. Unlimited time given for trial. Our goods guaranteed 5 years. Our new Sure Hatch Book tells all about our machines. Worth dollars, but FREE to you. Write today. **Sure Hatch Incubator Co., Box 42, Fremont, Neb., or Dept. 42, Indianapolis, Ind.**

MISCELLANEOUS.

TOULOUSE GEESSE, PARTRIDGE COCHINS—Eggs \$1 per sitting of seven and thirteen. Mrs. G. A. Rhoads, Route 6, Columbus, Kans.

AGENTS—To sell and advertise our Poultry Compendium; \$35 weekly; rig furnished. Franklin Manufacturing Company, Norwalk, Ohio.

PURE-BRED WHITE LANGSHANS for sale. Hens \$1.25, pullets \$1 each; also a few Silver Spangled Hamburg cockerels. Mrs. John Cooke, Greeley, Kas

WEBER'S POULTRY Describes 25 varieties pure bred chickens, ducks, geese, and turkeys. Quotes low prices on eggs for hatching. Mailed for 2 cents. **W. A. WEBER, Box 79, Mankato, Minn.**

GILT EDGE POULTRY CO. Eggs for sale from 24 different varieties of poultry, including Toulouse geese, Pekin ducks and M. B. turkeys. Each breed on separate farm. Write for catalogue. **Walter Hogue, Fairfield, Neb.**

EGGS! EGGS! EGGS! Toulouse Geese eggs, \$1 per sitting. Rouen and Pekin duck eggs, 18 for \$1. Muscovy duck eggs, 9 for \$1. Bronze turkey eggs, 9 for \$2. Peacocks, Barred and White Plymouth Rocks, Houdans, Buff Cochins, Silver Spangled Hamburgs, Cornish Indian Games, Buff Orpingtons, Rhode Island Reds, Brown, Buff and White Leghorns, Buff, White and Silver Laced Wyandottes, Pearl and White Guinea, Golden Seabright Bantams, Buff Cochin Bantams. Eggs 15 for \$1. Also sell by the 100. All kinds of fancy pigeons for sale. Also hunting dogs. Satisfaction guaranteed. Write for circular. **D. L. Bruen, Platte Center, Neb.**

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The fifty members of the Topeka Poultry Breeders Association raise all varieties of pure-bred poultry. Transactions of members guaranteed. Send for list of breeders and varieties.

W. H. MAXWELL, Secretary, 1990 McVicar Ave. Topeka, Kansas

Hatch Chickens by Steam with the EXCELSIOR INCUBATOR OR WOODEN HEN Simple, perfect, self-regulating. Hatch every fertile egg. Lowest priced first-class hatcher made. **GEO. H. STALL, Quincy, Ill.**

25 YEARS ON THE MARKET Think of it! Our "Silver Jubilee" Why take chances? Buy a Reliable and be sure. Beautiful Silver Jubilee Catalog free. Write today. **Reliable Incubator & Brooder Co., Box B-35, Quincy, Ill.**

Your Name Will Get \$2 Eggs For 50 Cents Per Sitting

The White and Brown Leghorns are the greatest layers in the world. I keep 2000 of the celebrated Chamberlain laying strain on my Experimental Farm, and to increase the sale of my Perfect Chick Feed, I will send to any one who will send me the name of a reliable breeder of White Leghorns, 2 sittings of Single Comb Brown or White Leghorn Eggs for \$1 for the 2 sittings. Only 2 sittings to one person. White or Barred Plymouth Rocks, White or Silver Laced Wyandotte Eggs \$1 per sitting. This is a rare chance to get a start of extra fine stock. Send money and have your orders booked at once. **W. F. CHAMBERLAIN, (The Perfect Chick Feed Man) KIRKWOOD, MO.**

\$7.50 Incubator Everybody's incubator holds 125 eggs. Self regulator, needs no moisture, powerful double heater, egg tray and new removable sanitary nursery tray. Has everything high-priced hatches have. (Four walls, packed, not affected by heat or cold. Cat. Free) **Gouverneur Incubator Co., 911 Main St., Gouverneur, N. Y.**

Try Till You're Satisfied

I give up to 90 days trial. I want you to know what I know before you buy. Nothing to hide about **OLD TRUSTY Incubators** and Brooders. The Old Trusty plan is all right. I built them square. I want to deal fair and square. Old Trusty has made thousands of personal friends. Write for my 1907 free catalog. You'll be interested. **M. M. JOHNSON, Clay Center, Neb.**

enough out of the profits from his poultry to save the farm. While this sounds like fiction, it is true, and it is only necessary to add that after the mortgage was lifted, the father began to take an interest in poultry culture, and in a few years had established the largest and one of the most profitable commercial poultry farms in the United States, making a specialty of egg-production. He retired from active business some time ago with money enough to last him the rest of his life.

Our caller was getting interested now, and as he showed no signs of uneasiness or no disposition to leave, we next told him about a young fellow within a hundred miles of where we sat, who, for several years farmed 160 acres of land, getting up at daylight and working long after sundown, doing the chores by lantern light. He had married some three years before and his father—a large land-owner—had given him the use of a 160-acre farm, rent free. By working hard from sunrise to sunset—and then some—he made a good living and laid up a little money.

After working the farm for three years it dawned upon him that there was an easier way of making a living and he decided to quit general farming and go into the poultry business on a somewhat extensive scale. When he mentioned the matter to his father, the old gentleman ridiculed the idea that there was any money in poultry and tried to discourage his son. But it was no use—the young fellow had his mind made up, and he gave up the 160-acre farm, retaining fifteen acres for his poultry farm. He had a good-sized flock of hens and pullets, and bought up several hundred more, put up good, substantial buildings, read up on poultry culture, and before long was nicely established. He then went to Peoria and made contracts with two of the leading hotels to take all the eggs he could produce at a good price the year around.

The writer visited this farm and was told by the owner that he was making more clear money from his poultry, on fifteen acres, than he ever did from the 160 acres, and was not working half as hard. He shipped eggs daily, and also supplied the Peoria hotels with fowls as wanted. It is needless to say that his father changed his mind in regard to the profits of intelligent poultry culture.

We had it in mind to tell our caller of the experience of a prominent Illinois horticulturist some years ago, but it got away from us. This gentleman was and is one of the most prominent horticulturists in the country and is an institute lecturer upon the subject of horticulture. Some years ago the writer gave an address on poultry culture before a farmers' institute at which this horticultural gentleman was present. When we had finished he arose and said that he could heartily concur in all that we had said regarding the profits to be derived from a flock of fowls properly kept, and backed it up with his own experience. He said that for years his wife had kept a small flock of fowls on the farm, but that he had never paid any attention to them. He knew they had all the fresh eggs they wanted to use and an occasional chicken dinner. He also knew that every time they went to town his wife took a basket of nice, fresh eggs and occasionally a coop of nicely fattened fowls, but he never figured that the proceeds amounted to much. He made his money from his fruit, and when it was marketed it brought him a substantial bank roll.

One year there was a cold snap after the fruit-trees had budded, and the buds were all nipped by the frost and killed. It was a dead sure thing that there would be no fruit that year and our friend was desperate. It so happened that he had made some improvements upon his farm that had used up all his ready money, and he was depending upon the season's fruit crop to replenish his depleted bank account. He didn't know how they could get through the year that must lapse before they could expect another crop of fruit. He talked it over

with his wife, and when she suggested that perhaps the income from the poultry would keep them, he laughed at her. In spite of his derision, however, she insisted that if they would get a few more hens and had good luck in raising chicks that season, that they could live on the profits of the poultry, providing he would fix up suitable quarters for the fowls. While he doubted her judgment, he followed her advice, as it seemed the only thing to do, and when telling of it at the farmers' institute he said: "And I tell you, gentlemen, we lived that year as well as we had any previous year, and every dollar of income we had was from our poultry. I fixed up good, warm quarters for the fowls, and the way they shelled out the eggs was good to see. We had eggs to sell all the time and marketed the cockerels as fast as they became fit, paid our bills as we went along, and we didn't seem to miss the income from our fruit at all. Since then I give more of my time to the poultry, and I know there is good profit in a flock of fowls."

We didn't tell this last story to our erstwhile pessimistic caller, but before leaving our office he admitted that he had changed his mind in regard to the profits in poultry culture.

There is good money in the poultry business if it is properly conducted. This has been proven in thousands of cases throughout the country. The little hen is a mortgage-lifter if she is properly cared for. Because people have embarked in the poultry business and failed to make a success of it should discourage no one. Some people could not make a success of anything. Commercial reports show that over 90 per cent of all the people who go into the mercantile business fail sooner or later, but still there are new ventures made in this field every day. We have no way of knowing what per cent of poultry ventures on lieve we are safe in saying that an investment in the poultry business is at least 25 per cent safer than an investment in the mercantile business. The demand for fresh eggs exceeds the supply, and if a person is located within a hundred miles of any of the larger cities, he can easily dispose of all the eggs and poultry he can produce at a good premium over current market prices. In fact, during the winter months he can practically get his own price.

A commercial poultry plant can be made all the more profitable if only pure-bred fowls are kept and carefully bred for both utility and fancy qualities. There will be a certain per cent of the birds raised that will bring good prices as fanciers' fowls, and this will be so much clear gain. In every instance we have mentioned in this article, except one, pure-bred fowls were kept exclusively. There is money in the poultry business—if properly conducted.—Commercial Poultry.

The Great American Hen.

The greatest thing in the United States to-day is the hen. Her portrait "rampant" ought to appear on every dollar, half, quarter, and dime that Uncle Sam puts out; for the actual fact is "Biddy's" business brings in more of those same dollars, halves, and quar-

ters than any other single—and I might almost say double—American industry. Three hundred million dollars' worth of poultry products is "Biddy's" yearly contribution to the farmer's pocketbook, and if the exact truth were known, a goodly number of those three hundred millions were made by men and women who have studied how to feed the hen.



Such men use good, sound, chicken

sense. They begin with young chicks, and follow a consistent system of feeding all through the life of the hen; using with the regular ration, that wonderful discovery of Dr. Hess—Poultry Pan-a-ce-a—which builds healthy flesh, bone, and feathers, and makes early laying a habit. Now let me say right here that Dr. Hess Poultry Pan-a-ce-a is not a stimulant. Rather, it is a health-giving tonic, which helps the hen to get out of her food all that Nature would otherwise supply.

Poultry Pan-a-ce-a helps the hen to digest her food properly, which of itself gives her health and vigor. It aids assimilation—every grain or particle of food goes where it is most needed, to build bone, flesh, feathers, or to make eggs, so that the greatest possible good is realized in the least possible time.

The saying that "an ounce of prevention is worth a pound of cure" is doubly true in the poultry business. The wise hen man cures his hens before they get sick, and his one certain agent for doing it is Dr. Hess Poultry Pan-a-ce-a.

Poultry Pan-a-ce-a and Instant Louise Killer are the result of long study and experiment under just such conditions as the farmer meets with in his own yards.

Dr. Hess & Clark, of Ashland, Ohio, are so confident of the good you will get from these preparations that they are willing to give a written guarantee with every package. The cost is so small it's hardly worth considering.

Great Vehicle Book Free.

The Ohio Carriage Manufacturing Company's catalogue contains 184 profusely illustrated pages. If you are interested in light vehicles—if you are thinking about buying a new buggy or carriage, wouldn't you like to see all the very latest styles so perfectly pictured by photographic reproduction that they seem to stand before you? And wouldn't it be worth while to know—just how a good buggy is made; What kind of wood is used? What kind of metal? What kind of leather? What kind of guarantee goes with it? What kind of people stand back of the guarantee? How you could try out the vehicle to your own satisfaction before parting with your money for it?

All these, and a good many more questions of first importance to vehicle-buyers are answered in the Split Hickory Vehicle Book just issued for free distribution by the Ohio Carriage Manufacturing Company, of Cincinnati, Ohio. It may be obtained without a cent of cost by writing to the Ohio Carriage Manufacturing Company. The demand is so great, however, that readers should take advantage of it at once.

This remarkable volume—for it can not be properly called anything less—contains 184 pages 7 1/2 inches wide and 10 1/2 inches deep. These pages are filled with information about the Ohio Carriage Manufacturing Company's famous Split Hickory line—buggies, driving wagons, bike wagons, stanhopes, photoons, stick wagons, handy wagons, surreys, carriages, spring wagons, delivery wagons and carts, and in addition its made-for-service single and double harness. Many of the illustrations are in colors showing the vehicles exactly as they appear. This free catalogue is without doubt the most elaborate work of its kind now offered to our readers. Its special features—descriptions of the making of vehicles part by part, wheels, axles, springs, bodies, gear, cushion, and backs, tops, shafts, poles and fixtures—full discussion of the freight question, with rates to all points, suggestions of value to all buggy-users—make it a book that every reader would prize. We advise all that desire it to lose no time in writing to the Ohio Carriage Manufacturing Company. Be careful to ask for catalogue. We are justified in saying that no buggy-buyer is completely informed as to the latest and best offerings in the market without it.

New Gas and Gasoline Engine Plant.

We illustrate herewith the new plant now under construction of the Witte Iron Works Company, of Kansas City, Mo. When completed, it will be the largest, most complete, and up-to-date gas and gasoline engine plant in the West; practically fireproof, steel brick and stone construction, 60,000 square feet of floor space, equipped with the finest of modern machine tools, electric power, traveling cranes, private switches, with enclosed loading warehouses.

The company have put in their own natural gas wells and water supply, will operate independent electric light plant, telephone service, with modern accommodations for benefit of visiting



No. 42. Light Double Buggy or Carriage Harness. Price complete with collars and nickel or imitation rubber trimmings, \$24.00. As good as sells for \$4.00 to \$8.00 more.

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Our vehicles and harness have been sold direct from our factory to user for a third of a century. We ship for examination and approval and guarantee safe delivery. You are out nothing if not satisfied as to style, quality, price.

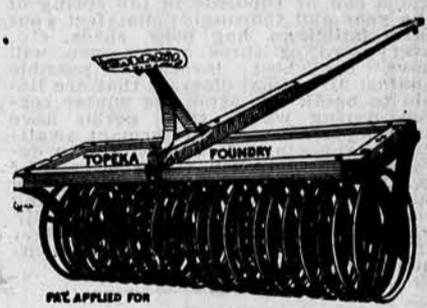
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No. 309. Fine Canopy Top Surrey. Price complete, \$65.00. As good as sells for \$25.00 to \$30.00 more.

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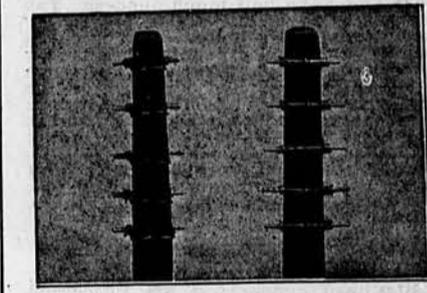


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A Post for the Future as Well as the Present. (Patented)

Adapted to and covering every possible requirement of farm, ranch, railroad, or wherever posts are needed. The best, cheapest, most convenient, most practical wire fastener, and the most durable post ever made. For particulars write

GEO. HASS, Lyons, Kans

CEMENT STONE

Build your buildings with cement stone. We can sell you a down face outfit complete for \$30 F. O. B. Wichita. Write for particulars.

J. H. TURNER, -:- Wichita, Kans.

BEE SUPPLIES

We can furnish you bee and all kind's of bee-keepers' supplies cheaper than you can get elsewhere, and save you freight. Send for our catalogue with discount sheet for early orders.

TOPEKA SUPPLY HOUSE, 7th and Quincy, Topeka, Kans.

mine hoisting engines, pumps, irrigation equipment, in sizes from 2 to 100 horse-power.

Dipolene.

Just now a few words of advice will be very opportune with reference to the shearing, as the season will soon be at hand.

Elsewhere in our columns you will find an advertisement of one of the best dips on the market—Dipolene—which is manufactured by the Marshall Oil Company, Marshalltown, Iowa.

As a further word of advice, let us say that we are confident if you will get a can of Dipolene in the spring of the year and thoroughly disinfect your farm buildings, hog pens, sheds, etc., every two or three weeks, you will have the best insurance possible against all animal diseases that are liable to break out after the winter season, during which time germs have been deposited and laid dormant awaiting the opening of the weather to develop their activity.

Cook Compliments "Beef Production."

That Professor Mumford's book, "Beef Production," is being fully appreciated by cattle-feeders generally is evidenced by the following, received from that extensive cattle-feeder, Mr. A. E. Cook, of Odeboit, Iowa, who writes as follows:

"I have just had the pleasure of reading 'Beef Production.' A more pointed, exhaustive, and comprehensive work on the subject I have never read. Based upon more than twenty years of practical experience in beef-production on a large scale, I frankly and unhesitatingly believe this book to be a most valuable one and just what the feeder and farmer requires to make him successful from the start."

Copies may be secured at \$1.50 by addressing this paper.

Caustic Balm Removed Cancer.

Toronto, Kans., June 21, 1904. The Lawrence-Williams Co., Cleveland, Ohio:

I have used Gombault's Caustic Balm more or less for about twelve years and have had much success. The last bottle saved me about \$14 in my stock, and I fully believe that it cured a small cancer on my wife's hand. My belief is based on personal experience as my father had had a cancer on his hand a year before and this one was in every particular like it except not quite so large.

The following letter received by C. A. Stannard concerning his Processed Crude Oil explains itself, and proves conclusively the value of this preparation as a dip:

Moreland, Kans., Jan. 25, 1907. "C. A. Stannard, Emporia, Kans.

"Dear Sir: Enclosed find check for which send me two barrels of Processed Crude Oil. I find this to be the best for lice and itch, and have tried running my hogs through a dipping vat for what was thought to be cholera and find that it cured them, making thrifty pigs out of little runts."

Appendicitis Conquered.

Kansas City has a doctor who has found what the medical profession has been seeking to learn for many years. "The Uses of the Appendix Vermiform." This doctor, H. C. Carson, looks upon surgical operations that remove the appendix as a crime against nature.

HENRY W. ROBY, M. D. SURGEON 730 Kansas Avenue, Topeka, Kansas

Grain Markets.

Kansas City, April 1, 1907. There was an absence of speculative life in the grain pit to-day. It was a waiting market. More bug reports were received. The receipts in the Northwest are running heavier than this time last year, and the weather is fair and promises to get warmer.

Kansas City futures: WHEAT. May... 69 3/4, July... 71 1/2, Sept... 72 3/4. CORN. May... 40 1/2, July... 41 1/2, Sept... 42 1/2.

In store—Wheat, 3,697,900 bushels; corn, 643,000 bushels; oats, 40,800 bushels; rye, 9,300 bushels.

Wheat—Receipts past 48 hours, 146 cars; shipments, 52 cars; receipts same time last year, 32 cars; shipments, 38 cars; inspections Saturday, 103 cars. The cash market to-day was rather slow, yet at the same time there was very fair trading before the day was over and the best hard wheat brought a little more money and red was steady with Saturday. Low grades, however, were still hard to move and prices were no better than steady.

Corn—Receipts past 48 hours, 147 cars; shipments, 55 cars. Receipts same time last year, 33 cars; shipments, 30 cars. Inspections Saturday, 74 cars. A fair demand was had for this grain to-day, but values ruled weak to 1/2c lower, mixed showing the principal loss.

Oats—Receipts past 48 hours, 34 cars; shipments, 11 cars. Receipts same time last year 11 cars; shipments, 12 cars. Inspections Saturday, 23 cars. There were more in to-day than for some days, but at the same time there was a very good demand and prices were much the same as on Saturday.

Rye—Receipts past 48 hours, none; shipments, none. Receipts same time last year, 2 cars; shipments, none. Inspections Saturday, none. There was but little doing in this grain to-day and values ruled about steady.

Barley—No. 3, 2 cars 54c. Flour—Market quiet but steady. Quotations: Hard winter patents, \$3.70 @ \$3.90; straights, \$3.40 @ \$3.60; clears, \$2.85 @ \$3.25; soft patents, \$3.85 @ \$4.15; straights, \$3 @ \$3.20; clears, \$3 @ \$3.10.

Corn Chop—Weak and slow sale. Quoted at 8c per cwt., sacked. Flaxseed—Receipts, none; same time last year, none. Steady, at \$1.12, upon the basis of pure. Bran—Lower and dull. Mixed, 87 @ 88c per cwt., sacked; straight bran, 85 @ 86c; shorts, 92 @ 94c per cwt., sacked. Cottonseed-Meal—At all points in

Kansas and Missouri, taking Kansas City rates, \$25.50 per ton in carlots. Castor Beans.—In carlots, \$1.25 per bushel. Ground Oil-Cake.—Carlots, \$27; 2,000-pound lots, \$28; 1,000-pound lots, \$14.50; 100-pound lots, \$1.50.

Seeds.—Timothy, \$3 @ 4 per cwt.; red clover, \$8 @ 12 per cwt.; Kafir-corn, 75 @ 79c per cwt.; millet, German, \$1.15 @ 1.20 per cwt.; common, \$1.05 @ 1.10 per cwt.

Broomcorn.—Quotations: Choice green, self-working, \$80; good green, self-working, \$75; slightly self-working, \$70; red tipped, self-working, \$60; common self-working, \$50.

South St. Joseph Live-Stock Market.

South St. Joseph, Mo., April 1, 1907. Supplies of cattle were moderate at all points for opening day of the week, in fact the total in sight at five points was far below expectations.

Supplies of hogs fell off sharply at all points, in fact, there were little more than half as many in sight as a week ago. Under this light supply the market here ruled very active with prices 5 @ 10c higher than the close of last week, and averaging right at 7 1/2c higher.

Market for sheep and lambs was quite liberally supplied, and after opening strong and unevenly higher, reacted and lost all of early strength. Lambs continue to constitute the bulk of supplies and about the only thing in the mature sheep line that is coming are the Colorado ewes.

Kansas City Live-Stock Market.

Kansas City, Mo., April 1, 1907. There was an advance of 15 @ 25c on steers after Tuesday last week, as orders were numerous and the run had been checked by the bad market Monday and the first half of Tuesday.

Hogs took a turn upward early last week and have been going up steadily each day, including to-day. Smaller supplies, and strength in provisions was the cause. Run is 6,500 to-day, market 5c higher, top \$6.55, bulk of sales \$6.45 @ \$6.52 1/2.

Sheep and lambs are holding up strong, without much net change in prices. Run is 9,000 to-day, prices a shade higher, lambs at \$7.50 @ 7.80, some medium class ewes at \$5.50 @ 5.65, ordinary wethers at \$5.85, and yearlings \$6.85.

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.

Stray List

Week Ending April 4. Wilson County—W. H. Couble, Clerk. PONIES—Taken up by J. E. Newby, in Neodesha tp., March 28, 1907. Two pony geldings; one a brown, 9 years old, 14 1/2 hands high, blemish on left fore foot and white streak near root of tail; the other a gray 9 years old, 14 1/2 hands high, no marks or brands.

The CANADIAN West is The Best WEST

THE testimony of tens of thousands during the past year is that the Canadian West is the best West. Year by year the agricultural returns have increased in volume and value and still the Canadian Government offers 160 acres free to every bona fide settler.

60 ACRE FARMS IN WESTERN CANADA FREE. GREAT ADVANTAGES. The phenomenal increase in railway mileage—main lines and branches—has put almost every portion of the country within easy reach of churches, schools, markets, cheap fuel and every modern convenience.

J. S. CRAWFORD 125 W. 9th St., Kansas City, Mo.

Nervous Indigestion

The action of digestion is controlled by nerves leading to the stomach. When they are weak, the stomach is deprived of its energy. It has no power to do its work. If you want permanent relief, you must restore this energy. Dr. Miles' Nervine restores nervous energy, and gives the organs power to perform their functions.

"For many years I was an acute sufferer from nervous indigestion; at times I was so despondent life seemed almost a burden. I tried all kinds of remedies and various physicians with little or no relief, until one night last summer I saw Dr. Miles' Nervine and Heart Cure advertised. I resolved to make one more trial which I did in the purchase of one bottle of Nervine and one of Heart Cure. In a few days I began to feel better, which encouraged me so much that I continued the medicine until I had taken more than a dozen bottles. I am very much improved in every way; in body, mind and spirit since I made a special point to recommend the medicine, and I feel a sincere pleasure in knowing that several persons have been benefited through my recommendations."

DOWLING'S FISTULA AND LUMP JAW CURE.

A scientific remedy and sure cure for fistula, polly and lump jaw. We send the cure on trial; use it carefully. If it cures your animal, send us \$1. If it does not, don't. State how long affected. If fistula, polly or lump jaw; whether swollen or running. Give particulars; also express office. W. T. Dowling Manufacturing Company, St. Marys, Kans.

Don't Eat Glucose.

Use our Percolator (the family use) and with the simple use of granulated sugar and cold water, make the purest and best syrup in the world, at a much less cost than you are paying for glucose or corn syrup. Operation perfectly automatic. Syrup cannot sour or crystallize. No waste. Price \$2.00. Write for full information. Ever-Ready Syrup Percolator Co., 188 C. Monroe St. Chicago. Agents wanted.

\$10.00 Sweep Feed Grinder. \$14.00 Galvanized Steel Wind Mill. We manufacture all sizes and styles. It will pay you to investigate. Write for catalog and price list. CURRIE WIND MILL CO., Topeka, Kansas.

Southward & Johnston

Established 1880. Dealers in—Hides, Wool, Furs, Pelts. WICHITA, KANS. Branch houses—Lyons, Kans., Guthrie, Okla. Shipping tags and price lists free on application. Write us, try us, and mention The Kansas Farmer. No More Blind Horses For Specific Ophthalmic Sore Eyes. BARRY Co, Iowa City, Ia. Have a cure.