

KANSAS FARMER

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LARGE OR SMALL FARMS.

Idealists have pictured a future condition in which every farmer shall till his own land and shall possess no more land than he can till well by his own labor, to the end that the land may "go around." True, the ideal arrangement meets trouble when the several children of the small farmer come of age, but a future obstacle like this is no serious annoyance to the idealist, for the idealist hates details and sees an enemy of humanity in every objector to his plans.

Now comes L. Whitney Watkins, a 2,300-acre farmer of Michigan, and before the Farmers' National Congress at its recent session at Rock Island, Ill., says:

"The oversight that will manage 100 acres will as well manage 200. The machinery needed for 100 acres will do the work on 200. Labor, teams, and other expenses for 200 acres are not double what they are for 100. It is easier to hire good men to work on a larger farm, and there is less necessity of having strangers in the family circle. The products of the larger farm can be sold to better advantage."

On this same point, Henry Wallace, Editor of Wallace's Farmer, says:

"In Iowa and States similarly conditioned the trend is toward larger farms. The larger farm requires relatively less help and less machinery; it distributes the labor better through the year; it means better farming at less cost."

The advantage of operations on a large scale are as real in other industries as in farming. The newspaper publisher who has a few thousand subscribers can not furnish as large or as good a paper for \$1 a year as can the publisher who has many thousands. The manufacturer of farm machinery who makes and sells but few finds the cost of each machine far greater than if he makes and sells thousands of machines. The railroad when it carries little freight does its work at greater cost per car per mile than when it carries much freight. The tendency to the concentration of industry into few and large concerns is therefore fostered by the powerful incentive of greater profit—possibly the large operation is made necessary to the realization of any profit.

This tendency is further fostered by the desire of the timid to avoid responsibility and to secure positions in which the pay comes regularly and without precedent anxiety, thereby furnishing the help necessary to the large operation.

Shall we then descend from the proud position in which the promoters of the homestead act fondly pictured the American farmer and the American artisan as owning and operating each his own means of livelihood, and developing his individuality and initiative as a free man—to a position of few owners, few hiring bosses, and many hiring operatives?

It must be confessed that the facts point to the undesirable condition. If it must come, then with it will inevitably come the extension of trade unionism to include hirelings in every industry. Then must come the federation of unions for concerted action in enforcing demands. The end of the contention about wages and hours of labor can not be foreseen.

There is another class of idealists who do not agree with those first mentioned in this article. These latter welcome the concentration of all industries, including farming, under large and few managements, and they expect that these managements will become still larger and fewer—possible more

exacting from employees and from the general public—until for self-protection the public as represented by the Government shall be driven to take over all industry, employing everybody and supporting everybody.

The conservative people who are doing the best thinking at the present time regard the socialists' plan as far less desirable than any other, realizing that the progress of the world has been made through the aggregated force of individual initiative and of efforts made for the furtherance of individual interests.

The farm has stood longest against the forces of consolidation. If the speakers above quoted spoke advisedly, however, the beginning of the end of individualism in farming is making its appearance.

SHAWNEE COUNTY BOYS' CORN-GROWING CONTEST.

Shawnee County organized her corn-growing contest rather late last spring. But about thirty boys entered, twenty-two of whom exhibited samples of their products at the court-house November 3. After entering their 10-ear samples, the boys were invited to a banquet at the expense of the Topeka Commercial Club. On their return to the city court-room, in which the contest was held, Major T. J. Anderson, secretary of the Commercial Club, on behalf of business men of Topeka presented each boy with an excellent knife. R. S. Brigham, manager of the Midwinter Exposition, announced that the winners of the first and second prizes would each be given a free pass to the exposition during its entire continuance.

Following is the list of contestants: Ray Kimball, North Topeka; Glenn O'Neal, Berryton; Finney Markham, Elmont; Arthur Monroe, North Topeka; Glendon Pollom, North Topeka; Fred Van Nice, Richland; Irwin Long, Tecumseh; Milton Long, Tecumseh; Perry Tice, Mission Center; Karl Nystrom, Station B, Topeka; Ralph Taylor, Shorey; Perry Stover, Shorey; Zoe Burnett, Station B, Topeka; Clarence Olson, North Topeka; Edward Warner, Auburn; John Ready, R. 7, Station B, Topeka; Joseph Sproul, Station B, Topeka; Roy Holtz, Richland; Hugh Bundy, R. 7, Station B, Topeka; Dwight Williams, R. 7, Station B, Topeka; Clayton Kline, R. 7, Station B, Topeka; Kenneth Kline, R. 7, Station B, Topeka.

The judges were Arthur Kiene and R. N. Dorman, each of whom had training in this class of work at the Agricultural College. Each exhibit was given a number so that the judges did not know to whom they were making the awards.

Following are the names of the winners:

First prize, \$10, Arthur Monroe; second prize, \$8, Clarence Olson; third prize, \$6, Karl Nystrom; fourth prize, \$4, Fred Van Nice; fifth prize, \$2, John Ready; sixth prize, \$1, Zoe Burnett; seventh prize, \$1, Hugh Bundy; eighth prize, \$1, Joseph Sproul; ninth prize, \$1, Perry Tice; tenth prize, \$1, Edward Warner.

The boys had been requested to report the methods followed in producing their corn, but lack of time made it impossible to receive these reports. Following is the written report prepared by the winner of the first prize:

"I plowed the ground about seven inches deep on April 25, and harrowed it three times. The ground was marked out with a one-horse, single-shovel plow. The rows were about three feet ten inches apart. I drilled the corn in with a one-horse drill, dropping the kernels about sixteen inches apart. The corn, Boone County White, was planted

on May 2. It was first cultivated on May 19 to a depth of about four inches. I hoed the corn May 25. The second cultivation was on June 1, the third cultivation June 13, and the fourth cultivation July 3. A two-horse cultivator was used. This corn was raised on upland, and 617 pounds were raised from one quart of seed."

Reports from other boys will be printed later.

To provide for continuance of the contest next year, vice-presidents were selected from the several townships as follows:

C. A. Kline, Monmouth Township; Wm. Quall, Topeka; John Milliken, Tecumseh; Emery Probst, Mission; Wm. Fierstone, Auburn; Chas. O'Neil, Williamsport; Arthur Kiene, Dover; W. P. Kimball, Soldier; Grant Kelsey, Menoken; Ben Hook, Silver Lake; David Howard, Rossville; Bradford Miller, of Topeka, at large.

These vice-presidents were directed to select a president and to perfect the organization. Their first meeting will be called by Bradford Miller.

The work of this season was conducted by a committee consisting of F. P. Rude, Emery Probst, Joseph Pollom, and Bradford Miller. It is expected that the auditorium will be necessary for the accommodation of next year's contest.

CEMENT FENCE-POSTS.

How can I make cement posts, and how much will good ones cost? Clay County.

It is perfectly possible to make strong fence-posts of concrete by the reinforcing method. The posts may be reinforced by iron wire or iron rods which should be put as close to the outside surface as possible. The reinforcing pieces should run lengthwise of posts and should be bent or looped at the ends to prevent slipping between the iron and concrete. Barbed wire is good but is hard to handle on account of the barbs. The posts should be about 6 inches square at the bottom and 6 inches by 3 inches at the top. This gives a taper on two sides. In order to fasten iron to the posts, it is a good idea to embed staples or loops of galvanized iron in the concrete while hardening. The wire fence may then be attached to the post by wiring it to these staples. As these staples are exposed over a part of their surface to the elements, it is necessary that they should be galvanized.

A good mixture is 1 part Portland cement, 2 1/2 parts clean, coarse sand, and 4 to 5 parts crushed stone or gravel. These proportions are by volume. It is better to screen the sand and then add the gravel, rather than to estimate the amount of gravel in the sand. The cement and sand should be thoroughly mixed dry, and then the gravel or crushed stone added. The mixture should be wet down to the proper consistency, and thoroughly tamped in the molds. The wetter the mixture the stronger the posts will be, but the slower it will harden sufficiently for handling.

The posts should be molded on a level platform and should not be moved from that platform for one week. They should be sprinkled thoroughly two or more times a day during the week. The sides of the molds may be removed as soon as the post is stiff enough to retain its shape. The direct rays of the sun should not strike the post while hardening.

The cost of the cement will depend upon freight rates. It will probably be from \$2.50 to \$3 a barrel. It will require from 20 to 25 cents worth of cement for each post if made 7 feet

long. The post should set in the ground the same depth as wooden posts. This, of course, depends altogether upon the nature of the soil, and the strain apt to be on the fence.

It is not at all likely that satisfactory posts will be secured without reinforcing. The corner posts will not need bracing unless the soil is of a loose character. E. B. McCORMICK.

JONATHAN APPLES—HOGS VS. CURCULIO.

Marketing the apple-crop of 1906 has been a pleasure or a pain, depending much upon the variety of apples the orchardist has had to sell. The local markets have been overstocked. A few days ago the writer met a farmer who had sold a load of fair fruit at 10 cents a bushel. But the demand for Jonathans has been brisk and prices liberal. There are two reasons for this: First, the Jonathan is an excellent apple, and second, it keeps well in cold storage, coming out at any time from October to May with its color and quality unimpaired. The veteran apple-grower, Judge Wellhouse, says that if he were planting 1,000 acres, every tree would be a Jonathan.

Speaking of his experience this season, Mr. Wellhouse tells of an experiment at his Leavenworth County orchard with pasturing hogs in the orchard. It was convenient to inclose five acres of Jonathan trees in a thirty-acre hog-pasture. These trees furnished the only shade in the pasture, so that this part of the field was much frequented by the hogs. Every curculio-stung apple was devoured as soon as it fell. The trees were in no wise injured by the hogs. At gathering time the fruit from other parts of the Jonathan orchard was found to be damaged in the usual way by the curculio, while every apple from the hog-pasture was absolutely free from curculio. The Jonathan orchard yielded 175 bushels per acre, and the portion in the hog-pasture contributed its full share in bushels and far more than its share in value. The trees are twelve years old.

Former experience in pasturing hogs among young trees has been unfavorable.

So pleased is Mr. Wellhouse with the results of this last experiment that he will make his orchard fences all hog-tight and will see to it that there are hogs enough among the trees to take care of the curculio.

OIL STOVES.

EDITOR KANSAS FARMER:—I would like to ask you about the Uncle Sam Oil Company and its advertisement that appeared in the Daily Capital a few days ago. Is it a responsible firm and is crude-oil a success for heating purposes? This company claims that it has a crude-oil burner that can be used in any ordinary heating-stove and that it is a success. Now if this is true, it certainly is a good thing for the people of Kansas, with coal at \$7.50 per ton out here.

I think if I remember correctly that some time ago it was stated in THE KANSAS FARMER that some one of THE KANSAS FARMER force was going to try an oil-heater, but I don't remember whether or not the result was published.

There was an advertisement in THE KANSAS FARMER a week or two ago claiming that a firm had an oil-stove that burned a small amount of oil and a large amount of air for cooking and heating. Do you know anything about this firm and its stove? Will it heat a large house in cold weather or will it just help to warm small rooms?

Do you know if there is any disa-

greeable odor from the oil in any of these stoves? In short, do you think it is best to try these heaters in our houses this winter? We were just about to buy a new heating-stove for this winter, but don't want to if oil is to be our fuel. I would be very glad to have your opinion in regard to both of these different firms and their stoves.

Graham County. W. C. BROWN.
THE KANSAS FARMER has had considerable dealings with the Uncle Sam Oil Company, and has received fair treatment in every respect. The writer has not seen the Uncle Sam oil-stove in operation, but understands that it is constructed on correct principles. Reports as to its operation have been favorable.

The stove advertised in THE KANSAS FARMER last week is furnished by the Standard Oil Company and can probably be obtained through the dealers handling Standard Oil goods. The writer has seen this stove in operation. It burns with a clear flame like a lamp, and gives out heat in proportion to the oil consumed. The stoves seen by the writer were not large, and probably two of them might be required to warm a large-sized living-room in very cold weather.

The crude-oil burner experimented with by the editor of THE KANSAS FARMER last spring has in some cases been entirely satisfactory. The operation was entirely satisfactory in a cooking range until it was undertaken to make it heat water for the bathroom in the ordinary range boiler. Then trouble began, and it was impossible to prevent the smoke passages from choking up with soot. The manufacturers of this burner have done a good deal of experimenting with the burner since that time, and will doubtless have a successful burner on the market if they have not already succeeded.

One of the things about burning oil, which does not always occur to the beginner, is the somewhat uncertain supply. Used as fuel, oil disappears rapidly, and dealers in most places have not yet prepared to keep in stock such supplies as to make it a reliable kind of fuel to depend on in cold weather.

FENCE-POSTS SET IN CEMENT.

EDITOR KANSAS FARMER:—As I am thinking of setting corner posts in cement for fence, would be pleased to have the following questions answered through your valuable paper:

If twenty-eight inch Page hog-fence is used, how deep should the posts be set? How large should the holes be? What part cement should be used with coarse sand and gravel? About what would be the cost per bushel of the concrete? Would the fence still need braces to maintain good corners? Being first bottom on the Arkansas River, striking sand and water at a depth of three feet, would the fence be a success? A READER.

Reno County.
If the corner posts are strong enough to bear the strain without danger of breaking, they may be bedded in concrete so as to hold them erect. It will be well to plant them at least thirty inches deep. If the soil is firm and not likely to be disturbed, a hole one foot in diameter filled with concrete around the post should give it a good deal of firmness. In very firm soil a smaller hole may answer. In planting telephone poles in Topeka, concrete was placed around the bottom of the pole to a depth of six or eight inches. Earth was then used to within eight or ten inches of the top, and concrete was used to complete the job.

Concrete for this purpose may be made of 1 part Portland cement, 4 parts sand and gravel, and 5 or 6 parts broken stone. A bushel of such concrete will contain about 15 to 20 pounds of cement. If the broken stone is omitted, 1 part of cement to 5 parts of sand and gravel, or if there is as much coarse gravel as sand, 1 part of cement to 6 parts of sand and gravel may be used. In this case there will be about 21 pounds of cement to a bushel of the concrete.

VALUABLE LAND TO BE OPENED FOR SETTLEMENT.

The next large tract of land to be opened for settlement, under the National Irrigation Act, will be the Uncompahgre Valley, in Colorado. Here the Government has been driving a tunnel six miles long to connect the Gunnison and the Uncompahgre Rivers, and its completion is promised by the fall of 1908. One hundred and fifty thousand acres of land, now arid, lying in the valley of the Uncompahgre River, will be made into productive farms and orchards.

In the cover design of a folder issued

to give information to homeseekers about this new land of promise, Uncle Sam appears in a new role, that of the Goddess of Plenty, with his cornucopia pouring out riches, in the form of a stream of water which flows down through and makes fertile a vista of farms and orchards.

The folder, which is fully illustrated, describes at length the Government works, the character and value of the land to be watered, and contains valuable information for future settlers. It is issued for gratuitous distribution by the Denver & Rio Grande Railroad, whose lines traverse the valley.

BAILEE'S LIABILITY.

EDITOR KANSAS FARMER:—Will you please give me some advice in regard to the sweep-grinder owned by a neighbor? I used it with my team several times on his farm and paid him for grinding. It was broken by an accident. He got the new parts and told me to pay the dealer for them. Will I have to buy the new parts, although I have paid him for the grinding? McPherson County. W. L. T.

Our correspondent does not state his questions plain enough to enable us to give an answer that will be entirely satisfactory to him. Our correspondent says he paid for the use of the grinder, so that part of the deal is settled. If through carelessness or improper use it has been broken, it is his duty to repair it or pay for the new parts required to replace the broken parts. If he delayed paying for the broken parts, till the price of the broken parts has been raised, that will not excuse him from replacing them, if they were broken through his fault.

PIPE-LINES HAVE NOT RIGHT OF EMINENT DOMAIN.

EDITOR KANSAS FARMER:—Being a reader of the old reliable KANSAS FARMER, I want to know if a land-owner can keep a pipe-line from being laid through his farm; or in other words can a pipe-line company lay its line through a farm without the consent of the owner? F. W. GILLESPIE.

Harvey County.
The answer to our correspondent can be very brief. The pipe-line company has no right to lay its pipe over land without the consent of the owner. If the company will not deal fairly with you, you can enjoin it by proceeding in court. There is no law conferring the "right of eminent domain" on a pipe-line company.

BLOCKS OF TWO.

Every opportunity to do a favor to a friend or neighbor should be improved. The subscription price of THE KANSAS FARMER is \$1 per year. It is worth the money. But the publishers are extending the circulation rapidly by means of their blocks of two proposition. It is this:

Every old subscriber on sending his dollar for renewal is authorized to send the name and address of some one not now taking THE KANSAS FARMER and the dollar will pay for both subscriptions for one year. Address, The Kansas Farmer Company, Topeka, Kans.

In Indiana a seed-corn special train will be run over the Lake Erie & Western Railroad November 13-17. Recent investigations by the Experiment Station show that the stand of corn in the State is less than 75 per cent of a perfect stand. This condition in most cases is due to poor seed. By the use of demonstration material and results of investigations, the Experiment Station hopes to show the farmers how the conditions of the stand of corn through the seed can be readily improved.

The authorities of the Kansas State Normal Schools will hold inaugural ceremonies of Joseph Henry Hill, A. M., D. D., as president of the schools, November 15, 1906. The importance of these schools which teach teachers has long been recognized as of the first order.

The National Grange, Patrons of Husbandry, will meet at Denver, Col., November 14. This will be a great meeting of a great body representing the greatest industry of the greatest country on earth.

VOICE OF THE PEOPLE.

D. Newby, Columbus, Kans.—"I am not an admirer of 'gush,' but will say that I think THE KANSAS FARMER is much the best paper for the Kansas farmer to take that is published 'this side of the stars.'"

H. E. Gwin, Morrowville, Kans.—"THE KANSAS FARMER is prized in our

home, not only for its reliable and accurate information in matters pertaining to agriculture in general and grass culture in particular, but for its high moral tone and the fearless stand it takes upon all public questions as well."

Mrs. D. C. Clark, Lyndon, Kans., writes as follows:—"THE KANSAS FARMER has for ten years been to us a trusty friend. May it receive its full share of the wealth it has helped to make."

A. M. Bear, Medora, Kans.—"I think every farmer in Kansas should read THE KANSAS FARMER."

C. M. Rust, Withrow, W. Va.—"I am a reader of THE KANSAS FARMER and think it is a fine paper. I could not do without it in my home."

F. C. Merrill, Lawrence, Kans.—"THE KANSAS FARMER is the very best of all agricultural papers which we are acquainted with, both as a family paper and otherwise. Can't do without it."

Floyd Morris, Halstead, Kans.—"I have quit farming and have sometimes thought I would try and get along without THE KANSAS FARMER, but I guess I would miss it more than any other paper we take. I believe I have been taking THE KANSAS FARMER for twenty-five years."

Miscellany

Is Our Present Public School System in Accordance with the Farmers' Best Interests?

SUSIE L. SEWELL, BEFORE BROWN COUNTY FARMERS' INSTITUTE.

Is our present school system in accordance with the farmer's best interest?

The preponderance of evidence is so strongly in the negative that we can only hope to touch upon a few of the many reasons why it is inadequate, and at the same time hope to offer suggestions as to how it can be bettered. In fact, we hesitate to tear down unless we build up something stronger and better in its stead. The world is ruled by ideals and when we lose sight of our ideals we retrograde.

A PATRIOTIC SIDE.

A government of the people will be assured of success so long as the people are intelligent enough to govern themselves. The fathers of our republic had ideals, and laid the foundation for broad, liberal, and universal intelligence in connection with the structure on which civil liberty has been reared. But the country schools have not kept pace with our development in wealth, science, or industry. The agriculturalist has done much toward feeding and clothing the world, accumulating wealth and by his stable conservatism is helping to steer our Nation safely through the social and industrial upheavals that threaten us, but he is not doing what he could or should if he fully realized the importance of education in producing good citizenship. Worthy thoughts are the surest guaranty of worthy actions. High thinking is most conducive to right living. The most honorable attainment in this world is to be a good citizen, and the man whose mind runs in the channel of purity and refinement may most always be regarded as a good citizen. Education is the saving grace of our republic. The improvement of our rural schools is a task in which every lover of his country and his race may profitably engage. All our schools need the thought and work of the best talent, but the social and financial conditions rest more heavily upon the schools of the country and naturally hinder their growth and prosperity. Under our State law, the farmer has the opportunity to make good district schools if he will put enough of himself and money into them to make them good.

As long as the farmer is so engrossed in commercialism that he has neither time nor thought to consider seriously the condition of the district school, just so long will this question remain unsettled. Public educators and periodicals have taken the initiative, but it is only for the farmer to work out for himself; and it is imperative that he must improve the schools, as he stands responsible in this complex Government of ours for over 10,000,000 votes. It is not only what the farmer produces from the soil that makes him a mighty factor in the world, but what he is, what he thinks, and what he does are the factors that make him great. He must realize more and more the necessity of making himself and children potential elements for making his Nation better and greater. Governor Cum-

mins, of Iowa, says: "We need schools that produce citizens who give to their country the right performance of every duty. Citizens who repudiate that barbaric sentiment that he may take, who has the power, and he may keep who can; a citizen who has the right regard for the rights of others, a loving sympathy for the weak and unfortunate, a bold voice for truth, and a strong arm for justice."

OUR PRIDE.

We speak of our school system as the first glory of the American Nation. Until recently it stood out the wonder and admiration of the world. We are justly proud of the results, but it is inadequate for the demands of the common people, and the common people are the ones God always calls when a great work is to be done. It is possible today, by arising to the emergency, for the masses of the people through proper education to save themselves and Nation in this commercial age.

The farmers' attitude in regard to the education of his children in a large portion of the United States, reminds me of President Roosevelt. Once, when a boy, Roosevelt belonged to a company of cavalry. There being no other steed convenient, Roosevelt took a bronco. The order was given to mount and remain so until ordered to dismount by headquarters. The captain riding down the line saw Roosevelt lying on the ground and remarked, "You have dismounted with orders from headquarters, I suppose." "No," said Roosevelt, "from hindquarters," the bronco having done the work. Our country schools have had orders from the wrong source long enough. It is our school system that is killing our country schools, as it is existing for itself and not for the good of our children. We are told the country schools were better twenty-five years ago than today. It is doubtless true. They met the needs of the people at that time more fully than the schools of to-day meet them, as our commercial and industrial progress demands a graded system with high school work. Until the country school question is settled right, corrupt municipalities, boodling political rings, etc., will threaten our republic, as political incapacity and inattention of the people will allow bribery and corruption to exist. When the school question is settled right, people of culture and refinement will be attracted to country life, who can not now leave the towns because the country affords no way of educating their children or any social privileges; also, farmers of wealth and influence will be induced to remain on their farms after retiring from active life rather than move into town, and thus better the social conditions.

A leading pastor in a large city church recently told me that school consolidation was the keynote to building up our country churches, as proper school privileges will keep a better class of people in the country to maintain them. When the school question is settled right, the problem of how to keep boys and girls on the farm will be solved, also sociability and monotony, as a country high school would demand teachers whose personalities are powers and examples for good; it would demand good libraries, good music entertainments, lecture courses, etc., that would afford culture and recreation and bring the people of the district together in social intercourse.

When the country curriculum includes the teaching of agriculture and rural economics, the hired-help problem on the farm and in the home will resolve itself into scientific agriculture and cooperation.

Under the following crude outline we give a few reasons why we think rural school consolidation the best solution of the country school question and most essential to the farmer's best interest.

NEED OF A GRADED SYSTEM.

We need a graded system with high school work, better prepared teachers, more attractive and substantial buildings, with sensible equipments.

First, we will consider the high school of vital importance in holding incentives to children in the lower grades for more years of schooling and obtaining that schooling at home. Into our country schools we send children with the soundest bodies, cleanest minds, and purest souls. But only a small per cent ever go higher than the so-called eighth grade. And there is little in our district schools or country life of to-day to encourage a child to push forward in obtaining an education.

Under a graded system with high school course the child would expect nothing else but to go until he finished, just as he goes to the district school

thinking he has accomplished a great deal when he finishes there.

THE AIM.

To make complete lives is the chief aim of education. Under the present system our teachers are obliged to serve so many grades, consisting of children of various ages, that it is almost impossible for even a competent teacher to do efficient work.

Our children need a graded system including the high school work that will prepare them for college. Why?

A WRONG FOUNDATION.

We fail in laying the correct foundation for the education of our children, and at some future period of life we try to overcome these difficulties by sending them to a graded school in the city. But we never get the results we would have gotten had we begun right and followed up step by step the education of the children as they were ready for it. It is true that some of our most eminent men have come from the country—yes, from the country—more is the pity. They had to leave the country before they could fairly start up the ladder. Their success came from home life and country environment and not from the country school—but in spite of it. It seems the mediocre is largely what he is because he can do nothing but adjust himself to his environment. We must give the child something higher and nobler to look to if we keep him from plodding. Schools that turn out pupils at the eighth grade do not hold out opportunities for intellectual growth, social culture, or industrial development. It is through the high school we must hope to awaken our children to their power and teach them to exercise it in making our laws and purifying our politics.

A DIFFICULTY.

Chancellor Kent said: "The parent who sends his child into the world uneducated defrauds the community of a useful citizen and bequeaths to the world a nuisance. To-day the farmer must allow his children to grow up with only a common school education or be at the expense of paying taxes in the district where he resides and board and tuition in another, while he educates all or a part of his children, or move into town and leave the farm in the hands of tenants. Should he decide to send the children, the country school has graduated them at that critical age when every wise parent realizes the danger of sending children to make new associations and influences, alone, in the town or city.

THE TIME OF YOUTH IS PASSING.

Should the parent detain the child until older, the best years of his life for study are lost, and the child may lose interest in his books and lose his education entirely.

Then we often find parents, who, after sending one or two children away to school, have not the means to send others. It seems an injustice, but under our present school system it is an injustice that parents can not help.

A high school at home would remedy all this. Should the farmer decide to move into town, he finds trouble ahead of him there. The country is robbed of a useful citizen and the children taken away from the associations of the farm. Some one has said: "During the time they are acquiring the learning of books they are learning the habits, tastes, and interests of the town. They do not want to return to the farm."

The boys start out in life with a town education to make a town living. The farm is left in the hands of tenants who do not care for it except for the dollars and cents wrung from the soil. And the boy whose rightful heritage it is is clerking in some store or traveling on the railroad. When it is too late, he wishes himself back on the farm. The farm needs the boys, country society needs them, and there is no more paying investment for a good, liberal education than in the intelligent, scientific management of a good farm. Equip the country schools so our children will have the same advantages as the town schools and all this will be changed, as our children will not have to go away from the farm to get their schooling.

THE TEACHER.

The right method of mastering the alphabet contains the law and gospel of education, but the absolutely right method is still to seek as are also the perfect teacher and model scholar. We need teachers who have the morals, manners, and studies equally at heart, emphasizing purity, justice, and patriotism, who have made thorough preparation by college or university training. Our district schools, as they now exist, do not hold out inducements for thorough preparation on the part of the teacher. The frequent changing of teachers is disastrous to a well-

qualified teacher and a good school. School consolidation would greatly help in this regard in that it would dignify the position of the teacher and give them the benefit of direct and frequent help from the superintendent. Teachers and superintendent would be sufficiently remunerated to make it profitable for them to remain a term of years in the same school and work out their ideals.

Too often our district school teachers look upon teaching in the country school as a light task, when their duty is a most sacred one. In reality they need the seriousness of Plato, the fire of an Aristotle, and the eloquence of the Athenian to direct the intellects and morals of our boys and girls.

An ex-superintendent says (of course he was an Ex.): "The bright side of the rural teachers' work they seldom mention; that is, they have such smart children to deal with. If they were not bright children, they would learn very little from some of our teachers' first term's work. And some school officers repeatedly employ beginners because they work cheap."

TEACHERS' WAGES.

The teacher's plea—they can not do good work at \$30 per month; but perhaps \$60 is too much while they are learning the business, as they are paid

for much that is really worth more to the teacher in doing than to the district in having done, while they experiment on the children. But after learning the business teachers should be paid enough to make it an object to them to remain in the business.

Teachers, parents, and school officers should take a lively interest in our farmers' institutes as a means of education and development of their children.

Teachers can do much by encouraging the essay and map drawing work, for which the institute holds our inducements by offering good prizes. Country children will thus cultivate a disposition to take an interest in rural life and its associations.

CURRICULA.

Our schools are unprogressive and do not meet the needs of the twentieth-century child. Progress is the watchword of the twentieth-century agriculturist. He has been so progressive that the old gentleman in the following little incident realized the fact in a somewhat amusing way.

"What, my daughter marry you, a common clod of a farmer? Young man, you must be crazy," remarked the choleric old gentleman with a Mark Hanna build. We looked to see the young man in the overalls wither up and disap-

pear, but instead he smiled faintly, even haughtily, and jingling a bunch of loose change in his pocket pensively remarked: "Mr. Vanderfeller, I planted 20 acres of potatoes last spring, and the crop was a success." "What," cried the old man, surprise and remorse in his tones, "20 acres of potatoes? And I called you a farmer? You're an agriculturist, sir, and I'm proud to have you as a son-in-law."

The Epitomist says: "Agriculture represents so many branches it is a master industry. A study of comparative figures leads to the conclusion that it is making more rapid progress than the population of the country. Other nations have expressed anxiety over our wonderful industrial progress."

We are growing and expanding, and the fact that the American farmer occupies this enviable position of leadership should stimulate him to the necessity of cultivating the intellect of our youth, as our complex highly organized industrial and commercial system demands not the intelligence of the few, but the masses.

NATURE STUDY.

It is very necessary that we are careful of the kind of education we give our children. While city schools are profiting by school gardens, nature

(Continued on page 1194.)

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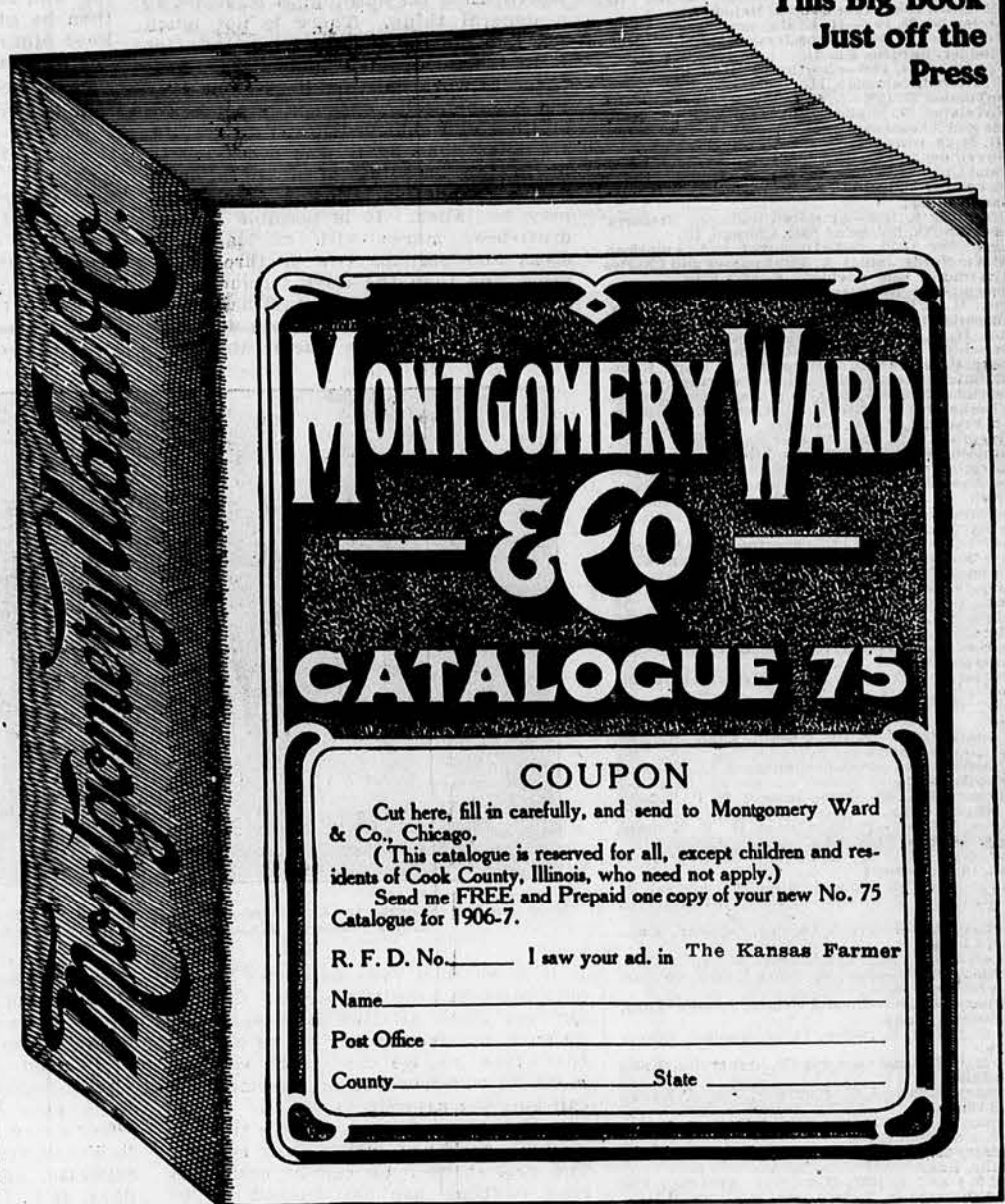
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Stock Interests

PURE-BRED STOCK SALES. Dates claimed only for sales which are advertised or are to be advertised in this paper. November 9, 1906—Poland Chinas at Fredonia, Kans. H. E. Bachelder, manager. November 10, 1906—Duroc-Jerseys at Fredonia, Kans. H. E. Bachelder, manager. November 13, 1906—Howard Reed, Frankfort, Kans. November 14, 1906—Poland-Chinas, H. B. Walters, Wayne, Kans. November 14, 1906—Poland-Chinas, F. R. Barrett, Cadmus, Mo. November 16, 1906—G. M. Heberd, Peck, Kans. November 17, 1906—Herefords, Henry Ackley, Wellsville, Kans. November 17, 1906—Poland-Chinas, Hammond & Stewart, Concordia, Kans. November 20, 21, 22 and 23, 1906—Blue Ribbon Sales of Shorthorns, Herefords, Aberdeen-Angus and Galloways at Fine Stock Pavilion, Kansas City. D. R. Mills, Des Moines, Iowa, Manager. November 23, 1906—H. E. Haynes, Olathe, Kans. November 24, 1906—Duroc-Jerseys, Marshall Bros., & Stodder, Burden, Kans. November 24, 1906—Shorthorns, Hall Brothers & J. P. Newell, Carthage, Mo. November 27, 1906—L. C. Caldwell, Moran, Kans. November 27, 28 and 29, 1906—Shorthorns, Herefords and Aberdeen-Angus at South St. Paul, Minn. D. R. Mills, Iowa, Manager. November 28, 1906—Snyder Bros., Winfield, Kans. Poland-Chinas. November 30, 1906—U. S. Ison, Butler, Missouri Poland-Chinas. December 6, 1906—American Galloway Breeders' Association Combination Sale, Chicago, Ill. December 11-12, 1906—Imported and American bred Herefords, James A. Funkhouser and Charles W. Armour, sale pavilion, Kansas City. December 18, 1906—Hereford cattle at Coffeyville, Kans. H. E. Bachelder, Fredonia, Kans., manager. December 14, 1906—Shorthorn cattle at Coffeyville, Kans. H. E. Bachelder, Fredonia, Kans., manager. December 14-15, 1906—Dickinson and Marion County Breeders Sale of Herefords, at Hope, Kans. J. B. Shields, Lost Spring, Kans., Secretary. December 15, 1906—Poland Chinas, Duroc-Jerseys and Berkshires at Coffeyville, Kans. H. E. Bachelder, Fredonia, Kans., manager. December 19-20, 1906—Webber, Apperson & Co., Teumseh, Neb., Berkshires and Red Polled Cattle. December 18, 19, 20 and 21, 1906—Shorthorns, Herefords, Aberdeen-Angus and Galloway at South Omaha, Neb. D. R. Mills, Des Moines, Iowa, Manager. December 19, 1906—Herefords, E. R. Morgan Blue Rapids, Kans. Jan. 17, 18 and 19, 1907—Shorthorns, Aberdeen-Angus and Herefords, South Omaha, Neb., W. C. McGavock, Mgr., Springfield, Ill. January 29, 1907—Grant Chapin, Greene, Clay County, Duroc-Jerseys. February 5, 1907—U. A. Cook, Salem, Neb., Duroc-Jerseys. February 6, 1907—Wm. Brandon, Humboldt, Neb., Duroc-Jerseys. February 7, 1907—R. F. Miner, Tecumseh, Neb., Duroc-Jerseys. Feb. 7, 1907—Ward Bros., Republic, Kans., Duroc-Jerseys. February 8, 1907—A. J. Fussell, Urab Orchard, Neb., Duroc-Jerseys. February 9, 1907—Poland-Chinas, C. O. Parsons Clearwater, Kans. February 12, 1907—Duroc-Jerseys, T. P. Teagarden, Wayne, Kans. February 13, 1907—Poland-Chinas, H. B. Walters, Wayne, Kans., at Concordia, Kans. February 13, 1907—J. B. Davis & Son, Fairview, Kans., Duroc-Jerseys. February 14, 1907—Poland-China bred sow sale at Abilene, Kans. L. D. Arnold, Route 1, Enterprize, Kans. February 15, 1907—Frank Dawley, Osborne, Kas., Poland-Chinas. Feb. 18, 1907—C. W. Taylor, Pearl, Kans., Durocs. February 19, 1907—Jno. W. Jones & Son, Concordia, Duroc-Jerseys. February 20, 1907—Poland-Chinas, Lemon Ford, Minneapolis, Kans. Feb. 20, 1907—J. E. Jones, Clyde, Kansas, Duroc-Jerseys. Feb. 21, 1907—Leon Carter & Co., Asherville, Kans Duroc-Jerseys. February 22, 1907—J. C. Larrimer, Derby, Kans., Poland-Chinas. February 23, 1907—Poland-Chinas, Holmes & McDaniels, Edmund, Kans. February 27, 1907—Poland-Chinas, W. H. Bullen, Belleville, Kans. April 3, 4 and 5, 1907—Herefords, Aberdeen-Angus and Shorthorns, Kansas City, Mo., W. C. McGavock, Mgr., Springfield, Ill. May 1, 2 and 3, 1907—Aberdeen-Angus, Shorthorns and Herefords, South Omaha, Neb., W. C. McGavock, Mgr., Springfield, Ill. Improved Stock Breeders Association of the Wheat Belt—November 12, 14, 15, 1906, at Arkansas City, Kans. I. E. Knox, Nardin, O. T., manager; Dec. 5, 6, 7, 1906, at Anthony, Kans., Chas. M. Johnston, Caldwell, Kans., manager; Dec. 12, 13, 1906, at Wichita, Kans., J. O. Larrimer, Derby, Kans., Manager; Feb. 13, 14, 15, 1907, at Caldwell, Kans., Chas. M. Johnston, Caldwell, Kans., manager.

Grading Up Drafters.

EDITOR KANSAS FARMER:—An example of what may be accomplished in the way of grading up drafters from a native foundation, and from a single, small mare at that, was furnished at the recently held Illinois State Fair. An exhibitor there showed a collection of registered mares, all of which he had raised from a native mare in the course of some twenty-five years. In the ring for aged mares he showed four full sisters, the eldest 9 years old. They were good types of the breed, but not of the highest class. It was, however, a most unusual thing to see four full sisters in one ring, and when it is stated that they were all great, big, rugged draft mares, the smallest weighing 1,790 pounds and the largest 1,910 pounds, enough has been said to show that they were of full drafter size, considering that they were thin. In the younger classes fillies from these mares were shown, and in each case they were an improvement on the dam. The owner of these mares deserves much credit for his work. It would have been an easy task to have sold the four aged mares for \$300 each, even had they not been registered. One of the younger mares, a 2-year-old, would probably sell for \$500, and the yearling for nearly as much, while two filly foals which were first and second in their class were very good. About the entire lot, however, there was a lack of quality that told against them. To the practised eye it was plain that the

sires used had never been of that grade of excellence which should be sought. This does not mean that the breeder has not done well. He has done well—very well, but he might have done much better if he had employed truly great stallions at least in putting the finishing touches to his work. If, for instance, he had used in his fourth or fifth cross a stallion of such superlative beauty, quality, and accuracy of conformation as Etrადegant, the stallion with which McLaughlin Bros. have won wherever they have shown him this fall, he would not only have had his size and bone, but better breed type, high quality, and considerably increased value.

Grading up is a long, stern chase at the easiest. You never got anything worth while for nothing, at least not as a general thing. There is not much use hunting it. It is better to go after it in the good old-fashioned way, prepared to work hard for it. No one ever yet deliberately chose a second-rate stallion and achieved first-rate results. In times gone by it was necessary to begin the breeding of drafters on a native foundation. Now a shorter cut may be taken. It is possible to buy draft-bred mares with at least one cross and perhaps two or three at a price, and then the work is much easier than it was when a start had to be made with the draft blood on one side only. But given the size in the dam,



Red Polled Steers in Feed-lot—Dual-Purpose Cattle, owned by Walter J. Burton, Fredonia, Kans. (Photo by Kansas Farmer Man.)

It is more than ever necessary to use only the best breeding horses. One can not get them all like Etrადegant, to be sure, but we can all get as close to that type as we can. And what is more, in this work of improvement we can pull out a profit as we go. In the breeding of drafters nowadays there is no long period of waiting for returns. The draft-bred foals can be cashed as soon as they are old enough to be weaned. JAS. HOPE. Dupage County, Illinois.

Care of Sheep During the Fall.

C. A. WILLSON.

The new flock-master is often puzzled with just how he shall care for the flock during the fall as to feed, mating the ewes, and the ram he shall use. Perhaps he has received the impression that sheep are naturally tender and of weak constitution and require greater care than do other domestic animals. As a matter of fact, sheep are by nature the best protected of our domestic animals, having a covering which protects them from cold and, with a properly oiled fleece, protects them from rain. However, this fleece has become changed through the agency of man and has become thickened and heavier so that when it becomes saturated with water, it requires some time for it to dry out. While they are able to withstand slight rains, protection should be provided for heavy and continued rains.

The object of the welfare of the flock during fall and winter months is to secure the healthy condition of the flock with the ultimate end in view of securing a strong, vigorous crop of lambs, and a good, clean fleece of wool with a strong fiber.

With this end in view, the shepherd is careful that he shall select a strong, vigorous ram, and that the ewes shall be in proper fettle. Since the improvement of the flock can be made more cheaply and quickly through the ram used, the good shepherd is careful that he use nothing but the very best. First of all, the ram must show strong masculine characteristics, as shown by the head; be of good constitution, as indicated by the large, open nostril, prominent, full breast, thickness of chest, fullness of heart girth, and a wide, strong, level back. Other points,

such as covering of wool, markings, carriage of ear, etc., take a secondary place in the choice of the ram.

After securing the ram, the shepherd should be careful to give proper care to the ram during the breeding season. The strain of the breeding season devolves largely upon the ram, and if we wish to look forward to strong, vigorous lambs we must see that the ram is kept in a good, vigorous condition during this season. It is advisable for this reason that we use a ram of at least one year of age, where it is possible. However, with proper care, a lamb may be used to serve as high as 30 to 35 ewes. If the ram has a large flock to cover, he should be allowed with the flock for only a short time each day, say for an hour in the evening and an hour in the morning, and then be given a supplementary ration. Feed him a liberal ration of corn, bran, and alfalfa.

Care should be taken to see that the ram is properly trimmed on the belly before he is turned with the flock in the fall. Especially is this true of the long-wool breeds. I have known the whole season's service of a ram to be nearly lost and the ram given the unwarranted criticism of not being a sure breeder, because of this oversight. The wool may become so matted as to form an apron for the ram.

The ewes should have a rest of at least six or seven weeks before the

breeding season begins, and during this time should be placed upon good pasture. Their feed should be supplemented with a little grain so that they shall be in good condition at the time of service. Before turning the ram with them, they should be properly tagged. After a ewe has been served, she should be taken from the flock and kept in a separate enclosure for two or three days, if it is desired to save the ram as much as possible. By handling the flock in this manner, a ram may be used to serve nearly twice as many as where he is left with the flock continually.

The ewes may be allowed to range, during the fall, on the wheat stubble, in the orchard, on blue-grass sod, or on whatever pasture is available, but care should be taken that all the sand-burrs, if there be any, should be destroyed. Nothing is more unsightly than a sheep's fleece filled with burrs, and nothing will damage it so badly as this. Sheep have been termed the scavengers of the farm, because of their propensity to eat the various weeds found in the fields and pastures. They enjoy a great variety in their feed, and for this reason they should be changed about as much as is convenient, so as to cater to their appetite.

As a pasture becomes scant in the fall, the breeding flock should be fed a little alfalfa hay and grain as a supplement to the pasture. You can not afford to let your sheep run down in flesh at this time of the year, since it is easier to hold the general good condition of the flock which you already have than to try to build them up after they have started to run down.

The most successful shepherd is the man who looks after his flock at all times of the year in such a way that his flock is always found in the pink of condition.

The Use of Salt.

A correspondent of American Sheep Breeder asks: "Why do sheep require salt?" There is a natural law which controls this matter. This is that everything that is contained in any animal must come from the food and water used; that every minute of any animal's life there is a waste of the substance of it, and consequently whatever is thus wasted must be supplied in the food. Every secretion and ex-

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cretion from any animal—these words mean wastes from the body of all kinds—contain salt; and we have learned by exact methods that a sheep excretes from its body every day one dram of salt. This is equal to half an ounce every week, and this twenty-six ounces in a year. This quantity is one pound and a half. Now, how many shepherds supply this quantity of salt to their sheep? There is a very small part of it supplied in the food, but this is wholly insufficient for the needs of any animal. Now these facts will answer the question proposed.

But what will happen if this actual necessary of life is not supplied? Suppose we take a mere thing, like a watch, and remove one of the smallest wheels in the machinery of it. The watch will stop and nothing can restore the movements of it but the return of the abstracted part. Just the same with that machinery we call an animal. It wears out every moment by the activity of its parts, just as any other machine does. And if these worn parts are not repaired and made good continually, something goes wrong and the machine goes irregularly for a time and then stops. Any person having a watch which is not duly oiled at regular intervals has this experience just the same as any man having sheep will do if every natural want of the animal is not completely supplied all the time.

A handful of salt is a small matter, but the life of a score of sheep may be sacrificed for the want of it any time during a winter or summer. The first result of this want is falling off of the appetite. Or the appetite becomes perverted and all kinds of rubbish will be sought to supply the want. But in either case the result is the same. The food is not duly digested and the nutriment of it is wasted and so far as these failures go the animals starve.

The supply of salt is thus one of the most exacting necessities of any animal, and as the domesticated animals are wholly dependent on their owners or keepers for their subsistence, and this food—which salt really is—is not duly supplied, the animal must, in fact, starve; not only for want of the salt, but through the failure of the digestive organs to do their duty for want of it.—The Farm Money Maker.

Care of Fall Pigs.

Many farmers and hog-raisers believe the fall litters unprofitable, while others have very good success with the fall pigs, realizing almost as great a per cent of profit from fall pigs as from their spring and summer pigs, writes F. E. Rutter in Western Swine Breeder. We believe, if properly handled, the fall pigs do as well and are as profitable, all things considered, as earlier pigs, but it is necessary to have ample shelter for them during the cold storms of the fall and winter. And it is also necessary, where two litters a year are raised by the same brood-sow, to have the spring litter come early in order that the sow may be bred again in time for the fall litters to be started before severe cold weather sets in. By breeding the sows for spring pigs, which you intend to farrow a fall litter the fall following, they should be bred to farrow early in March and bred again in May for September farrow. September pigs should have a dry shelter provided for them where they can take refuge from the wet and cold storms, and where they can sleep dry and warm during the cold, frosty nights of late fall and winter. Sows that farrow in the fall usually have stronger pigs and raise a larger per cent of pigs farrowed than in the spring farrow for several reasons, but mainly because during the summer they have had a more nitrogenous feed and more exercise, and they are less likely to overlay them while quite small. A sow that has been properly fed and cared for until she is 2 years old, raising one litter only the second year, will be more prolific and a better breeder if thereafter she farrows and raises two litters each year until she gets old and clumsy. She will consume but little more feed during the year and will have double the number of pigs to her credit among which to divide the cost of her keep during the year. But it seems I hear some say the cost per pound of pork raised is greater in raising fall pigs since they can not, up here in the North, forage for their feed during the frozen winter months but must be fed what they consume, which adds to the expense. Granting that it does take more feed prepared for them during the winter, the value of your time in feeding and caring for them is not so much as during the busy season of summer when the farmer of necessity must attend to his growing crops, and harvest, usually the pastures dried up and his hogs needing as much or more care than in the winter. And time is mon-

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ey, especially when one has to hire help to raise or harvest his crop. After breeding your sows that have raised spring litters for fall litters, give them a good June grass and clover pasture until rape is large enough to turn them in. Feed a little slop of ground or mill feed each evening mixed in a thin slop and have them moderately gaining in flesh until farrowing time. When due to farrow, provide a dry, sheltered place to farrow in, where the air circulates freely, and is moderately cool. After farrowing let the sow pasture a few days without additional feed and then begin to feed a little mill feed in her drinking water, being careful to feed scant enough so the litter will take all the milk, and be careful not to increase the feed faster than the little pigs' capacity to take all the milk of their dam. Feed in low, shallow troughs and the pigs will soon get their feet as well as their noses into it and begin to eat with her, and when they seem anxious for feed and want more than they get with their dam, a good plan is to have a creep hole in the fence into a pen where they can be fed separately, and when they are about 6 weeks or 2 months old reduce the sloppy feed of the dam, giving her dryer feed, and gradually dry her up while the pigs are still with her by increasing the dry grain-ration so she will begin to take on flesh. She will come in heat and may be bred again while the pigs are still unweaned. The pigs, by the time winter sets in, will be large enough to consume consider roughage, second-crop clover run through the feed-cutter and fed fine and mixed with shorts or mill feed for the morning and noon feed during the winter when the pigs can not have pasture. Pigs eat it and readily thrive on it. Feed corn for the evening meal, and let them have a roomy lot for exercise, but a warm, dry place to sleep during severe cold weather. This will prevent them from piling up, which causes them to steam, and when the cold wind strikes them it is chilly and very often is the cause of rheumatism. Feed them all the cut clover mixed with shorts or mill feed that they will eat up clean, and the fall pigs will thrive as well and make as rapid growth, provided they have dry, warm, comfortable housing, as the spring pigs in their pasture lot. Try this method of raising two litters of pigs a year instead of one, and give the fall pigs the attention necessary to make them thrifty, and you will find them equally as profitable as the earlier pigs.

Live-Stock Meetings at the International.

In addition to the practical demonstrations of the breeders' and feeders' art in cattle, horses, swine, and sheep on exhibition in single groups and car-load displays, we are to have this year meetings of breed associations where the foremost breeders and feeders of our day are to discuss their work. Papers of practical value to the agriculturist and live-stock men of America, on subjects of immediate interest that now confront out people, will be read and discussed.

On Monday night, December 3, the annual meeting of the International Exposition Association is to be held.

On Tuesday night, the following breed associations meet: Percheron Society of America; American Shire Horse Association; American Cotswold

Sheep Society; American Oxford Down Association; American Suffolk Flock Registry; American Clydesdale Horse Association; American Southdown Breeders' Association.

On Wednesday evening the following meet: The American Shorthorn Breeders' Association; The American Aberdeen-Angus Association; The American Galloway Breeders' Association; The American Berkshire Association; and The Hampshire Down Breeders' Association.

On Thursday afternoon the American Red Polled Cattle Club holds its meeting, followed by The American Poland-China Breeders' Association, and The Yorkshire Swine Association in the evening.

The hour, room, and other particulars concerning each of these meetings will be posted on the bulletin boards of the show grounds during the week. Every one interested in live stock of any kind should make an effort to attend these meetings.

Record-Breaking Shorthorn Sale.

Again the cattle-breeding world stands in astonishment at prices made by Scotch Shorthorns at public vendue. Mr. Duthie's 18 bull calves averaged \$1,520 at the Uppermill sale. The top price was \$4,250, and another calf brought \$4,150, and yet another one \$4,000. The annual average on the Collynie calves for some years was considerably exceeded. It reached its maximum in 1904 when the figures stood at \$1,130. The present average is sensational. The explanation is not far to seek. Of course something of "fashion" inheres in it. It is proper to have a bull from the leading Scotch nursery of Shorthorn stocks, but back of that lie the sterling reasons for the popularity of this herd. The material element in the present situation is the fact that Britain is well-nigh swept bare of desirable herd-headers. The Argentine demand has robbed home-breeders. This year they planned a determined defense. Argentina was present, although that trade has recently suffered a diminution that may almost be termed a slump; but home-breeders had rallied to protect their own, and then made stout contention among themselves for the choice lots. None of the high-priced ones was allowed to go out of the country, although one went to Argentina at about the average of the sale. The prices were unexpectedly high, but the number in the front rank indicated not only a remarkable uniformity of excellence, but the breadth of the demand from prominent home-herds. At Perth last winter Argentina pretty well routed British breeders when about 100 yearling bulls averaged \$500, but this time the tables were turned. Mr. Duthie will have the congratulations of his friends on all continents at this renewed and reinforced tribute to his genius as a breeder.—Breeder's Gazette.

Bollin and Aaron's Sale.

John Bollin and Gus Aaron, Leavenworth, Kans., regular advertisers in THE KANSAS FARMER, and breeders of some of the best Poland-Chinas produced in Kansas, sold fifty-six head from their herd on October 16 at Leavenworth at an average of \$24.50 for the entire offering. The top of the sale was \$66 for No. 1 of the catalogue, which was bought by J. A. Harness, of Hemple, Mo. This boar sold very much under his value, as did all the better ones of the offering. It seemed that from the fact that there were so many

Bog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be imitated. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser describes and illustrates all kinds of blemishes, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

FLEMING BROS., Chemists,
318 Union Stock Yards, Chicago, Ill.

Sanitary Hog Troughs

Will not rust or rot out and will last a life time. Every breeder should use them. Prices furnished on application.

Blue Valley Mfg. Company
Manhattan, Kansas

Anti-Scour

A sure and speedy cure for scours in hogs of all ages. Use it and keep your herd free from runts. At druggists, \$1 per pound, or sent postpaid upon receipt of price.

AGRICULTURAL REMEDY CO.,
523 Kansas Ave., Topeka, Ks.

LUMP JAW

A positive and thorough cure easily accomplished. Latest scientific treatment, inexpensive and harmless. NO CURE, NO PAY. Our method fully explained on receipt of postal.

Chas. E. Bartlett, Columbus, Kans.

HARDY CHESTNUT TREE FREE

To introduce this tree and gain new friends we offer a 1 yr. tree free to property owners. Mailing expense 5 cts. A postal will bring it and our catalogue with 64 colored plates. Write today.

The Gardner Nursery Co., Box 740, Osage, Ia.

BOWSER SWEEP MILLS

Different from all others. Gird Corn with shucks or without. K. in the head and all kinds small grain. 4 and 8 horse sizes. Geared 10 to 1 or 7 to 1. (Also make 7 glass belt mills.)

C. N. P. Bowser Co., South Bend, Ind.

boars in the offering, thirty-nine of the fifty-six head being boars, the better ones did not bring their value. The female portion of the offering generally sold for very good prices Messrs Bollen and Aaron sold but few gilts on account of reserving all their better ones for their brood-sow sale to be held February 25. The buyers of the higher priced ones were as follows:

Geo. Leonard, Dawn, Mo.; Sam Olvis, Platte, Mo.; Barney Marsh, Easton, Kans.; C. F. Knobs, Platte City, Mo.; Ed Netter, Piper, Kans.; W. L. Reid, North Topeka, Kans.; C. A. Weaver, Admire, Kans.; Henry Odee, Leavenworth, Kans.; Reece Lewellin, Cedarvale, Kans.; E. P. Sherman, Wilder, Kans.; J. F. Myers, Stillings, Mo.; John Harness, Leavenworth, Kans.; Fred Ode, Potter, Kans.; Frank M. Hill, Hiawatha, Kans.; Ed. Alexander, Stillings, Mo.; Wm. Osman, Stillings, Mo.; A. A. Meyer, McLouth, Kans.; Leon Calhoun, Potter, Kans.

Messrs. Bollen and Aaron own jointly Nemo L's Dude, the Iowa and Nebraska prize-winner that has done so much to produce the large type of Poland-Chinas that are so popular in these two States. Mr. Bollen also owns The Picket, the World's Fair winning son of Corrector that is proving himself a sire of the popular kind. It was one of his get that topped the Calhoun brood-sow sale last year and also one of his sons that topped the sale above mentioned. Mr. Aaron's other herd-boar is Sir Darkness, full brother to the champion Mischief Maker, who is also of show-yard type and would make a strong fight for honors in the aged class at any of the best shows and is the equal of any of his illustrious brothers as a breeder. These gentlemen, aside from selling a large draft twice each year at auction, have a large private trade and can supply our readers at all times with up-to-date Poland-Chinas of the best blood lines.

Leon Calhoun's Attractive Pig Sale.

Leon Calhoun, Potter, Kans., held one of the very successful pig sales of the year on October 30, selling fifty-six head, all spring pigs but four, for \$1,820, an average of \$32.50 per head. A notable feature of the sale lay in the fact that every single animal catalogued was sold. Buyers were present or represented from Kansas, Missouri, Oklahoma, Nebraska, Iowa, and Illinois, and purchases were made that went to each of these States. The sales were as follows:

- No. 3, E. E. Axline, Oak Grove, Mo., \$50.00
No. 6, W. H. Brenner, Doniphan, Kans., 40.00
No. 9, Frank D. Winn, Mastin, Kans., 45.00
No. 12, J. C. Hanna, Middleton, Iowa, 45.00
No. 13, E. L. Jimison, Oneida, Ill., 62.50
No. 21, Gus Aaron, Leavenworth, Kans., 47.50
No. 25, Gus Aaron, 40.00
No. 29, Honeyman & Reed, Madison, Kans., 100.00
No. 30, T. P. Sheehy, Hume, Mo., 50.00
No. 42, C. P. Brown, Whiting, Kans., 40.00
No. 45, L. V. Martin, Belle Plaine, Kans., 52.00
No. 47, H. E. Lunt, Burden, Kans., 60.00
No. 48, W. J. Honeyman, Madison, Kans., 42.00
No. 53, Wm. Acker, Vermillion, Kans., 53.00
No. 56, R. M. Hartman, Farnell, Kans., 42.50

Other buyers were: W. G. Moore, Oklahoma City, Okla.; Shuler & Brecht, Falls City, Neb.; Joe Schneider, Nortonville, Kans.; Geo. Manville, Fayette, Mo.; F. O. Grubb, Whiting, Kans.; J. M. Ross, Valley Falls, Kans.; Mrs. G. H. Vickery, Atchison, Kans.; E. W. Hartman, Atchison; Lefe Williams, Benedict, Kans.; E. C. St. Clair, Atchison, Kans.; C. H. Falk, Leavenworth, Kans.; A. Baker, Bendena, Kans.; Dietrich & Spaulding, Richmond, Kans.; F. P. Oswald, Bendena, Kans.; Pete Walters, Atchison, Kans.; J. B. Myers, Canton, Kans.; Glancy Bros., Atchison, Kans.; Wm. Wilkie, Brenner, Kans.; Snyder Bros., Winfield, Kans.; J. J. Ward, Belleville, Kans.; Tom Gorman, Huron, Kans.; Ben Snyder, Nortonville, Kans.; W. M. Martin, Atchison, Kans.; John Harness, Leavenworth, Kans.; J. E. Sullivan, Effingham, Kans.; J. B. Zinn, Topeka, Kans.; W. C. Burdette, Riceville, Mo.;

RHEUMATISM AND NEURALGIA ST. JACOBS OIL The Proved Remedy For Over 50 Years. Price 25c and 50c

F. C. Brecht, Falls City, Neb.; Klaus Bros., Bendena, Kans.; John Bollen, Leavenworth, Kans.; Dick Mayfield, Cummings, Kans.; B. F. Gilmore, Sharon, Mo.; Frank Doman, Potter, Kans.

The quality of the offering was remarkable and much favorable comment was heard from the breeders present, especially on the great quality and uniformity of the offering sired by Mr. Calhoun's herd-boar, Prince Darkness, one of the greatest of the Chief Perfection 2d and Darkness boars that has so much reputation all over the United States. Mr. Calhoun has back at his farm at Potter, Kans., the fall yearling gilts that he raised from the same dams and the same sires that these spring pigs were from. These were reserved for his brood-sow sale February 1, at Atchison.

Notable Sale of Dairy-Cattle.

At the recent sale of Holstein-Friesian cattle held at Chicago, seventy-nine head of cows, heifers, and young bulls sold for \$25,980. Sixty-six cows averaged a trifle less than \$200. Eight young bulls sold at an average of \$184.75, and five young bulls sold at an average of \$140. Mr. H. B. Cowles, of Topeka, who purchased seven head at this sale, has the following to say about the event:

"A notable sale of dairy-cattle occurred in the Dexter Park pavilion, Chicago Stock Yards, October 23, at which time the Pierce Land and Stock Company, of San Francisco, sold seventy-five head of registered Holstein-Friesian cattle.

"For a number of years this company has been laying the foundation for a fine herd of Holsteins by purchase from the best herds in America and Holland, until at the present time it numbers over 400 head. The present offering consisted of fifty-seven head of American-bred and eighteen imported cattle of a great variety of breeding, many of which had large A. R. O. records or are out of A. R. O. cows. This gave the buyers an opportunity to select from different families in which they were particularly interested. This doubtless added greatly to the success of the sale. There were seven bulls included in the sale, one of which was imported. After a short talk by Dean W. A. Henry, of the Wisconsin Experiment Station, recommending the advisability of using pure-bred stock in general and Holstein-Friesian stock in particular, and strongly recommending farmers in the same community to breed the same class of stock, thus getting the benefit of each other's advertising, and a short address by Mr. Pierce, owner of the stock, Col. Cary M. Jones took the stand and proceeded to sell the seventy-five head for an average of \$220.60.

The highest-priced cow was a 7-year-old, Alcartra Polkadot 50798, with an A. R. O. record of 29 pounds 1 ounce butter in seven days, and 120 pounds 2 ounces in thirty days. She went to E. J. White, of Syracuse, N. Y., at \$1,350. T. R. Fries, West Newton, Pa., paid \$530 for her 6-months-old daughter. Among the other high-priced cows to be sold was Belle Korndyke's Daughter 54035, to Henry Stevens & Son, of Lacona, N. Y. The price paid was \$725. They still own her mother, Belle Korndyke, who is past 19 years old, is still hale and hearty, and has just given birth to a fine bull calf for which they are offered \$1,000.

"These cattle were mostly purchased by buyers from Illinois, Michigan, Wisconsin, Ohio, New York, and Pennsylvania with a few to adjacent States, including Kansas, seven head coming to Topeka to the Cowles' herd. The sale as a whole makes a new record for auction sales of dairy-cattle in the West, if not in the whole country, and goes to show that the dairy-cow, if a good individual and backed by good breeding, can find a ready purchaser at a good price."

Centerville Syndicate Sale.

The sale of the Centerville syndicate was well attended by local farmers and breeders, and a number of outside breeders were either in attendance or represented with bids in the hands of the auctioneers or fieldmen. The seventy-five head sold for a total of \$2,474, an average of \$36. Sales of over \$50 were as follows:

- No. 1, A. & P. Smithz, Alma, Kans., \$99.00
No. 2, Snyder Bros., Winfield, 100.00
No. 3, Emmett McGrew, Centerville, Kans., 70.00
No. 4, J. J. Ward, Belleville, Kans., 99.00
No. 5, Frank Hoover, Columbus, Kans., 72.00
No. 6, Honeyman & Reed, Madison, Kans., 59.00
No. 7, C. W. Dingman, Clay Center, Kans., 60.00
No. 8, R. M. Buck, Eskridge, Kans., 55.00
No. 10, L. C. Caldwell, Moran, Kans., 77.00
No. 16, W. J. Honeyman, Madison, Kans., 57.00
No. 44, W. J. Honeyman, 57.50
No. 5, Frank Zimmerman, Centerville, Kans., 147.00
No. 46, W. J. Honeyman, 112.50
No. 56, D. V. Stoll, Lone Elm, Kans., 50.00

Other buyers were: J. H. Lemon, Parker, Kans.; C. P. Murrow, Blue Mound, Kans.; T. A. Church, Lone Elm, Kans.; J. E. Bundy, Centerville, Kans.; H. E. Lunt, Burden, Kans.; J. R. Young, Richards, Mo.; John Boydston, Centerville, Kans.; O. D. Mahen, Centerville, Kans.; J. G. Caldwell, Centerville, Kans.; Dietrich & Spaulding, Richmond, Kans.; T. P. Sheehy, Hume, Mo.; T. R. Rogers, Blue Mound, Kans.; Fred Ziener, Centerville, Kans.; W. N. Gray, Blue Mound, Kans.; H. S. Paddock, Kincaid, Kans.; and Mr. Donald from Tulsa, I. T.

White's Holstein Sale.

Mr. A. J. White, who lives southwest of Topeka, recently found it necessary to sell his dairy-herd because of a change in location. In the herd were twelve head of pure-bred Holsteins that were worthy of special notice. In speaking of the sale Mr. White says: "I think the prices on my Holstein cows were a little lower than they should have been, but the general av-



Swift's Digester Tankage

The final test of the season's feeding is the price the hogs bring in the Stock Yards at the packing house. Every good feeder wants Market-toppers—the profitable kind.

They Top the Market

When fed Swift's Digester Tankage (Protein 60%) because they stand shipment well, arrive in prime condition and look attractive to the expert hog buyer. Market-Toppers are Money-Makers. For facts, figures and prices, write us.

Swift & Company, U. S. A.

Animal Food Department, Dept. 8, Union Stock Yards, CHICAGO.



erage was very fair. I am glad to say that the choice 2-year-old heifer, Pauline Louise Sarcastic, remains in Shawnee County. She sold to Hughes & Jones, of Topeka, for \$102. The young bull calf sold too low. He went to Walter Pleasant, of Ottawa, who got a bargain. Daniel M. Estes, of Scranton, Kans., got a prize when he secured Jasper Wintje. The best of the cows went to the neighbors, but H. B. Cowles, of Topeka, captured the permission by taking all of the registered heifers. The herd-bull went to Dr. Warner, of Topeka. The grade yearlings sold for about double the price of ordinary grade cattle of the same age. On the whole, I am very well pleased with the result of the sale."

Dr. O. L. Kerr Sale.

The Dr. O. L. Kerr sale of O. I. C. swine at Independence, Mo., was well attended, and good prices prevailed except for some of the youngest boars, which were a little small for immediate use. The Doctor was somewhat under the weather and was unable to assist at the sale, which was not favorable to best results, but everything considered, it can be classed as an excellent sale. In fact, this was the best sale to be made by a Chester White breeder. The average for fifty-five head was a few cents less than \$43, and the total receipts for the sale were \$2,366. The top of the sale was brought by Kerr Garnett, the American Royal champion bear. He sold to John Cramer, Beatrice, Neb., for \$625. Mr. Cramer also took No. 9, the top gilt of the sale, at \$120.

Other sales at over \$40 were: No. 10, Frank Tallie, Lees Summit, Mo., \$70
No. 14, W. H. Cole, Pattensburg, Mo., 40
No. 15, Charles Kerr, Independence, Mo., 51
No. 20, Parly Bros., Plattsburg, New York, 45
No. 22, Walter Bowen, Neola, Ia., 45
No. 28, D. W. Mathews, 41
No. 58, J. R. Brownfield, Everest, Kans., 40
No. 61, J. R. Brownfield, 50

Other buyers were: Frank Watts, Buchner, Mo.; Frank Schweltermann, Montezuma, Ohio; J. R. Barns, Oak Grove, Mo.; J. A. Pauley, Adaza, Iowa; R. T. Frantz, Pleasant Hill, Mo.; C. T. Adams, Grand View, Mo.; Ed. C. Neer, Dover, Mo.; J. E. Museiman, Medford, Okla.; C. M. Baker, Louisburg, Kans.; J. C. Humphries, Laredo, Mo.; Frank Walters, Rock Point, Mo.; John Collister, Holden, Mo.; W. T. Diggs, Arrow Rock, Mo.; T. J. Wade, Weston, Ohio; O. Donnohoe, Sugar Creek, Mo.; T. K. Corder, Raymore, Mo.; J. M. Chestwood, Leavenworth, Kans.

Kansas City Blue-Ribbon Herefords.

The low excursion rates to the Kansas City Blue Ribbon sale, November 20-22, as advertised by Sale Manager D. R. Mills on page 1200, should bring out a large attendance, judging from the high-class entries revealed in the handsome illustrated catalogue just out. The Herefords will be sold on November 21 and include among other attractions an own daughter of Beau Brummel, out of Donna Agatha by Anxiety 4th; several daughters of the champion Dandy Rex, one out of a Beau Brummel dam with bull calf at foot by a grandson of Don Carlos, second and third dams by the same illustrious sire. The above are listed by U. S. Campbell, Bates City, Mo. Miss Dandy Andrew, another beautiful heifer by

a son of the champion Dandy Rex out of Nidia of Shadland, by a son of the world's famous Lady Laurel that twice sold for \$1,000 is consigned by J. W. Lenox, Independence, Mo., and many other superbly bred females of similar character. The first of the get of the twice champion Onward 4th at the American Royal to be sold by his new owner, S. L. Standish, Hume, Mo., is the grandly bred yearling bull, March On 1st, and Mr. Standish also includes a number of choice females with calves by Onward 4th and others bred to him. Sons, grandsons, and daughters of the great Benjamin Wilton, who sired so many of O. Harris' famous prize-winners, are also included by James Slau-son & Sons, Hopkinton, Iowa, while a half-dozen sons and daughters of the double Anxiety 4th prize-winning Brigadier, conceded by those who know to be the best living son of the great Lamplighter, are consigned by W. G. Swinney, Bois D' Arc, Mo.; also Thickett young bulls and heifers by the show bull, Beau March On, are included by C. N. Moore, Lee's Summit, Mo., all of which are only samples of the many good things in the catalogue, which will be cheerfully forwarded upon application to D. R. Mills, sale manager, Des Moines, Iowa.

Perfect Challenger to Kansas.

W. J. Honeyman, the enterprising hogman at Madison, Kans., who on October 17 sold fifty-five Poland-Chinas at an average of \$60 per head, which is one of the best averages ever made in the State on a fall sale up to that time, is ever on the alert to advance himself in the business. He has purchased from Sam Kaylor, of Illinois, Perfect Challenger, the first-prize aged boar at the recent Illinois State Fair, and now has him at his farm at Madison, Kans. This boar is pronounced one of the best aged boars ever shown at any of the great shows. He weighs 225 pounds and possesses possibly more quality than a great many of those that are 200 pounds lighter in weight. This is a great acquisition to the Poland-China interests in Kansas, and we predict great things for Mr. Honeyman in the Poland-China hog business in the future, as he is a man of pleasing personality and a thorough hogman in every respect. Mr. Honeyman has claimed February 28 for his Perfect Challenger brood-sow sale.

International Live-Stock Exposition, December 1 to 8, 1906, Chicago.

Murdo Mackenzie, president of the American National Live-Stock Association and manager of the Matador Cattle Company, of Texas, and above all, a student of live-stock problems, is a very busy man with his multiplicity of duties in the interest of live stock, yet he found time to give the following short statement concerning this greatest of all shows:

"No one appreciates more than I do the good the International Live Stock Exposition has done and is doing for the live-stock and agricultural interests of America, and its influences are felt abroad. It is a liberal education to us all. No matter how much we think we already know, there is a never-ending fund of information on breeding, feeding, and marketing problems to be found at this great show. I only wish that I could raise my voice loud enough to be heard by all my fellow live-stock men to advise them to never miss an opportunity to take advantage of its teachings. As the live-stock industry grows more and more

closely allied with agriculture, the coming generation of farmers should be sure to make a pilgrimage to the show and study the various breeds of animals there shown and hear and see the experiences and results of the life's work of the best breeders and feeders of America, who are exhibitors and in attendance at the annual association meetings held during the week of the show.

Waltmire's O. I. C. Sale.

The W. W. Waltmire sale of Chester White hogs averaged \$32.14. The sales at \$30 or over were as follows:

No. 4, J. Musselman, Medford, Okla.	\$31
No. 13, C. L. Meirs, Neposett, Ill.	50
No. 17, Jno. Cramer, Beatrice, Neb.	49
No. 21, Frank Walters, Rockport, Mo.	42
No. 23, Blodgett Bros., Beatrice, Neb.	30
No. 25, John Cramer	40
No. 26, John Cramer	100
No. 27, R. F. Frantz, Pleasant Hill, Mo.	100
No. 28, W. M. Frantz	50
No. 36, Aaron Grim, Harrisonville, Mo.	35
No. 38, C. L. Meirs	45

Other buyers were: J. R. Colville, Pleasant Hill, Mo.; Fred Hudson, Raymond, Mo.; M. Tillson, Archie, Mo.; H. B. Paine, Pleasant Hill, Mo.; T. W. French, Pleasant Hill, Mo.; Cass Saunders, Lees Summit, Mo.; C. B. Adams, Grand View, Mo.

Red Polled Cattle.

That Red Polled cattle will make beef is indicated by the photograph reproduced in this issue. That they will produce milk is shown by many incontestable proofs, and that they are the best dual-purpose cattle is claimed by all owners of this breed. Certain it is that Red Polls have gained rapidly in popularity of late years, and the herds now in Kansas are quite numerous in spite of the fact that this is a comparatively new breed in the West.

The Red Polled herds of Kansas, so far as we know them, are owned by the following gentlemen:

James Anderson, Leonardville; Willie Blair, Girard; Peter Blocher, Richland; Chas. P. Butler, Farmington; Geo. C. Butler, White City; Walter J. Burris, Fredonia; Valla Christian, Clyde; A. L. Entsminger, Silver Lake; Chas. Foster & Son, Eldorado; R. T. Gilbert, Lawrence; B. E. Grimm, Wakeener; Geo. Groenmiller & Son, Pomona; F. G. McKinney, Great Bend; Chas. Morrison, Phillipsburg; Geo. Newcomb, Morrowville; Leon Robbins, Rosa; G. K. Smith, Lincoln; Daniel Stainbrook, Lawrence; H. A. Thomas, Freeport; H. A. Thomas, Seranton; D. E. Van Ruskirk, Blue Mound; Carl Weidling, Tonka; Otto Young, Utica; E. F. Fritzell, Larned; S. C. Bartlett, Wellington.

J. W. Myers Sale.

The J. W. Myers' fall Poland-China sale at Galva, Kans., was one of the good ones, considering the fact that Mr. Myers expected to make the sale to his local people and did not advertise it extensively. The offering consisted mostly of under a year pigs, and the seventy head sold averaged within a few cents of \$20, which was a pleasing sale to Mr. Myers. He also sold a lot of nice high-grade and pure-bred calves, ranging in price from \$20 to \$33 each. The top price of the hog sale was \$57, and the average made was considered very good considering the fact that the greater portion of the offering were hogs, and a great many very small pigs included.

O. B. Smith's Sale.

The Poland-China sale of O. B. Smith & Son, which was held at Cuba, Kans., October 31, was an unusually good offering and while the prices were not as high as they should have been considering the quality of the offering, they were very satisfactory to the owners of the stock, and every animal sold should go out and make some money for his purchaser. The top of the sale on hogs was \$61, paid by R. H. Weir, of Oberlin, Kans., for a yearling animal sired by their great herd-bear, Keop Coming, while H. R. Walters, of Wayne, Kans., topped the sows on a yearling gilt for \$66. Smith & Son have reserved an unusually good lot of gilts and will have one of the strongest offerings of Northwest Kansas in their spring sale of bred sows.

The Kansas Farmer Brings Results.

"My advertisement in THE KANSAS FARMER last year sold all the hogs I shipped and they were many. I can not produce and sell pure-bred hogs without THE KANSAS FARMER. My stock is of better breeding and in better condition than ever before and I expect to sell lots of hogs this year."

J. F. ENSOR, Proprietor, Eureka Manor Breeding Establishment (Duroc-Jersey swine), Olathe, Kans.

Kansas City Blue-Ribbon Daddies.

Thursday, November 22, is the day set for the Aberdeen-Angus cattle at the Kansas City Blue-Ribbon Sale, as advertised by Sale Manager D. R. Mills, Des Moines, Iowa, on page 1200. The largest contributor to this event is R. P. MacClement, Olathe, Kans., who lists fifteen of his top cattle; nine cows and heifers and six choice young bulls by Black Knight of Estill 2d, Royal Eric, the Nosegay bull, Maple Leaf Dewey, etc., and representing the Drumin Lucy, Ruby, Lady Anne, Kinochtry Blue Bell, and other popular families. The entire consignment is good and includes liberal selections of show material. This is especially true of the yearling heifer, Maria of Olathe 91884, and the 2-year-old Mary 2d of Olathe 77168 by Maple Leaf Dewey, also Lucy of Herd Park 35743, belonging to the fashionable Drumin Lucy family and a granddaughter of the noted Black Knight, perhaps the greatest sire ever bred in America. Among the bulls listed in this sale is a superb yearling, consigned by W. A. Holt, Savannah, Mo. He is sired by the royally bred Blackbird bull, Bard, by 2d Lad of Emerson,

Beef Making As a Business

Beef is made very much like any manufactured article. The internal organs of the steer represent the machine and the feed is the raw material. To grow beef the raw material or feed must contain every element of the animal body—but by combining the different grains, fodders, etc. commonly raised on the farm, a perfect ration can be formed—after obtaining the proper ration your ingenuity should be exerted to see that this ration is properly digested and converted into profit.

DR HESS STOCK FOOD

the prescription of Dr. Hess (M.D., D.V.S.) was designed for this particular purpose. Dr. Hess being a doctor of medicine and also veterinary surgery learned from his experience in the practice as well as from such authorities as Professors Winslow, Dun, Quitman and all the most noted writers that bitter tonics would increase digestion, iron would make rich, red blood, and that nitrates of soda and potassium would assist nature in throwing off the poisonous waste material from the system. These ingredients he combined with nature's roots, herbs, barks, seeds, etc. and this formula has become so successfully famous that every pound is **Sold on a Written Guarantee.**

100 lbs. \$5.00
25 lb. pail \$1.60

Except in Canada and extreme West and South.

Smaller quantities at a slight advance. Where Dr. Hess Stock Food differs in particular is in the dose—it's small and fed but twice a day, which proves it has 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 15th of each month.—Dr. Hess (M.D., D.V.S.) will prescribe for your ailing animals. You can have his 96 page Veterinary Book free any time for the asking. Mention this paper.

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



and Erica son of the champion and champion sire, Gay Lad. W. E. Lawrence, Salisbury, Mo., also lists a royally bred one in the Boghead Flora, Axtell Star, a grandson of Heather Blackbird and tracing direct to the noted Black Knight on his dam's side. Consult the advertisement and write Manager Mills for catalogue containing full particulars of all the consignments. A few additional entries can be accommodated if forwarded at once.

Gossip About Stock.

Ward Bros., of Republic, Kans., have a few more herd-headers left which they are pricing very reasonably. So great has been the demand for their stuff this fall that it was unnecessary for them to make a public sale, they having disposed of nearly their entire surplus of boars at private treaty. If you want a good Poland-China herd-header, here is the place to get it at a reasonable price.

The Agricultural College at Manhattan has a fine pheasant hatchery in which birds of a half-dozen varieties are being propagated under the direction of Prof. Oscar Erf for the State Game Warden. Recently several pairs of these splendid game-birds were liberated and all hunters are cautioned against shooting them. Warden Travis is liberating pheasants in different parts of the State, and it is to be hoped that the farmers will see that any one who is guilty of shooting them is vigorously prosecuted.

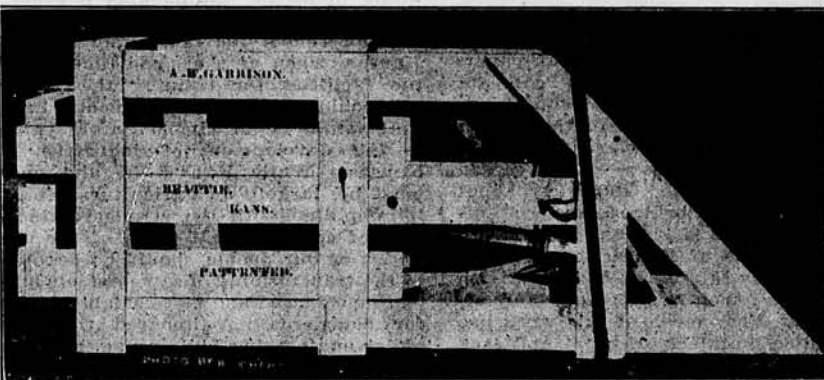
O. W. Simerly, Route 6, Parsons, Kans., announces a sale of Duroc-Jersey hogs from his fine herd. The sale will be held at the farm and the offering will include sons and daughters of such good boars as Captain 34985, Climax 2d 23361, S. R. Advance 40509, and Dude Junior 36493. Col. D. Christman will conduct the sale and bids may be sent to him by those who can not attend this sale in person. The sale will begin at noon on Thursday, November 15, 1907, and may be reached either from Parsons or Altamont. Remember the date. Write for a catalogue.

The fifty head of On and On gilts, and a few sows by Chief Perfection 2d, sold by J. R. Young at Richards, Mo., on Saturday, November 3, averaged \$92.25, which is pretty good for open under a year gilts, and which again demonstrates the value of a great sire. On the Plumb, pronounced by all those in a position to know, the best under a year boar seen this year, not excepting the Illinois and Iowa winners, goes to head the herd of Snyder Bros., Winfield, Kans., and will be used extensively on their sale offering, an announcement of which will appear in the next issue of THE KANSAS FARMER.

James Mosher, of Rydal, Kans., made a very successful Poland-China sale last week, selling over thirty head at an average of about \$25. The sales were all made to local parties and the offering was one of the good ones of Republic County. Mr. Mosher will make a bred-sow sale the latter part of January and it will be one of the best offerings of the season. He has been one of the fellows that has bought the high-priced stuff during the past three years and has succeeded in getting some of the best foundation stuff that there is in Kansas, and his spring sale will be one in which breeders can obtain the best there is. Watch for his sale advertisement and arrange to go and buy some of his good stuff.

Roberts & Harter, owners of the Highland Herd of Duroc-Jerseys, announce that they have a fine bunch of 40 early spring boars ready for their customers. These were sired by Crimmon Wonder, Tip Top Notcher, and Improver 2d boars. They are coming on at a wonderful rate and are making strong, lusty fellows that are bound to

Do You Need a Breeding Crate?



My Crate is used and endorsed by the leading breeders of the country. It is strongly built and easy to operate. Price, \$15.00 f. o. b., Beattie, Kans. Circulars free, which fully describe it.

A. B. Garrison, -- Beattie, Kans.

do the purchaser lots of good. They are all out of large, roomy, highly bred sows. These boars are good enough to back up anything good that may be said of them. They are going to sell these boars at very reasonable prices. They will avoid the expense of a public sale and give their customers the benefit. Later on they will have a fine lot of bred sows and gilts for sale. Keep your eyes on this herd as here is the place for real bargains.

N. B. Sawyer, Cherryvale, Kans., has a fine lot of Duroc-Jersey swine from five different strains of breeding, comprising forty head of choice males ready for service and thirty-five fall and spring gilts that will be bred for March and April farrow. They are pasture-raised on white clover and Kentucky blue-grass. They are growing nicely. He has been at all of the State fairs, and at the American Royal for the last five years. He has been put to a great expense to get the best boars and sows to head his herd. If you are looking for something to head your herd and improve your stock, write to Sawyer that has had fifteen years' experience in the Duroc-Jersey business.

C. A. Lewis, of Beatrice, Neb., conducted a very successful Poland-China sale last Saturday. The offering consisted of about fifty head of spring stuff sired by his herd-boars, Corrector and Norval Chief. The top of the sale was \$115, paid for a spring gilt out of Black Beauty, the sow that won first prize in the under 18-months class at the Nebraska State Fair. This gilt was purchased by J. T. Elerbeck, one of the prominent breeders of Beatrice, Neb. Mr. Lewis is a young breeder, having been only in the business for about three years, but the show-herd which he had at Lincoln would have been a credit to any one, and the quality of the stuff which he is raising makes it in great demand among the breeders. We predict that within the next few years Mr. Lewis will be recognized as

one of the leading breeders of Poland-China hogs in Nebraska.

In the H. E. Hayes offering of Short-horns, which will sell at Olathe, Kans., on November 23, we find the young Cruickshank Duchess of Gloster bred bull, Premier by Lord Bamf 2d out of Lady Gloster C., bred by Martin Flint. This is only a sample of the breeding of the herd-header kind that Mr. Hayes is offering in the bull consignment to this sale. The female portion of the offering contains some of the very best bred Scotch animals and some very high-class Scotch-topped sorts, cows and heifers individually good enough to go into any herd in the land, and just the kind for our Western breeders to buy. They possess all the desirable characteristics of the pure Scotch cattle. Be sure to get the catalogue, and if any information is desired that it does not give, write to H. E. Hayes, Olathe, Kans., and he will gladly answer any inquiries about these cattle. Remember this sale follows the one to be held at Carthage, Mo., and can be easily reached after that sale. Mention THE KANSAS FARMER when writing.

Mr. J. F. Ensor, owner of the Eureka Manor Herd of Duroc-Jerseys, at Olathe, Kans., has some of the best-bred stock in the United States. His principal herd-bear is Eureka Tip Top 43641, who is one of the best sons of Tip Top Notcher 20729, the great St. Louis World's Fair champion, who weighed 1,123 pounds in his 2-year-old form, and who recently sold for \$5,000. The sons of this great champion are now producing the most sensational hogs known to the breed, and are sought for eagerly by breeders who know what is demanded. Eureka Tip Top is said to be a perfect image of his sire. He stands up like a horse and now weighs, at 16 months, about 600 pounds. He is very smooth and his pigs are just like him and promise to become very large hogs at an early age. These pigs are for sale at very low prices, considering their quality. (Continued on page 1195.)

Miscellany

Engineering at the Kansas State Agricultural College.

EDITOR KANSAS FARMER:—The original land grant signed by President Lincoln in 1862 making appropriation for agricultural colleges provided not only for the teaching of agriculture, but for the teaching of mechanic arts in order to permit of a liberal and practical education of the industrial classes. This authority as well as the general spirit of the day has warranted the authorities of the Kansas Agricultural College in developing this department. In recent years this has had a remarkable growth, showing that the young men from Kansas farms, and from the cities as well, are alert to recognize the opportunities offered in various forms of engineering and mechanic arts.

From the beginning, all students here have been trained in the elements of wood and iron work, given a fair industrial training. Every male student is required to take six months in elementary woodwork and three months in elementary ironwork—blacksmithing. They are allowed to take as much more as they desire, many carrying on certain forms of wood- and ironwork throughout the entire four years of their course. At the present time, of the nearly 1,400 students enrolled, nearly 500 are taking shopwork, taking this in a building that was crowded four years ago when 300 students were taking this work. Now sections must work all day, one crowding fast upon the heels of another and taxing the skill and ingenuity of the assistants. Small additions have been built from time to time, but these are necessarily lacking in harmonious arrangement.

In this building there must be given all the classwork, the drafting-, designing-, and construction-work for the four years' course in mechanical engineering.

In recent years there have been very many inquiries from Kansas tax-payers asking for opinions which call for forms of testing that were almost impossible here on account of the lack of room. Inquiries have come for testing of building materials—stone, brick, lime, and concrete; inquiries about building blocks, bridges, arches, culverts, etc. This is just as important to the tax-payers of Kansas, certainly to those directly interested, as information concerning crop-raising or animal-breeding. Very much of this work has been done, but lack of room and lack of money for material and for labor have kept the department from doing anything like what ought to be done by a State institution for the benefit of the people.

Aside from those who are taking elementary shopwork, since all the agricultural, horticultural, and dairy students are required to take this as well as others, about 500 students are to-day taking work in mechanic, civil, and electrical engineering here in the agricultural college. That these departments have had such remarkable growth, proves the practical efficiency of the work done here in recent years. The limit has about been reached unless greater facilities are offered. One of the greatest needs of the agricultu-

ral college to-day is a complete engineering building, a building constructed for these specific lines of work and large enough to enable the department to give the right kind of instruction and to do the right kind of experiment work for the State. The original grant and all the successive appropriations from the Kansas Legislature have recognized the necessity for this department in the agricultural college, and there is no reason why after such a start has been made, with meager appropriations, there could not be built up here the greatest engineering school in the West, with training in mechanical, electrical, and civil engineering.

A man may ask what may be done by this department that will be of practical experimental value to Kansas. Professor McCormick and Professor Eyer, of the mechanical engineering and electrical engineering departments, answer by telling some of the things they have been attempting to do in a meager way:

(1) To test building material for strength and durability; (2) to test draft and efficiency of all kinds of farm implements; (3) to test the character of road materials found in different parts of the State—gravel, stone, etc.; (4) to actually build model roads, that is, to supervise the building of these roads wherever communities or counties desire such work done; (5) to test for efficiency and economy, gas, oils, and coals under steam boiler, and for direct heating; (6) to test for determining the best methods and best machinery for using gasoline and denatured alcohol and producer gas for manufacturing and agricultural purposes; (7) testing gasoline-engines, electrical power-engines, and testing power and light meters.

In addition to all these kinds of experimental work to be carried on as our experiments in crop-production and animal-breeding, students would have the practical training that would enable them to undertake important work. No better time than the present is likely to be found for establishing a proper building and equipment, a great engineering school for the young men of Kansas, when at the same time all of the facilities for training the young men could be used in experimental lines that would be of almost untold value to the development of industries in Kansas. While Kansas is, and ever must be, largely an agricultural State, it is in line with the simplest principles of economy that more of the energies of our people should be devoted to the transforming of raw products into more condensed and more salable forms for commerce. A hundred thousand dollar engineering building at the State Agricultural College would be the wisest kind of an investment. M. Manhattan, Kans.

Trans-Mississippi Commercial Congress.

EDITOR KANSAS FARMER:—The 17th annual session of the Trans-Mississippi Commercial Congress, composed of delegates from the twenty-four States and Territories lying between the Mississippi River and the Pacific Ocean, will meet in Kansas City's great Convention Hall November 20, for a four-days' session. Every commercial club, board of trade, chamber of commerce, and similar organization in the Western States will be represented, and the secretary has already been notified of the appointment of more than fifteen hundred delegates.

This meeting will be the most notable and influential gathering of business men in the United States this year, and its great importance to the Western country in general can not be over-estimated. Formal addresses will be delivered by United States Senators W. J. Stone and Wm. Warner, Governor Folk, and Gov. E. W. Hoch, of Kansas, in welcoming the congress, and responses will be made by Governor Mickey, of Nebraska; Governor McDonald, of Colorado; Governor Frantz, of Oklahoma; Governor Pardee, of California; Senator Patterson, of Colorado; Governor Blanchard, of Louisiana; and Governor-elect John S. Little of Arkansas.

Secretary of State Elihu Root; Secretary of the Treasury Leslie M. Shaw; E. H. Harriman, president Union Pacific Railway; Hon. Wm. J. Stone; Governor Chamberlain, of Oregon; Hon. Wm. J. Bryan, of Nebraska; Hon. W. D. Vandiver; and a number of other men almost equally prominent in the business and public life of the country will participate in the discussions of the congress.

Every board of county commissioners in the State of Kansas ought to be represented at this meeting, not only on account of the deep interest felt in the improvement of the Missouri River, but also to give impetus to the National

good roads movement, both of which will be important subjects for consideration.

Every county court may appoint one or more delegates, as well as every commercial club. It is earnestly to be hoped that the State of Kansas will be adequately represented at this great meeting of Western business men.

County clerks and secretaries of commercial clubs should promptly notify Arthur F. Francis, secretary, 1114 Grand Avenue, Kansas City, of the appointment of delegates so their names may be entered on the official register of the congress.

D. R. FRANCIS, St. Louis, President.
FRED W. FLEMING, Chairman Ex. Com.
J. B. CASE, Abilene, Executive Com.
E. R. MOSES, Chairman Advisory Com.
H. B. TOPPING, Treasurer, Kansas City.
ARTHUR F. FRANCIS, Secretary.

Water for Table Use.

FROM BULLETIN NO. 262, EXPERIMENT STATION WORK.

It would hardly seem necessary to direct the attention of any one to the desirability of pure water, clean water-coolers, pitchers, water-bottles, and drinking-glasses, and pure ice. Yet to the careful observer, it is evident that many persons not only overlook the first requirements of an attractive table in these respects, but are careless of the water and ice supply to an extent which menaces the health of the household.

Water may be clear, cold, free from odor and taste, and yet be unfit for drinking purposes because of bacterial contamination from sewage or other causes. In the same way ice may look clean, yet contain objectionable matter, including harmful micro-organisms.

As a part of their regular work, a number of the agricultural experiment stations, including among others those of California, Connecticut (State), Idaho, Indiana, Massachusetts, New Hampshire, South Carolina, Vermont, and West Virginia, have made examinations of potable waters with a view to determining their purity and fitness for household use. In some of this work the ice supplies are also included. In some of the States such examinations are also made under the auspices of the State boards of health.

In Massachusetts the inspection of water and ice supplies has formed a very important part of the work of the State Board of Health for many years, and an experiment station for the study of water-supply, sewage disposal, and related questions has been established, and many problems relating to water-supply have received extensive study.

That water may often be undesirable for drinking purposes is illustrated by studies at the Vermont Experiment Station. Of 231 samples of water from springs, wells, ponds, etc., analyzed, 22 per cent of the spring-water, 50 per cent of the well-water, and 41 per cent of the water from ponds, etc., were found to be impure, or at least of doubtful purity. Of four samples of pond ice examined, all were unfit for use.

A simple way of securing wholesome water for drinking purposes in the home is to boil it. Many persons object to the taste of boiled water and insist that it is flat and unpalatable. Fresh water owes its sparkle to the air dissolved in it, and the flat taste of boiled water is due to the fact that the air normally present in drinking water has been almost entirely driven out by heat. A few minutes' vigorous boiling is sufficient for ordinary safety; and if fresh water is boiled for a short time only, it retains more or less air and when properly cooled is by no means unpalatable.

Water properly distilled is free from harmful impurities and is very satisfactory for household use. Several stills, simple in construction and operation, have been devised which are suitable for use in the home. Several years ago the statement was quite widely circulated in popular journals that distilled water was very unwholesome, because it dissolved and removed from the tissues necessary salts. So far as can be learned, there was no experimental evidence for such a statement, nor is this belief commonly held by well-informed physiologists.

Boiled, distilled, or other water which is perfectly satisfactory for drinking purposes is frequently contaminated by adding dirty ice or by keeping it in a water-cooler which has not received proper attention. If there is any doubt as to the ice supply, it certainly seems the part of common sense to cool the water in receptacles placed near the ice, or in some other way so that it is out of actual contact with the ice. Under favorable conditions the process of freezing is undoubtedly a process of purification, but it may be safely as-

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A strong phrase, but it's a good name, for Congo. Perfect rolls, carefully made and every one inspected and tested. No imperfect rolls will reach you. That's why it never leaks. There are no flaws, no thin places, no weak spots. Once it is on the roof, the water will not get through.

A sample will show you why. Send for it to-day; it's free.

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sumed that under ordinary conditions contaminated water will produce an impure and unsafe ice. Moreover, ice is generally handled in a manner which is not conducive to cleanliness. Obviously such ice should not come in contact with food or drink. Its beneficial effects can be obtained without actual contact, and contact means contamination.

The sale of simple potable waters for table use has greatly increased within recent years, owing to the fact that many persons distrust the ordinary water-supply and believe that by purchasing water in bottles or jugs they are sure of obtaining something which is entirely satisfactory.

The Connecticut State Experiment Station recently examined a considerable number of samples of such waters and found that although the majority of them were of good quality, a number were not above suspicion. It must be remembered that water from an uncontaminated source may become unwholesome if it is carelessly bottled or marketed in unclean receptacles.

The bureau of chemistry of this department has reported an extended series of investigations which have to do with the mineral waters of the United States, most of them being those which are sold in bottles and more or less extensively used, some for medicinal purposes and others, particularly those containing only a small amount of mineral matter, as table waters. These investigations showed that in many cases when such waters reach the consumer a bottle may not contain the water indicated by the label, owing either to incorrect labeling in the first place or to tampering with the contents of the bottles by the dealer.

Very many persons who are very careful to secure pure water for their tables do not exercise the same precautions with the water used in their kitchens for washing vegetables, etc., and lettuce and other foods which are eaten raw may appear on the table after being washed in water which would not be considered fit to drink.

A good illustration of the need of pure water for household purposes is afforded by experiments at the Iowa Experiment Station on the keeping quality of butter washed with pasteurized and unpasteurized water. In every case the butter washed with sterile water kept better than the other.

Attention, Grand Army Comrades!

EDITOR KANSAS FARMER:—December 7 next will be forty-four years since the battle of Prairie Grove, Ark. It is desired that the survivors of this battle meet on the anniversary of this day in reunion at Garnett, Kans.

Dinner call will be at 1 p. m.; supper call at 6 p. m. The afternoon will be spent socially. A camp-fire will be held in the evening.

Entertainment will be furnished to all who desire it. Report, on arrival, at Post room, in the court-house.

Comrades who will come, who participated in this battle, will please send name, address, company, and regiment to C. W. DeWOLF.

Garnett, Kans. Papers please copy. Comrades, pass the word.

If some hearts should go to heaven there would be a hard frost there right off.

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GENUINE BREECH LOADING TAKE-DOWN STEVENS. Shell Ejecting, Choke Bore, Perfect Gun for Shooting Ducks, Rabbits, Quails, Etc. SEND NO MONEY Your Name.

Description.—Single barrel, take-down, choke-bored, automatic shell ejector. Case hardened frame, top snap action, rebounding lock, walnut stock, hard rubber butt, reinforced breech, 12 gauge, 28 or 30 inch barrel. Shot or anyshell made Winchester, U.M.C., Etc. COMPLETELY finished, can be taken down instantly into two pieces.

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TESTIMONIALS.
Shot gun is a Daisy. Thank you for kindness and honesty.—Wesley McKeever, Fremont, Ohio.
Find it a very close and strong shooter.—Carey Fish, South Haven, Mich.
Am well satisfied with gun.—R. L. Beyer, Columbus, O.
Gun is much better than I expected.—M. G. Baker, Skowhegan, Mich.

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We have bought a number of these guns and are giving them away for a very little work any boy or man can do for us. We guarantee you can earn one in a day. Many have earned one in an hour. No cheap pictures or jewelry to sell. Our plan does all the work. Simply say you want a gun. Send No Money, just your name and address. Write today.

SUCCESSFUL FARMING,
607 Tenth St., DES MOINES, IOWA.



Agriculture

The Soil the Nation's Bulwark.

Among the many prominent men who addressed a recent meeting at Chicago was James J. Hill, famous as a country developer, financier, and railroad operator. "Back to the Soil" might be picked as the subject upon which Mr. Hill spoke. In some respects his address was along the lines of the speech at the Minnesota State Fair.

After briefly relating the history of the development of the great agricultural West and Northwest, as one speaking with authority, Mr. Hill proceeded to pay a high tribute to the farm and the farmer, and the utmost necessity of proper and systematic cultivation that our crops may not only be increased, but that the fertility of the soil be held and enhanced.

By 1925 Mr. Hill believes that the population of this country will have been increased to 125,000,000 persons. Accepting this estimate as correct, Mr. Hill argues that the economic laws guided by this increase in population and the necessary decline in industrial dominance must tend to bring this country closer and closer to the soil for the sustenance of the Nation. Here are Mr. Hill's views on the future status of the farm as given before the Commercial Association:

Practically speaking, our public lands are all occupied. The irrigation of land by the general Government will do something, but when all the present plans are completed they will furnish land for 1,500,000 small farms of 40 acres each, or a population of 7,000,000 or 8,000,000.

Our other natural resources have been exploited with a lavish hand. Our exports, of which we love to boast, consist mostly of the products of the soil. Our iron and coal supplies will begin to show signs of exhaustion before 50 years have passed. The former at the present rate of increasing production will be greatly reduced. Our forests are rapidly going, our vast supply of mineral oil flows to the ends of the earth.

We can not continue to supply the world and recruit our own resources by the methods of trade that now obtain, because the minerals stored in the ground do not recreate themselves. Once utilized they are gone forever. We shall with these coming millions to provide for be thrown back upon the soil, the only recourse of mankind that is capable of infinite renewal and that offers life for generation after generation.

The period of ransacking the National storehouse to see what can be sent over seas and sold must be changed to an era in which we shall consider the preservation and the improvement of what is, fundamentally, our chief maintenance. For upon the cultivation of the soil all varied commercial activity of whatever intrinsic form or interest is mainly built, and upon it depends the future of mankind and the nature and stability of its institutions.

In some things we are going backward. The soil of the country is being impoverished by careless treatment. Forests are cut down that the sun may bake it and the floods scour it into the ocean. It has been cropped to the same grain year after year until its productive power in some of the richest portions of the country have deteriorated fully 50 per cent.

The census returns show an actual decrease in farm values in a large number of the States. There are but two States in the Union which return a total value of farm-products of \$30 per acre of improved land.

The State of Illinois, with its fat soil and nearby markets, gave but \$12.48 at the last census, and it stands well up on the list. It is easily demonstrated that a mere reform of methods of cultivation would double the agricultural product each year, adding for the whole country from five billion to six billion dollars to the National wealth, while the resort to small farms and the adoption of intensive cultivation would give an equal additional increment. These are possibilities to which necessity will lend a more pertinent and compelling aspect with the coming years of the present century.

The costliest error will be any clinging to the delusion that we are to continue to increase our exports and to live upon the profits of the foreign market. As we have seen, the foreign market is supplied now by us with materials that are mostly the products of the farm and many of these we shall soon cease to send abroad.

The time is coming on when we shall

need our wheat-crop for home consumption and seed; when our mines will not yield, except at increased cost, the iron and coal required for manufactured commodities consumed at home, and when the cheap labor of the Orient, the wages of which we can not hope to meet, equipped with our machinery and with the patience and imitative instinct there so highly developed, will vanquish all competitors in every market.

Though our trade were unshackled from the legislative bonds that now prevent its natural growth and free expansion, it would not offer us for long any other reliance than a broken reed.

Every nation that enjoys prosperity and exhibits a healthy national vitality is rooted to the soil, and all its other industries are clustered about tillage as the branches spring from the parent stock that nourished them all.

To a realization of our position, to a return to agriculture, to a jealous care of our land resources, both as to quantity and quality, and to a mode of cultivation that shall at once multiply the yield per acre and restore instead of destroying productive qualities we must come without delay if we are to escape disaster.

I know of no issue, in business or in politics, that compares in importance or in power with this that looms already upon us and threatens our future.

In the past, before the advent of railroads in this country, large cities were built on the harbors of our navigable waters, where traffic might be most conveniently and cheaply transferred between land and water.

Next in importance to the productivity of the soil comes that of transportation. Already the growth of our commerce between the Mississippi River and the Atlantic Coast finds itself delayed and hampered for want of additional railway lines and of terminal facilities. And throughout the whole country there is a rising call for more tracks, more engines, more cars, and more transportation facilities of all kinds.

To furnish what is required will call for the investment of many hundreds of millions of dollars to be furnished from the savings of people of all classes, and without them the whole business of the country must suffer.

No city, State, or nation can ever build up a great commercial growth based upon a foundation theory that one of its most important servants shall render service at a loss or under unreasonable conditions. Such a growth can not endure.

The outlook for the future has been summed up with rare accuracy and force by a writer and thinker of the first rank, to whom I have already referred, the late Professor Shaler, in these words:

"As the population becomes dense, there will soon appear the dangers of poverty and misery that are apt to accompany a crowded civilization. The enormous pressure of masses of people seems to crush out the hope and energy and prosperity of a large proportion of them, and the great problem of modern progress, after all, is how to deal with this tendency—how to prevent the forces of advancing social evolution from being destructive as well as creative."

This is the problem of the Nation, exactly stated, and it is, in a special sense, the problem of the Northwest. As here the noblest fruits of prosperity have been gathered, so here must be evolved methods to preserve them from decay.

Leadership implies responsibility; primacy must carry with it protection for those less favored. It is the central area of this continent that gave the material and the stage for the latest phases of human progress. It is there that the problems which have silenced the older nations, the evolutions as yet unaccomplished must be worked out. Nowhere else is there more energy or more courage to join with great issues that promise success.

The event will not come through boasting or through accretion of wealth and the magnification of industries, but as all the work of science and all the revelations of natural law have been made our heritage; by infinite patience, infinite study of facts as they are, infinite search for close adaptation of means to ends, infinite devotion to the glory and perpetuity of our institutions and infinite love for man as he should and yet may be.

Mark A. Carleton, the wheat expert who has been in charge of the durum exploitation, now ventures the opinion that the United States is capable of producing a billion and a half bush-

els of wheat instead of 750,000,000 only. This is not a wild guess by any means. Given the need, and, of course, the profit, of intense farming, and the American farmer will do as well as his English contemporary, at least; and a billion and a half is only doubling the yield, which will be 'too easy'—some day.—American Grain Trade.

Alfalfa the Wonderful, in Kansas

J. C. MOHLER, ASSISTANT SECRETARY KANSAS STATE BOARD OF AGRICULTURE.

Alfalfa, that truly wonderful forage-plant, which is now a most important factor in Kansas' agricultural prosperity, has a larger acreage than ever before. According to the sworn returns of assessors and county clerks, which are being tabulated in the office of the State Board of Agriculture, Kansas devoted 614,813 acres to alfalfa in 1906. This is a gain of 12,253 acres over the previous year. The present acreage devoted to alfalfa seems remarkable when it is considered that prior to 1891 it was a stranger to Kansas' agriculture, at least so far as official recognition in the agricultural statistics of the Board of Agriculture was concerned. During the first few years that statistics of acreage were compiled, the increase from year to year was little short of marvelous, but the increase within the past few years, except in 1900 and 1904, has been steady and sure.

The increase of this year's acreage over that of its statistical birth-year, 1891, is 1,688 per cent. Alfalfa ranks first in acreage of tame grasses, its nearest competitor, timothy, having 125,211 acres less in 1906. Jewell County's area in alfalfa this year, 41,903 acres, is the largest acreage ever raised by one county and is larger than that for the entire State in 1891. From 1891 to 1897, inclusive, Finney led all other counties in acreage; in 1898 Butler was first; in 1899 Jewell forged ahead to first place, which position has been retained ever since. In 1891 but nine counties had over one thousand acres of alfalfa; this year seventy-one counties show acreages of 1,000 and upwards.

Every county, save Haskell, Norton, and Stanton, grows alfalfa.

Below is given a table showing the ten counties leading in acreage in 1906, and the acreage of each in 1891. These ten counties now have over 36 per cent of the entire acreage of alfalfa for the State:

Counties.	Acres. 1906.	Acres. 1891.
Jewell	41,903	296
Butler	27,365	503
Smith	24,681	53
Republic	24,613	490
Phillips	19,524	111
Cloud	18,080	2,018
Marion	17,143	851
Mitchell	16,797	880
Sedgwick	16,627	1,023
McPherson	16,079	980
Totals	222,712	7,211

It will be seen that the entire alfalfa acreage of the ten Kansas counties named was in 1891 less than one-half the acreage of McPherson County in 1906, which ranks tenth. In all, thirty-three counties each devoted more land to alfalfa in 1906 than the total of the ten counties named above for the year 1891. Jewell and Butler Counties have over 11 per cent of the present acreage of the entire State.

The following shows the acreages devoted to alfalfa in Kansas each year from 1891 to 1906, inclusive:


Year.	Acres.	Year.	Acres.
1891	34,384	1899	278,477
1892	62,583	1900	276,008
1893	73,500	1901	319,142
1894	90,825	1902	458,493
1895	139,878	1903	566,592
1896	155,949	1904	557,569
1897	171,334	1905	602,560
1898	231,548	1906	614,813

These statements and figures will convey some idea of the importance of alfalfa in the agriculture of Kansas, and suggest that there will undoubtedly be no cessation of interest in a crop so valuable and so readily adaptable to well-nigh all sections and localities.

There seems to be no abatement of interest in the development of alfalfa, but on the contrary there is an insistent and almost clamorous demand for more information and literature on the subject. This desire for enlightenment knows no county or sectional boundaries, but from all parts of the State (and, indeed, the entire country) the Kansas Board receives queries as to the adaptability of this legume to different localities and soils.

Since 1901 the standard work on alfalfa has been a 160-page book, of which F. D. Coburn, Secretary of the Kansas Board of Agriculture, is the author, and which is published in New York. This book has proved worth many times the half dollar charged for it by the publishers, but Mr. Coburn, realizing the need for a far more ex-

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Save time, horses, work and money by using an **Electric Handy Wagon**
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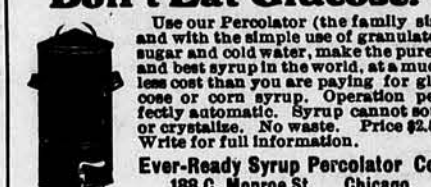


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haustive and comprehensive work on the subject, has prepared "The Book of Alfalfa," of over 400 pages, fully illustrated, which contains pretty much all that is known, to date, about alfalfa. In fact, so complete is it that it is very properly classed as a text-book, and its use as such has been the author's purpose in its preparation. This volume is expected from the press in the immediate future.*

More About Bermuda Hay.

The two and one-half acres of upland soil that was planted to hardy Bermuda grass on June 29 and 30, 1905, has been cut for the third time this season. The first cutting in the season of 1906 was made June 12. The total yield of cured hay from the field was 13,145 pounds, or at the rate of 5,658 pounds per acre. The second cutting for 1906 was made August 2. The rainfall from June 12 to time of second cutting was 6.53 inches. Before the second crop was fully cured it began raining again and 5.36 inches of water fell on the hay before it was hauled in and weighed August 15. This thorough leaching reduced the weight materially, but the final weight of dry hay was 7,275 pounds from the two and one-half acres, or 2,910 pounds to the acre. The third cutting was made September 18 and the hay cured without being rained upon. The total yield of cured hay for the field was 7,840 pounds, or at the rate of 3,136 pounds per acre.

The total yield of hay per acre for the season was 11,704 pounds, or 5.8 tons. Land of the very same nature adjoining this field does not produce over one-half ton of prairie hay of inferior quality. Bermuda hay contains twice as much digestible nutrients as the best of prairie hay, is much more palatable, free from stems and weeds, and in every way superior to hay made from wild grasses. It is time Oklahoma farmers were beginning to wake up to the possibilities of this remarkable grass, not only as a pasturing grass but also as a hay-crop.—Press Bulletin Oklahoma Experiment Station.

Farm Notes.

N. J. SHEPHERD, ELDON, MO.
Bad management is the most fruitful source of farms becoming poverty stricken.
The rearing and feeding of live stock is the salvation of impoverished farms.
The food and management of the stock has much to do with its healthfulness.
As a rule, the more rapidly animals are finished and fattened, the greater the profit.
Animals must be fed on food that they relish in order to produce the best results.
Mineral manures tend to make the soil more compact and therefore less absorptive and retentive of water.
Intensive farming seeks to leave each acre better after each crop is taken off than it was before.
Convenience and economy in feeding will least expose the farmer to inclement weather in caring for his stock.
In feeding to fatten, use liberally that kind of feed that is richest in oil and fat-forming elements.
The greatest profit lies in bringing the stock to maturity as quickly as possible at the minimum of expenditure.
Besides the profitable need of growing better animals, there is always a demand for such stock, even when poor animals are unsalable.
Feeding heavily and judicious selection of parents on both sides are powerful factors in producing good stock of all descriptions.
A falling appetite is generally the first indication of an animal being out of condition, and such should receive prompt attention.
Clay land is the most retentive of water and for this reason it is all the more important that such land should be thoroughly drained.
Care should be taken to thoroughly dry the seed-corn before storing away and before freezing weather sets in, as freezing while it is damp will injure the vitality.
Economy in keeping stock is only attained in securing the largest returns, and this can only be done by keeping the animals in a good, thrifty condition.
A variety in stock and of crops is most essential to the proper cultivation and highest fertility of the soil

*The publisher's price of Mr. Coburn's new work is \$2, postage paid, and it can be ordered through THE KANSAS FARMER.

and also in achieving the greatest profit in farming.

Too late fall pasturing of meadows destroys the growth necessary to protect the grass-roots during the winter and to fertilize the soil and render it rich and mellow.

A horse may have sound limbs, a sound body, and be sound apparently in every particular, yet if he lacks constitution and good vital organs, he is of little value.

However valuable a food may be as shown by its analysis, the feeding value is more or less determined by the way it is administered and by other conditions attending the feeding.

The stock should be kept off the fields as far as possible when the ground is soft, as tramping a soil at that time does more than anything else to injure it.

Miscellany

Suggestions to Country Shippers for Handling the 1906 Corn-Crop.

[The problem of marketing farm-products is not a new one, but its complete solution is yet to be found. One of the developments of the recent past and the present is the farmers' independent elevator. The management of the business of such an elevator is simple, except as to the one respect of the terminal market. This terminal-market problem is one that affects all local elevators, whether cooperative or operated by buyers. The following discussion of the question of forwarding and selling will be found useful from its clear descriptions of aspects of the business that have appeared to every manager of an elevator.—EDITOR.]

That the 1906 crop of corn will be unprecedentedly large is almost an assured fact; and that the country elevator man will handle it under somewhat changed conditions than have obtained for a number of years is evident. For a quarter of a century a limited number of exporters and elevator concerns at the terminal markets, working on elevator allowances and freight rebates, or on published tariffs reduced for their especial benefit (but not published until the intended beneficiaries had bought up the desired quantity of corn), have contracted large blocks of corn of the interior dealers for forward shipment, paying higher prices than it was possible to pay on the known cost of transportation. By far the greater proportion of corn purchased on these secret freight rates was for direct shipment to Gulf ports and to the Atlantic seaboard on export account, though a considerable amount, billed as export grain, was diverted to domestic points, and so secured the benefit of the lower export rate. Because of this favoritism in freight rates, enabling a few concerns to pay higher prices for corn than was obtainable in the open market, the interior grain-dealer has been forced to sell to them on their terms. At times there has been great difference in the price he was induced or deluded into selling corn on distant weights and inspection, though fearful of the condition of his corn on arrival at destination, and though almost certain that a long journey in defective cars must result in enormous loss of grain by leakage.

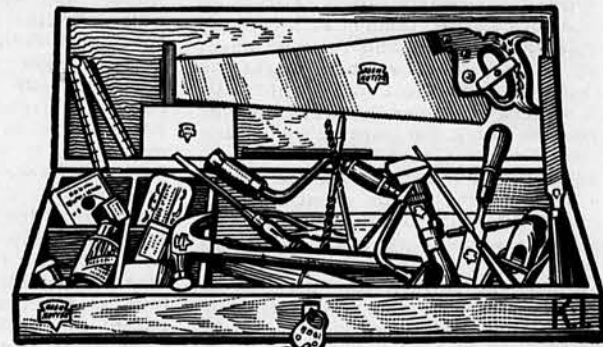
SPECIAL FAVORS NO MORE.

But the operation of the Hepburn law, enacted at the last session of Congress, places the interior grain-dealer in the position of a free man—free to sell or consign to whom or to any market he chooses. None will have a lower rate to ship on than he; none can have any advantage over him. This fact will enable the country-elevator man to conduct his business and dispose of his grain as his intelligence and experience may dictate. And, being free to handle the 1906 corn-crop on the best possible lines, a few suggestions for his consideration are in order.

HOW TO HANDLE DAMP CORN.

Every dealer knows without being told that poor quality, or poor conditioned, corn must be bought on its merits, and that if he ships No. 4 corn he can not expect it to grade No. 2 in the market. And every dealer knows that the quicker he disposes of damp corn the better off he will be, for it does not improve with holding. If the country-elevator man has no drier he should ship his damp corn quickly to a nearby market, and he should impress upon the railroad company the urgent necessity of quick transit. There is no valid excuse for grain being in transit from Nebraska points more than five or six days to Chicago, Peoria, or

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Almost every day some sort of a tool could be used to advantage around the house, and oftentimes it is absolutely necessary to have tools at once, to make repairs. The best way to buy them and the most convenient way to keep them is in a cabinet.



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This booklet contains cabinets from \$8.50 to \$50.00, according to assortment of tools. A postal will bring it.

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The BEST CORN SHELLER

to buy is the one that will shell the most corn in a given time with the least power, and the smallest outlay for repairs. That sheller is



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The feeder is from 12 to 16 inches longer than others. Elevator head is wide and can not clog. Rear end of sheller is 5 3-4 inches wider than others—these features insure

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

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The stay wire runs through our fence continuously up and down for many rods without end—can't pull off at top or bottom under strain. Try this fence 30 days free. We pay freight. Return it at our expense if not what you want. That's fair, isn't it? Send for our catalogue; it shows details of construction—quotes manufacturer's prices—that saves you the dealer's profit. Write today.
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For a beautiful as well as a most profitable pasture sow Blue-grass. The genuine Kentucky seed is what you want, and from September until June is the proper time to sow. For pure seed of our own raising, and full particulars write MT. AIRY SEED FARM, PARIS KENTUCKY.

St. Louis, and in cold weather damp corn is not likely to deteriorate in that length of time.

TRACK BIDS, OR CONSIGNMENTS.

Whether the interior dealer prefers to sell on track bids, or to consign, with or without hedging, let him in his own interest have his corn go to some of the primary markets, where there are ample facilities for handling grain, and where perfect systems are in vogue for its inspection and weighing; where there is ready sale for all qualities and varieties, and where the discount on "off" grades is trifling.

Has it ever occurred to the country-elevator man that when selling direct to the exporter or to points of domestic consumption he is destroying the very competition that is necessary to establish a correct and fair basis of values at the primary markets, and that while in some instances he may possibly save commissions by direct selling, he is causing from one to five cents per bushel to be taken off the selling price? If No. 2 corn is quoted at 45 cents on the Chicago market, the track-bidders would base their bids to the country on that quotation, and if the country grain-dealers would supply their wants, they would be relieved of the necessity of buying in the open market. Now, suppose that the country grain-dealers had declined their bids and had compelled these track-bidders, buying for export, domestic shipment, terminal elevators, and various industries, to go in the open market for supplies, would not their active bidding for corn naturally put the price up to 47 or 50 cents? Is it not strictly proper that when the price established at primary markets is presumed to be a reflection of supply and demand, the primary markets should be made to feel the influence of the demand as well as of the supply? But under the system of buying of the country dealers, the primary markets are not permitted to feel the influence of the purchasing power, but are most forcibly made to feel the depressing effects of hedging sales by these parties buying direct of the country, without the counterbalancing and stimulating effect of an equal amount of cash grain purchases in the same market where the hedging is done.

WHERE PRICES ARE MADE.

Were it not that the price established at the primary market is the basis of value for the disposition of every bushel of corn sold, whether marketed on the hoof or as grain, it would be a less serious proposition. But it is an accepted fact that the bids sent out daily to the country are based on the prices established in the primary markets on the day transmitted, and that current prices for corn govern the selling price of pork. It matters not whether bids to the country-elevator man are sent from Omaha, Des Moines, Memphis, Kansas City, or any of the headquarters for brokers; these bids are based on the prices established in the great primary markets of Chicago and St. Louis. Confronted with the proposition that there will be about three billions of bushels of corn of the 1906 crop to be marketed as corn or as its products on the basis of prices established in the primary markets, would it not be the part of wisdom for the country grain-shipper to pause and consider whether he has been drifting? Let the disastrous results of the manner of marketing the 1906 red winter wheat-crop be a lasting lesson to the grain-shippers of the United States. Selling that crop on track bids has cost the winter-wheat producers of the country from

\$50,000,000 to \$100,000,000 because of the lower prices realized than would have been had the wheat been consigned to primary markets.

SHORT WEIGHTS AND DOCKAGES.

The main losses sustained on corn by interior shippers are not through fluctuations of the market, as the market as often fluctuates in their favor as against them. The blood-curdling losses suffered in the corn business by country shippers are on account of short weights and dockages on "off" grades. If the shipper would avoid these real sources of loss let him select whichever primary market is best suited to his location and the character of corn he handles and consign his corn to good commission merchants who will protect his interests in the matter of weights and grading. By sending his corn on the shorter journey to a primary market, the chances of leakage and deterioration of quality in transit are less than when shipments are sent to distant points. If a car containing corn arrives in a leaking condition, the commission merchant will collect the evidence necessary to sustain the shipper's claim against the railroad company for loss of corn in transit. If country shippers universally consign their grain to convenient primary markets, they will find a more plentiful supply of empty cars. If shippers generally will consign to the commission merchant, and thus force all classes of buyers into the open market for supplies, the active public bidding of these numerous buyers will compel relatively good prices and slight discounts on the "off" grades.

Even though the primary market price for No. 2 or No. 3 corn were not as high by 1/2 cent as the price offered by some track-bidder, what would it avail the shipper to sell on the attractive looking track bid and suffer a dockage of 3 to 10 cents a bushel on even only a portion of the corn sold?

CAR SHORTAGE.

Another point: In view of the absolute certainty that the supply of cars will be shorter this winter than ever before known, will it not be a hazardous undertaking to sell a block of corn for specified time of shipment? Had not the country shipper better take the chances of a moderate decline on consignments to the primary markets rather than run the risk of incurring a heavy penalty for failure to fill a contract of track-sold corn? If the shipper fears a decline in the market price, he can protect his purchases of the farmer by selling distant futures. But, by all means, let him steer clear of selling December for his hedge, as corners in that month are too frequently among the possibilities, on account of rough weather and bad roads curtailing farmers' deliveries.—F. S. Rutherford, in American Elevator and Grain Trade.

Where Reciprocity is Badly Needed.

Alvin H. Sanders, editor of The Breeder's Gazette and chairman of the American Reciprocal Tariff League, in opening his address at the recent live-stock conference on foreign markets held at Kansas City said:

"Live cattle and hogs have been selling in Germany for a year past at approximately fifteen cents per pound. Horse meat and dog sausage enter into the daily diet of the people. In the city of Paris horse steak is also regularly handled, and frugal housewives buy legs and wings of chickens because they can not afford a whole fowl or a cut of beef. These two countries alone have a population of ninety-nine million people; a large proportion of whom are now practically meatless. That is one side of the picture. What is the reverse?"

"Dressed beef is going out of our Chicago packing houses at an average price of about 6 1/2 cents per pound. A large supply of ordinary stock daily crosses the scales in our leading markets at \$3.25 to \$4.50 per hundred-weight. This class of cattle, while not up to the requirements of our Eastern and English shipping trade, would 'look good' on the docks of Hamburg and Bremen, to people who are now eating cats and dogs and goats, or if offered in every city and village throughout France and Germany in the form of dressed, canned, corned, or barbelled beef, the product would meet with a grateful reception from a hungry people.

"Our market for fat native steers is sustained fairly well because London plays an important hand in that branch of the trade, but not every cattle-grower can furnish bullocks good enough for John Bull; hence the question of better markets for the lower-priced sorts becomes a matter of prime importance to vastly more people than are interested in the 'tops.'"

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lies in the fact that it generates intense heat without smoke or smell. The oil fount and the wick carrier are made of brass throughout, which insures durability. Gives great heat at small cost. Fount has oil indicator and handle. Heater is light and portable. Absolutely safe and simple—wick cannot be turned too high or too low. Operated as easily as a lamp. All parts easily cleaned. Two finishes—nickel and japan. Every heater warranted. If not at your dealer's write nearest agency for descriptive circular.

The Rayo Lamp can be used in any room and is the best all-round house lamp made. Gives a clear, steady light. Is the safest lamp you can buy. Brass throughout and nickel plated. Equipped with the latest improved burner. Handsome—simple—satisfactory. Every lamp warranted. Write to nearest agency if you cannot get it from your dealer.



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Pure, graded seed is the first essential for a good crop. It makes no difference what the weather or seed bed may be, without good seed you will not get a good crop. You have no control over the elements but with a moderately fertile soil, by preparing your seed bed and sowing clean, graded, perfect seed, unless the season be unfavorable you can be assured of a 45-bushel crop.

DO IT NOW! Decide that this season you will do everything in your power to insure a perfect crop. Prepare your seed bed with care but above all else sow clean, graded seed.

A "Perfection" Cleaner, Separator and Grader will enable you to properly prepare your seed grain. It will remove all Rye, Oats, Cheat, and other noxious seeds from your wheat and will more than pay for itself on even the smallest farm. It separates, cleans and makes three grades all in one operation and will handle any kind of seed or grain from Corn to Red Top.

Decide now and write us to-day so that we can show you why a "Perfection" has eclipsed the fanning mill and why it is the best.



What F. D. Coburn, Secretary of the Kansas State Board of Agriculture said of the "Perfection" in sworn testimony given at a recent court proceedings:

"It was nearer perfection than anything of the kind I had ever seen and far more so than I had supposed possible. I couldn't have believed it without seeing it."

Tell us what kind of grain you raise and we will send you cleaned samples showing the way a PERFECTION will clean and grade it.

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You do not have to wait; we have all our stoves in Kansas City. We are ready to fill your orders the same day they are received. We guarantee safe delivery. Our big catalog is ready for you. Do not buy before getting our catalog and prices.

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Don't cripple your ducks. Kill them with Arrow Shells. All standard smokeless powders loaded. Perfect from primer to crimp.

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U.M.C. CO. NO. 12 ARROW



U.M.C. CO. NO. 12 ARROW

Horticulture

The "Cabbage Snake."

EDITOR KANSAS FARMER:—At this season of the year, I am receiving specimens of the so-called "cabbage snake," with inquiries as to the alleged poisonous character of the worm and of the cabbage in which it is said to be found. The suspicion against cabbage as a food, on account of the fear of the presence of this worm, has reached a point where the vegetable is refused by buyers, sometimes to the serious loss of the gardener.

The agitation has had its origin in newspaper paragraphs, and it is sufficiently answered by the conclusions of reputable investigators to the effect that "the cabbage snake is entirely harmless, and the public rumors and superstitions to the contrary are fallacies without semblance of foundation."

The so-called "snake" is really a hair-worm, a member of a group of which the majority, if not all, are parasitic in the bodies of insects. Similar worms are frequently found in the abdomen of the grasshopper, to which they prove to be indeed a deadly parasite, but not on account of any poisonous quality, but because they absorb the juices of the host insects, gradually reducing its vitality until it finally dies of exhaustion. On this account they are rather to be regarded the friend than the dangerous foe of man.

How hair-worms gain access to the interior of the cabbage is yet an unsolved question, and some doubt exists whether all the specimens sent to naturalists have actually been taken from the cabbage they are supposed to infest. But there is no doubt that their presence in the cabbage is rather accidental than natural or usual, and it has been abundantly shown by experimental tests that neither the worm nor the cabbage that it was taken from disclose evidence of any poisonous quality whatever.

A complete account of this worm, and of certain serious investigations into its supposed poisonous qualities, will be found in Circular No. 62, Bureau of Entomology, U. S. Department of Agriculture, Washington, D. C., a copy of which may be obtained free on application to Dr. L. O. Howard, Chief of the Bureau.

E. A. POPENOE, Entomologist.
Kansas Experiment Station.

The Wellhouse Rabbit-Trap.

Editor Kansas Farmer:—Last winter I read the description of a successful orchard rabbit-trap in your paper and thought I would like to give the trap a trial. Having lost the paper describing the trap, I do not know how to make it. Will you please give directions and illustrations for making the trap through THE KANSAS FARMER?

Jackson County. L. A. SALESKY.
THE KANSAS FARMER has frequently published descriptions of the Wellhouse

along the under side of the top board of the trap. This trigger-wire is bent downwards near the rear end of the trap and formed into a loop or a figure 8, so that as the rabbit crowds into the rear end of the box he is sure to push against this wire and thus move it backwards, releasing the door, which falls and makes him a prisoner.

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

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

Missouri State Horticultural Society.

The Missouri State Horticultural Society advertises its 49th annual meeting for December 4, 5, and 6, 1906, at Boonville. This is one of the great meetings of the year.

Secretary Goodman announces that a number of prominent horticulturists from other States, from Washington, D. C., and from the Missouri University will be present and give the best practical information to be had. Evaporating, use of culls, cider-making, packing, and selling will all have a part. A good program will be provided. Rates will be given on the railroads. Hotels also will give rates. One hundred and fifty dollars will be given in premiums. The apples will be repacked and held for the Jamestown Exposition. Arrangements are made for the saving of specimens for that display in 1907. The Merchants Cold Storage Company, Kansas City, Mo., will take care of the collections and the Society will pay the express on them. The Society very much desires that the members save a fine collection of apples for this exposition, since they have so many good ones, and for the meeting of the American Pomological Society at the same time. Select the best you have, wrap them in paper, pack them well, put your name on them, and send by express to L. A. Goodman, The Merchants Cold Storage Co., 550 Walnut St., Kansas City, Mo., and they will be cared for there.

Orchard Culture.

Government inspection of the orchards of Wayne County, N. Y., showed that the most prominent varieties of apples grown are Baldwin and Greening followed by Roxbury, Russett, King, Northern Spy, and Twenty Ounce. From 20 to 25 per cent of the orchards are rented. The average yield of rented orchards for four years was 174 bushels per acre and from orchards managed by the owner, 210 bushels.

Relative to tillage and yield, 44 per cent of the orchards have been in sod

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ter results than those pastured with cattle or horses. A few orchards in sod were found which were among the best producers.

About one-third of the orchards examined received no fertilizers whatever. The other two-thirds received more or less manure. Commercial fertilizers were used in only about 12 per cent of the orchards. The average yield for two years in fertilized orchards was 267 bushels per acre and in unfertilized 202 bushels. Buckwheat is the cover-crop most commonly grown.

In 43 per cent of the mature orchards the trees were 30 by 30 or less feet apart. The average yield for 4 years where the trees were 30 by 30 feet apart was 186 bushels. When 31 by 31 feet to 35 by 35 feet apart, the average yield was 222 bushels, and when 36 feet to 40 by 40 feet apart the average yield was 229 bushels per acre. Trees were found to reach their maximum yield in Wayne County 44 years after planting.—Farm and Stock Journal.

Management of Orchards.

How the orchards of the Ohio Experiment farm are cultivated is described as follows by A. J. Root in Gleanings in Bee Culture: "On one part of the great farm there is a very pretty orchard of different varieties of fruit-trees, one whole row of each variety running north and south. Well, in order to test different methods of cultivation or management, there are strips running east and west to cut across all the different varieties managed in this way. First, there is a strip embracing three or four trees, of clean cultivation. Nothing is allowed to grow at all, except apple-trees. Next to this is a strip

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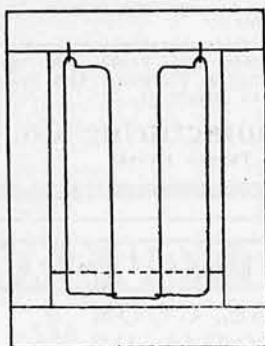
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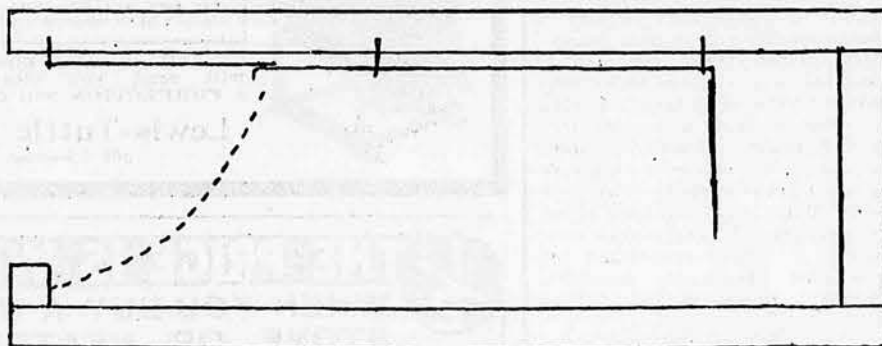
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No. 1, Front.



No. 2, Section.

The Wellhouse Rabbit-Trap.

trap. Following is the description as dictated by Judge Wellhouse several years ago:

MATERIALS USED IN MAKING THE WELLHOUSE RABBIT-TRAP.

Four pieces 1 by 6 by 21 for sides, top, and bottom, one piece 1 by 6 by 8 for back; one piece 7/8 by 7/8 by 3 1/2 for door stop; 2 3/4 inches wire for door; 22 inches wire for trigger; 4 1/8-inch staples made of No. 15 wire; 480 feet or twelve pounds No. 12 galvanized-iron wire and one pound of staples are required to make one hundred traps.

The Wellhouse trap is a box made of 6-inch fencing, old boards preferred. It is 21 inches long. The front end is closed only by a wire door which is hung from the top and opens inward. A cleat across the bottom prevents the door from opening outward. In setting the trap the door is fastened open by a wire which is attached loosely

at least 5 years, 20 per cent have been tilled 5 years or more, and 36 per cent have been tilled part of the time. In 1903, 30 per cent of the orchards thus differently managed were as follows: Tilled for preceding 5 years or more, 266 bushels per acre; tilled most years, 299 bushels; in sod most years, 202 bushels; in sod at least 5 years, 148 bushels. It is thus seen that the tilled orchards have given an average yield of 80 per cent higher than orchards regularly in sod.

Not all this difference, however, is due to tillage, since the men who till the orchards usually also give better attention to manuring, spraying, and pruning. Taking these factors into account, it was found that the increase in yield, due to tillage alone, was about 35 per cent. A large number of the orchards in sod were pastured with various kinds of stock. Orchards pastured with hogs or sheep gave bet-

managed in the same way, except that cover-crops, crimson clover, soy-beans, cow-peas, or something of that kind, are put on to cover the ground in winter and be plowed under in the spring to furnish fertility. Then there is a third strip, in grass or clover. The grass or clover is cut off at different periods and taken away; but right around every tree, as far as the limbs extend, the sod is removed entirely, and clean cultivation practised. No weeds, grass, nor anything else is allowed to grow at all. Last, but not least, is a strip in grass and clover, and all the growth is cut off at different times like the other; but the grass, clover, etc., are all put around the trees for mulching, say as far as the limbs extend.

"Here are four different methods of managing an orchard, right side by side, and each strip embraces trees of different varieties, habits of growth,

etc. Which method comes out ahead? If somebody had asked me before I had seen it, I should have said where the leguminous cover-crops were put in and plowed under; but, dear me! what an object lesson the sight of that orchard was! This process had been carried on for three or four years, and the mulched trees were away ahead in every respect. The strip next to them, where the ground was left bare in a circle as far around as the limbs went, was the poorest in the lot. Then there was the cover crop next to the mulching. The mulched trees all had dark, green, healthy foliage. Many of the trunks were twice the size of those adjoining, where the ground was bare and clean the year round. I presume the mulching was largely clover hay, for on kicking down into it the soil was loose, dark colored, and looked almost like the woods' dirt from the forest. The decaying grass and clover not only furnished nutriment for the trees, but it shaded the ground and prevented the sun from scorching the roots that ordinarily come near the surface for air. Come to think of it, is not that Nature's plan as we see it in the forest? The roots are covered with dead and decaying leaves. The ground is shaded from the sun, and kept damp and moist even during a dry time. Unless the ground is very rich, I presume the grass and clover that can be grown between the trees, especially if they are large ones, would hardly be sufficient mulching, and I believe it is sometimes necessary, especially when the trees get large, to bring in spoiled hay, straw, or something of that sort from somewhere else."

Planting Forests on the National Reserves.

PRESS BULLETIN NO. 115, U. S. DEPARTMENT OF AGRICULTURE.

FOREST SERVICE.

Forest-planting on the National forest reserves has gained far wider scope and a wholly new importance since the administration of the reserves passed to the Secretary of Agriculture, a year ago. This work now forms a leading part of the activity of the Forest Service and gives great promise for the future.

This change is due to a fuller appreciation of the needs of timber-supply and water-conservation, and to the knowledge that nature, unaided, can not repair the forest ravage and waste of the past.

The area now under forest in the West is less by millions of acres than the area suitable for forest growth. In the first place, fire has destroyed an enormous quantity of forest, denuding mountain slopes so completely that forest renewal by natural means has been rendered impossible for ages. Again, vast areas, scores of millions of acres, like the chaparral lands of Southern California, which once bore forest growth but long since lost it, must remain indefinitely unproductive wastes unless brought again, by planting, under forest. Moreover, the demand for timber, even the local demand, can not long be supplied from the reserves unless they are developed to the highest productive capacity, and, for this, forest replacement and extension, quite as much as conservative logging, are essential. Finally, the indirect use of the reserves is not less impressive. The vital importance of water for irrigation would, in the case of several of them, alone suffice to render forest-planting on watersheds imperative. In Southern California forest extension on the mountains is strongly favored by public sentiment, at almost any expense, because it is water, not the supply of fertile soil, which limits agriculture, so that land worth \$2,000 an acre with water could hardly be given away without it.

There are now six permanent reserve planting stations, two in California, one in New Mexico, one in Colorado, one in Utah, and one in Nebraska. Others will be established as it is found advisable.

The past winter has been extremely favorable for planting in California. A large force of men has been employed, both in the San Gabriel and in the Santa Barbara Mountains. Since the beginning of the rainy season about one hundred thousand seedlings have been set out. A least a dozen kinds were tried, to ascertain which are most suitable for use at different altitudes and under different exposures. Besides the seedlings set out on the mountain slopes, from two to three hundred thousand more have been transplanted from covered seed-beds to open nursery-beds, there to be held for use in the winter of 1906-7. The prime ob-

ject of the operations in Southern California is the improvement of important watersheds.

With the approach of the spring season plans are being made for active work at the other stations. The most extensive planting will be done in the Dismal River Reserve, near Halsey, Neb. Here five hundred thousand two-year-old pine seedlings will be planted in the sand hills adjoining the nursery site. This work will begin about the middle of April and will continue for a month or six weeks. This Dismal River Reserve is located in the typical sand-hill country, where the ground is of little value for agriculture, but well adapted to tree growth. The forestation of this large reserve will create an important future timber supply, and will at the same time demonstrate that these sand-hill lands generally can be put to productive use.

On the Pike's Peak Reserve planting will be done near Clyde. From thirty to forty thousand yellow pine and red fir seedlings will be shipped from Nebraska for that purpose, since seedlings in the Clyde nursery are too small for transplanting. The planting will be done on denuded watersheds for the conservation of water and for a future store of timber.

In the recently established reserve in the vicinity of Garden City, Kans., extensive experimental planting will be carried on. For this project fifty thousand pine seedlings will be shipped from Nebraska, and thirty thousand broad-leaf seedlings will be purchased from nurserymen. A section of land will be fenced, and fire-guards will be plowed to protect the planted area. The work here will serve the same purpose as in the Dismal River Reserve, and will, besides, be a great incentive to settlement.

The success which accompanied seed-sowing in the Black Hill Reserve last spring has encouraged the Forest Service to plan similar work for this spring. Broadcast sowing had never before proved successful in reserve work, but the 300 pounds of yellow pine-seed cast upon the snow in this experiment produced results far beyond all expectations, results which appear to indicate the practicability of this method on thousands of acres in this region. Of all methods of forest-planting, it is the simplest and cheapest, and the local demand for timber for mining purposes is great.

Nursery work will be carried on extensively at all the stations. At the Fort Bayard Station, New Mexico, permanent headquarters will be established and open transplant beds constructed. With the new nursery-beds at the Wasatch Station, Utah, at the Bear Creek Station in the Pike Peak's Reserve, and at Clyde, Col., and the enlarged beds at Halsey, Neb., the total area of seed-beds will have an annual capacity of about twelve million seedlings.

At the end of the planting season nearly five hundred acres will have been newly reforested.

God is a kind Father. He sets us all in the places where He wishes us to be employed; and that employment is truly "our Father's business." He chooses work for every creature which will be delightful to them, if they do it simply and humbly. He gives us always strength enough for what He wants us to do; and we may always be sure, whatever we are doing, that we can not be pleasing Him if we are not happy ourselves.—John Ruskin.

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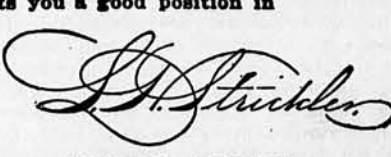
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Ohio State Grange Educational Work.

MARY E. LEE, SUPT. EDUCATIONAL WORK,
OHIO STATE GRANGE.

For years State and National Granges have declared in favor of a systematic course of home study of the problems affecting the farm and home. Subordinate granges have asked for it, and granges have been organized with a promise that such an opportunity would be offered. In 1904 Ohio State Grange adopted a plan to carry these promises into effect. Instantly, granges in Ohio and other States signified their desire to take up the work. This eagerness is an eloquent tribute to the intelligence of the farmers, to the work of the Grange, agricultural press, college of agriculture, Department of Agriculture, and experiment station that have labored for better methods of producing and distributing farm-produce. The "Ohio Plan," as it is called, met with hearty commendation from the officers of many State Granges who saw in it the opportunity long sought for home study under the auspices of the Grange. The education committee of the National Grange "notes with pleasure the work being done by the Ohio State Grange and suggests the advisability of the National Grange establishing a National Correspondence School of Agriculture on some similar plan." The report was unanimously adopted. "It is what we have all talked for years and now that a plan that is ideal, that seems to me to strike at the very roots of the whole matter, has been put in operation, it might as well be extended to all the States. The same machinery could carry it on for the Nation that does for a State and at a great saving of expense," declared the chairman of National education committee. Other States are asking for the opportunity to take the work. And this is but little more than a year after its first announcement, with limited funds to carry it on and with all the hardship incident to launching a new enterprise that promises good for humanity. Secretary Wilson, in one of the busiest weeks, when associations of agricultural college presidents, experiment station directors, National Association of Farmers' Institute Workers were holding conventions in Washington, gave an hour to the discussion of the plan, introduced the superintendent to the heads of various departments, explained the work in detail to each, and directed that anything that each could do to further it be done. He said, "It is one of the best plans ever devised. Ohio has struck the right trail in agricultural education for farmers at home. It is bound to succeed." When asked what message he would send back to the youth of Ohio, he replied, "Tell them to take this course their Grange offers them; that agriculture and domestic science is yet in its infancy. They will become teachers of a new time. New speakers and teachers are being called for every day. This will pave the way for preparation for the larger opportunities that will come." Prof. Richard Crosby, in charge of rural educational department, Washington, pronounced the plan ideal and said he would gladly render any assistance possible. "The Grange has shown its ability to do things," he exclaimed. "It appeals to all sides of human nature and can do the work more profitably than in clubs organized for this purpose alone." "The work should have been begun twenty years ago," said the late Secretary Miller at his last meeting with the Ohio State Grange.

Commendation from these high

sources is indeed gratifying to the Grange, but the opinion of those who are actually engaged in farming and know, experientially, the need and the opportunity, is entitled to careful consideration. M. Crawford, the great gladiolus- and strawberry-grower of Ohio, said in his local grange: "A farmer can well make his winter worth \$2 per day to him in studying the books recommended. It is all the more valuable because we can get together for discussion and comparison of views." Mr. Crawford is taking the work and speaks warmly of the pleasure and profit derived therefrom. His books go with him wherever he goes.

One of the leading institute lecturers in Ohio reported to W. W. Miller that at one of the best institutes he ever attended the discussions and questions were so far superior to the average that he inquired the reason. He was told that the local grange had a class of 32 in the grange educational work. Homer B. Crall, of Crawford County, writes: "Please send us bulletins of the second term's work as soon as possible. Several young men came into the grange to avail themselves of the opportunity offered by this work. We are all anxious to begin the next term's work. We would feel lost without it. We take turns about in leading, each one feeling a personal responsibility. This class will probably be doubled this year." O. J. Demuth, County Commissioner and Deputy of Tuscarawas County, writes: "At our last Pomona we recommended all the granges to take up the work. Interest is growing and as the granges that have taken the work report what good is being done, others will be enthused also. It takes time to get people to take hold of a thing, no matter how good. I believe it is the best thing the Grange has ever undertaken, and it will be the means of holding many granges together that would otherwise perish. I will do all that I can to advance the work." J. W. Ware, Darke County, reports great interest. F. M. Randolph, Perry County, whose grange is taking the second term's work, testifies to the value and interest. Fred Belknap, of Licking County, says it has required hard study but all have derived much pleasure and profit from it. A. L. Wakefield, of Trumbull County, reports much interest. Others might be quoted, but the aim is to mention those in different sections of the State that interested parties may inquire from a nearby source.

There is no discouragement as great as having worked hard all the season to find failure in the end. A little more intelligence in the beginning might have changed loss to profit. Conspicuously successful farmers are those who combine intelligence with skilled labor. Inefficiency of every kind brings disaster directly and indirectly. Expensive and impractical methods of farming entail hundreds of thousands of dollars loss annually. No other industry could thrive under it. The ravages of insects and diseases, loss of fertility, loss in feeding might be largely prevented if the facts, which are known and published, had been followed. In the matter of fertilizer, e. g., how many farmers know the needs of their soil, are acquainted with it, know what element to add and in what proportion? Fertilizer is bought by the bag or the brand, not the analysis. A year given to this study alone would save the farmers of Ohio thousands of dollars. "Fully half the hay- and grass-crops are eaten by insects of various kinds," said Prof. Osborn, of the Ohio State University. "They feed along side the cattle and sheep, but no notice is taken of their depredations till they become so strong as to appear in hordes; then a great outcry is made against them. But their work goes on year by year, persistently, quietly, and Ohio annually suffers thousands of dollars loss thereby." "Are there known remedies for their destruction?" was asked. In most cases, yes. But the farmers do not heed the insects till they come as a plague. "Our educational work is intended to bring this knowledge, which is already available, directly to the farmers, in such a way that they can refer to it when needed and be ready to act intelligently and in time to prevent the unseen, though constant forces of destruction," I answered. "The Grange could not do a greater work, he replied. "By study and diffusion of knowledge each one is helped as well as well as others in the community who imitate rather than seek a better way through careful study."

Our experiment stations are carried on at a cost of millions of dollars annually, and no money is spent that brings larger results, yet very few farmers reap benefits commensurate with what they might. I asked the

directors of nearly all the experiment stations how large a per cent of farmers used the bulletins. The replies were so similar that one will embrace all. "A very small per cent of the farmers ask for bulletins. Sometimes they come in a busy time, or are not of interest at that moment, are laid away till a more convenient time, and the chances are that they are never read."

A progressive farmer will avail himself of the revelations of science. After years others will imitate him and find to their mortification they might have had the same information, with the resultant good, years before. Books have been written embodying the careful experiment of years, which have helped the progressive farmer to achieve success far beyond his neighbor. Colleges of agriculture have been established to impart this knowledge to students; traveling schools inspire and direct thought to the fountain of knowledge. It is left to the individual to follow up the suggestion. The Grange brings these helps directly to its membership.

The Grange offers, absolutely free to its membership, a course of study in agriculture and domestic science for home study, in cooperation with the college of agriculture and domestic science of the Ohio State University. A grange was organized at the University to aid in making the work more effective. Later, one was organized at the experiment station. All agencies are cooperating to make the work as valuable as possible. An outline on each term's work is prepared that aids the student in getting the most out of the work. Questions are asked and topics for papers suggested. The first term's work for agriculture dealt with the soil, using Brook's Soil as text, with Robert's Fertility of the Land, King's Soil, and King's Irrigation and Drainage, Snyder's Chemistry of the Soil and Fertilizers, and Vivian's Principles of Manures as reference works. In domestic economy sanitation was the first term's work. Mrs. Ellen H. Richard's, of the Boston Polytechnic School, Home Sanitation was used as text, with Burrage's School Sanitation and Decoration, and Waring's How to Drain a House as references. The course in agriculture will embrace study of soils, crops, animal husbandry, rural economics, comprising study of farm management and the distribution of crops and economic questions of vital interest. In domestic science home sanitation, foods and dietetics together with a study of food and drug adulterants, hygiene, house and lawn decoration, house management, vegetable and floral gardening, and study of economic problems in their broad aspect. The second term's work takes up crops, using Brook's Crops as text with Hunt's Cereals in America, Vivian's Principles of Manureing, King's Soil, Spillman's Farm Grasses of the United States, Shaw's Forage Crops, James' Practical Agriculture, and various experiment station and agricultural bulletins. In gardening, S. B. Green's Vegetable Gardening and Rexford's Floral Gardening have been used as texts, with Greiner's the Garden Book, Bailey's Principles of Vegetable Gardening, as references. Prof. Price, of the college of agriculture, prepared the outline on soils. Prof. McCall, of the same institution, that on crops; Prof. W. J. Green, of the Ohio Experiment Station, that on gardening; and Mary E. Lee that on sanitation. Other bulletins will be issued as the work advances. Examinations are based on the text-books, though as large use of the reference works is urged as is possible. A certificate will be issued to each member completing the course. Credits will be given on each term's work.

Books may be bought at wholesale prices. Several classes have asked for as many reference works as were available. A glance at the list will show that they are standard works written by those who are authorities in their various lines in America and Europe. While it is not necessary to purchase all the reference works, it is highly desirable that each grange add the entire list to its library, and that students purchase such as they feel able. The prices are lower than ever before offered on any class of books for private buying.

Study at home. At each grange meeting a paper or talk should be given bearing on the lesson for that period, and full discussion welcomed both by members of the class and others. This course provides for a continuous program, systematic, logical, with the certainty of having something of worth to offer and receive at each meeting, while the members will secure a valuable course in a correspondence school. Vitality and exuberance of

Do it Now! Don't Wait Until It's Too Late!

KEEP your body clean! Most people are very neat and clean in their outward appearance, but how about the inside?

Are you clean inside? And if not, how can you face the world with clean thoughts, clear intelligence, a fair, just, bright mind and get your full share of capacity for work and enjoyment?

Neglect of exercise, rich over-feeding and carelessness about stools, often leave the delicate internal mechanism in a nasty mess.

The small intestine is compelled to absorb the poison of decaying matter instead of wholesome nourishment.

The liver gets inactive; the bile doesn't "work off"; the eyes get yellow; the skin gets dead like putty and pale like dough, disfigured with boils, pimples, blackheads and liver-spots.

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thought and that pleasurable excitement that comes from study, result, while farm and home life will be made larger, richer, and fuller. Students of all times pay tribute to the value of solitary study, rounded and ripened by meeting together for discussion and exchange of experiences. Not all the patrons will want to take the course, but all will be benefited by it.

New books had to be provided for the women and are in the course of publication. They will be ready for the fall and winter work.

The opportunity the Grange offers the progressive men and women of the farm is a splendid one. When it is understood that such a course is offered free to the membership, many who have been unable to take a correspondence course will come into the Grange for this chance. They will make the best possible members. This course is one of the dividends the Grange pays its members, and shows the wide scope of Grange enterprise and possibilities. It rests with the individual to what extent he will embrace his opportunity.

Bulletins are sent to interested parties. Prices are sent under seal of the Grange. Please observe this scrupulously as I have no means of knowing whether the inquirer is a member or not. Inquiries are cheerfully answered whether they come from members of the Grange or not. Address all communications to the Superintendent.

The Veterinarian

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

Mule Out of Condition.—I would like to have you tell me what ails my mule; is coming three in the spring. He has not done well since his first winter. Thinking it would help him, I gave him all the corn and oats he could eat and since then he has been dead on his feet. I put him in pasture away from home and when I went after him he seemed to be weak in the back. He wobbles when he walks and acts like some hogs I had that were constipated. This evening I was watching him and he seemingly tried to have a passage and could not. I injected about a gallon of water with a syringe and he had a large movement. R. C. H. Irving, Kans.

Answer:—I believe that if you feed your mule oil-meal he will do better. Give him the following condition powder: Pulverized nux vomica, 1 oz., pulverized iron sulfate, 4 oz., powdered fenugreek, 4 oz., sulfur 1/2 pound, common salt, 4 oz., pulverized glycyrrhiza root 8 oz. Mix with 10 pounds of oil-meal and give heaping teaspoonful of the mixture in ground feed, three times daily.

Worms in Horse.—Indigestion and Colic.—What is the matter with my 7-year-old horse? About two weeks ago after dragging all day he began to forge ahead and finally ran up against a wheat-stack and fell down. After a time he got up and the next morning appeared to be all right until last night, when he had another attack after a hard day's work. He has a good appetite and seems to have plenty of life.

I also have a mare that is subject to colic without any apparent cause. She keeps in fair condition otherwise. What prevention can be given? Belle Plains, Kans. C. E. M.

Answer:—We are sending you a Press bulletin on the pallsade worm which I think is causing you the trouble with your first horse; also an Agricultural Review which has an article in it on indigestion and colic. The treatment there is very much more fully given than I would be able to prescribe in this short letter.

Mare with Leg Cut.—Please tell me what to do for my mare's leg. About a month ago her leg was cut in front, just below the hock joint. It is still discharging pus. There is an enlargement and it doesn't seem to heal any. The swelling has left and she doesn't limp. Otherwise she is in good condition. T. R. D. Halfway, Ill.

Answer:—If you will have the following put up at your drug store and

use on your animal, I think it will effect a cure: 2 oz. tannic acid, 1 oz. boracic acid, 1 oz. acetanilid. Mix and keep the wound covered with this powder.

Heifer's Knees Swollen.—I have a yearling heifer whose front knees are swollen. She lies down most of the time. Two weeks ago one knee broke and ran thick matter; then the swelling went down. I cut the other knee in several places but found no matter. She has some warts on her hock and is getting very thin. She eats some corn and a little grass, but acts stiff and sore. Can you tell me what to do for her? J. B. B. Perth, Kans.

Answer:—I would advise you to use a disinfectant to cleanse the wounds on your heifer's knees. You can use a 2 per cent solution of lysol or eucalyptol.

Colt Kicked in Eye.—Would like answer to the following: Colt kicked two weeks ago below eye on bone. Have been using liniment, but with no effect. W. B. T. Junta, W. Va.

Answer:—I think a stimulating liniment applied to the part on your animal that has been kicked will be very beneficial in restoring it to its former good health. Use this liniment on the animal daily.

Hogs with Indigestion.—I would like for you to give me your ideas on the following symptoms: My shoats have not eaten or drank anything since last Friday. Their ears are swollen and some are dying. They are getting poor and reel when they walk. These shoats are running on alfalfa and are at large. Clyde, Kans. J. E. P.

Answer:—I think your pigs have indigestion. Would therefore recommend that you have filled the Government prescription that I am enclosing in the press bulletin on "Some Troubles of Swine," and I think you will then find that your hogs will do very much better.

Fistulous Withers.—We have a mare that has fistula. She has been ailing for some time and we have so far failed to get the fistula cured; has been on both sides. We can get it healed over, but it breaks out in a very short time. Have used coppers and blue vitriol. Could you send us treatment? G. W. B. Tescott, Kans.

Answer:—I think that if you will try and follow the instructions in the press bulletin I am enclosing you that you will have no trouble in keeping your animal's withers healed to stay healed. Failing to get these results, write me again and I will try and advise you further.

Worms in Hogs.—I would like to know what will kill worms in hogs. My pigs are dying with them. I have lost one sow that weighed 300 pounds. I have used lye, Government powders, oil-meal, and turpentine, everything I could think of but with no results. The worms come out of some of the pigs' mouths and are as large as a rye straw. They eat through into the pigs' lights. The pigs suck the sows and the hogs run on clover. I feed ground corn, barley, and shorts. The pigs are 2 months old. Some die when they get to that age, and some of my last fall's pigs died also. The deaths were all caused by worms. S. H. L. Morrowville, Kans.

Answer:—I would advise you to have the prescription filled that you will find in the enclosed press bulletin on "Some Troubles of Swine." Drench each hog with the medicine and see if you can not kill some of the worms.

Strained Tendons.—Ailing Steer.—I have a 5-year-old horse which for a year or more, when standing, puts his hind leg out and back, seeming to get relief in that way. The tenderness seems to be just above the ankle. I also have a steer that has been slobbering for some time. L. W. F. Pleasanton, Kans.

Answer:—Probably a blister applied to the horse's ankle will help draw the inflammation out. Would advise you to apply the blister about every three weeks. Would advise examining mouth of steer thoroughly to see if he has anything in his mouth that might cause irritation. Failing to find anything there, you had better look at his teeth and see if you can locate any protruding teeth that would cause the trouble.

Worms in Hogs.—Please tell me some remedy for worms in hogs. Would like something that can be put in the feed that they will eat. How about calomel for worms? Would large feeds of oil-meal kill worms? Stillwater, Okla. J. H. T.

Answer:—The following prescription I think your hogs will eat in feed. If it fails to kill the worms add 1/2 dram of creolin to the prescription. The

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Sirs: Please send me your New Fall Catalog.

creolin has quite a bad odor and they possibly won't eat it. I have my doubts as to calomel killing worms. A large feed of oil-meal would simply cause a greater looseness of the bowels but I do not think it would kill the worms. It is all right to give the oil-meal to help get rid of the worms, however. We are mailing you press bulletin containing a prescription which have filled at your drug store.

Lameness.—My 8-year-old horse is lame in right hind leg; acts as if paralyzed; is lame only when trotting. What causes black teeth in pigs when they are born and what can be done for them? J. E. C. Delphos, Kans.

Answer:—It is rather hard to prescribe treatment without having symptoms, but if you think the seat of the lameness is in the leg you can not do wrong by applying hot water to the entire limb with considerable hand-rubbing. The black teeth in the pigs that you mention, in my experience, have been either perfectly natural or have been the result of decay.

Barb Wire Cut.—My 3-year-old iron gray stallion has barb wire cut; leg is badly swollen. It has gathered and broken in six different places around joint. Horse also has cough. C. S. Hinton, Okla.

Answer:—Poultice the horse's leg with linseed-meal, changing the poultice as often as it gets cold. When you have the parts all softened up, you may then be able to find out the location of all the pockets of pus.

Distemper.—Mare mule has discharge from left nostril; looks like distemper. The discharge has a bad odor. She has had the trouble a year and a half.

Answer:—Have the following put up at your drug store in powders: Two ounces of lead acetate, 3 ounces of zinc sulfate, 1 ounce of potassium iodide, pulverized and divide into eight powders. Put a powder in a pint of water and inject into the nose, allowing the discharge to run out. Treat daily.

Tumors after Castration.—My 7-months-old pigs, castrated in March, healed nicely, but six have big hard bunches where incisions were made. Alma, Kans. E. G.

Answer:—The tumors were caused by infection at time of operation. They will have to be cut off in order to save your pigs. Cut high enough on the cord so as to get all of the tumor.

Cow Out of Condition.—My cow has 2-weeks-old calf and seems not through cleaning; has been down three days and can not get up. The trouble seems to be in the back. Had the scours until she got down. The bowels seem all right now. C. M. C. Macksville, Kans.

Answer:—Probably the best thing to do for your cow is first, to have her properly cleaned out, removing all the afterbirth. Use about a 3-per-cent creso or senollum preparation; probably about

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\$25.00 is the wages of one man for 30 days. It is 5 per cent interest on \$500.00 for one year. You can save this amount this winter, and every winter that your home is heated with a Cole's Hot Blast Stove.

The big expense in heating your house is the fuel, not the first cost of the stove. You are wasting DOLLARS in high priced hard coal through leaky joints and poor radiating surface. You also waste HALF the Gas Half, the best heating half of soft coal, by imperfect combustion.

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- 1.—We guarantee a saving of one-third in fuel over any lower draft stove of the same size with soft coal or slack.
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- 3.—We guarantee that the rooms can be heated from one to two hours each morning, with the soft coal or hard coal put in the stove the evening before.
- 4.—We guarantee that the stove will hold fire with soft coal thirty-six hours, without attention.
- 5.—We guarantee a uniform heat day and night, with soft coal, hard coal, or lignite.
- 6.—We guarantee every stove to remain absolutely airtight as long as used.
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Built on Honor—Cole's Original Hot Blast was invented after 12 years' continuous experimenting to find a way to save the enormous waste in fuel through the escape of gas and heat up the chimney in the ordinary stove. Our reputation as manufacturers of the Original Successful Hot Blast goes with every stove; and will not be sacrificed by the use of inferior material or cheap workmanship.

Would You Lose \$50 in Fuel to Save \$1.00 on the cost of Your Stove?
That is what you do when you buy a cheaply constructed, putty jointed, showy made stove.

Like all successful inventions Cole's Original Hot Blast has many inferior imitations, avoid them. They all lack our patented top Hot Blast construction, the patented steel collar connection for the elbow casting to stove body, making an everlasting tight joint which cannot open by action of the fiercest heat; the patented compound hinge for ash door, the guaranteed smoke-proof feed door, which prevents dust, soot or smoke from escaping when fuel is put into the stove, and other patented features which are essential to the success of our stove. Do not let any dealer persuade you to buy anything but Cole's Original Hot Blast. See the name "COLE'S HOT BLAST from Chicago" on the feed door of each stove. None genuine without it.

The best dealer in every town generally has the agency for Cole's Original Hot Blast Stoves. Write us for name of local agent and for FREE BOOKLET on the scientific combustion of fuel, which also tells about Cole's Hot Blast. In towns where there is no agent, mail order purchasers are protected by the above guarantee.

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a gallon to a treatment will be sufficient. Wash her out daily with this strength solution, then give her a stimulant of the following: Fluid extract of nux vomica, 1 oz., tincture of ginger, 1 oz., tincture of iron, 1 oz., tincture of gentian, 1 oz.; give one teaspoonful of this mixture three times daily in a pint of water. If you find she doesn't do well, write us again.

Home Departments

CONDUCTED BY RUTH COWGILL.

Nobody Knows But Mother.

How many buttons are missing to-day?
Nobody knows but mother.

How many playthings are strewn in her way?
Nobody knows but mother.

How many thimbles and spoons has she missed?
Nobody knows but mother.

How many burns on each fat little fist?
How many bumps to be cuddled and kissed?
Nobody knows but mother.

How many hats has she hunted to-day?
Nobody knows but mother.

Carelessly hiding themselves in the hay?
Nobody knows but mother.

How many handkerchiefs wilfully strayed?
How many ribbons for each little maid?
How for her care can a mother be paid?
Nobody knows but mother.

How many muddy shoes all in a row?
Nobody knows but mother.

How many stockings to darn, do you know?
Nobody knows but mother.

How many little torn aprons to mend?
How many hours of toil must she spend?
What is her time when her day's work shall end?
Nobody knows but mother.

How many cares does a mother's heart know?
Nobody knows but mother.

How many joys from her mother love flow?
Nobody knows but mother.

How many prayers by each little white bed?
How many tears for her babes has she shed?
How many kisses for each curly head?
Nobody knows but mother.

—McCall's.

Thoughts for the Stay-at-Home.

Virtues may become faults if carried too far or made a hobby of. Economy may lead to stinginess. The careful housekeeper, in her endeavor to "make both ends meet" and make the best use of what she has, easily acquires the habit of watching the use of everything, until unconsciously and blindly she is just stingy and close. The devoted mother is sometimes so unselfish and self-forgetful that she unwittingly becomes very narrow and selfish. This seems like a contradiction of terms, but let us see. She begins by denying herself everything possible that she may minister to her family. Her whole time is devoted to making them comfortable and happy. She allows no time for her own improvement or enjoyment. That the children may be well-dressed and have other advantages, she goes without clothing, except such as is needed for bare comfort, consequently she can not attend church or go into the city or in any way come in contact with other people, which is so necessary to make one sane and keep one from becoming narrow and out of ruts. She may even become such a stay-at-home that even sickness or a death in her own neighborhood will not get her out. But she consoles herself with the thought that her first duty is to her family, and that "charity begins at home." She certainly is an unselfish and devoted mother, but in her thought and service for her family, she has allowed herself to become narrow. She has confined her unselfishness to too narrow limits.

There is hardly anything so narrowing and depressing as to stay continually at home. It is so easy to get into that habit and so easy to find what seems like a reasonable excuse for it. Women do not realize what they are missing out of their lives when they keep themselves away from the companionship of others. It is by coming in contact with others and exchanging views and ideas that we see ourselves more clearly and measure ourselves with others, and alas! often to our sorrow, we find out how far short we fall in many ways. But this vision is helpful, and we grow and do not stagnate. It is kindness to our children to make ourselves so that they will not be ashamed of us, and it will help them and make them happy to be an agreeable companion for them.

Cold Weather Recipes.

Baked Beans.—Pick over and wash beans enough for a meal. Parboil in soda water, drain off and cover with water, salt and pepper to taste, add a piece of salt bacon, which I think is best, but any kind of pork will do; add four tablespoons of sorghum and place in a bean jar and bake slowly for one-half day; the longer the better.

Brown Bread.—Two cups of sweet milk, one cup of sour milk, two cups of Indian meal, one cup of flour, one-half cup sorghum molasses, one tea-

spoonful soda and one of salt. Steam three hours or more with a tight cover on.

Graham Pudding.—Mix together half a cupful of molasses, half a cupful of butter, one egg, three tablespoonfuls of milk, one-half teaspoonful of soda dissolved in the latter, and one and one-half cupfuls of graham flour, one small teacupful of chopped dates or figs, one teaspoonful of cinnamon, and half a teaspoonful of cloves. Steam four hours. Serve with hard sauce.—Physical Culture.

Soft Ginger Cookies.—Mix one cupful of molasses, one quart of flour, one large tablespoonful of shortening, rubbed well into the flour, and one teaspoonful of soda dissolved in a tablespoonful of cold water. Add a tablespoonful of ginger to the flour, and moisten with the molasses. Roll out in a soft dough and bake in a moderate oven.

Indian Pudding.—Scald a quart of milk. Beat a scant cupful of cornmeal with a cupful of molasses and a teaspoonful of salt and stir into the boiling milk. Let it cook ten or fifteen minutes, then set aside to cool. Add half a pint of cold milk, a heaping teaspoonful of butter, a little allspice or cloves and cinnamon, and two well-beaten eggs. Pour this mixture into a well-buttered baking-dish and cook in a steady oven three or four hours—the longer the better. When the pudding has baked nearly an hour pour over it half a pint of cold milk, which must not be stirred, but allowed to soak in gradually. The pudding requires in all three pints of milk, and should be allowed to stand nearly half an hour after it is taken from the oven before it is served. In baking, if it should become too brown, cover with a pan or thick cloth.

Ben B. Lindsey, "The Kids' Judge."

FLORENCE SHAW KELOGG.

In the October number of McClure's Magazine is a thought-provoking article on Ben B. Lindsey and the wonderful work he is doing with his "Juvenile Court" in Denver. This and the article on the same subject that is to be given in the November McClure's should be read and deeply pondered by every one. The subject is not a new one. We have been reading and hearing more or less about the "Kids' Judge," as he is lovingly called, for several years past, but, after all, how many of us have really given thought enough to it to fully grasp and comprehend the depth and scope of the work he is doing for the poor boys of Denver, those who "both by heredity and environment are driven to lawlessness?" How many of us have thought of it all as we should and have learned the meaning of the revelation that is before us? For hundreds of boys all the difference between a life of crime, lawlessness, and poverty and a life of true manhood and usefulness; all the difference between passing long periods of time in the gloomy, sin-laden, soul-crushing atmosphere of jail or prison and the joyous, life-giving, manhood-inspiring air of a true home lies in Judge Lindsey's work and their response to it, for he, however willing, can not do all. He can only give each boy the needed chance and encouragement, the strong right word spoken at just the right time. The boy himself must do the rest, since manhood is a growth from within, the fruit of individual effort and purpose.

If one man, earnest and persistent, true and loving and wise, can do so much to redeem and build up boy life; if he can so inspire the boys with confidence and the surety of help that they come voluntarily to him to "snitch upon themselves;" if he can so impress them with his own strong manhood that they desire, in so far as is possible to them, to emulate him and to do everything "on the square" and so in time come to be worthy citizens, filling places of trust, honor, and usefulness, instead of sinking lower and lower in the scale of vice and crime, and dragging out miserable years in jails, reformatories, and prisons; if one man can establish and maintain a "Juvenile Court," founded on the principle of love, where the erring child is received as one who is weak rather than wicked, one who has made mistakes rather than done intentional wrong; a place where his good traits are all taken into account as well as his bad ones, and he is given just the help and encouragement he needs to make a new start and "make good"—if one man can do all this, what might

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Oven Thermometer

not be done, what would it not mean to neglected boyhood if there could be a solid united effort of this kind among all those having to do with laws and lawbreakers in all our cities and towns? If everywhere, as in this juvenile court, the principle of love could rule, and all corrective effort be founded upon it instead of upon "the doctrine of fear, degradation, and punishment," as Judge Lindsey charges is the case in the old way; if wickedness in both boy and man, girl and woman, was recognized as what our wisest philanthropists are coming to feel it must be, weakness and moral sickness and deficiency; and all our prisons and reformatories, all our courts of justice were conducted upon this principle, what a vast difference it would make! What a step forward and upward we should take!

THE SECRET OF JUDGE LINDSEY'S SUCCESS.

The one thing Judge Lindsey's work and its results gives greatest emphasis to is the saving power of love and confidence, the great gain and good of putting one's self in the other's place and trying to see things from "the standpoint of the boys," and the comprehension of what it all means, how it all appears to them. It is this making of himself one with them, of meeting them upon a common level, and yet in such a way as to detract nothing from his own standards of truth and manhood, this remembering of his own boyhood with all its mistakes and trials, all its loneliness and longing, this rare instinct and understanding of boy nature that makes him see the good under all the bad, the real boy who would be good with half the chance given him to be good that he has to be bad, this steadfast holding on to the good and belief in it—it is this that gives the boys' judge his great power and inspiration. But over and above all in its potency for good is the love his great heart holds for those for whom he works. It is not a weak, sentimental love that would pity and condone a fault or belittle its consequences in any way, but a love as wise as it is tender, as just as it is true—brave enough to acknowledge all faults, deep enough to see the good hidden under the forbidding exterior, Christ-like enough to wait, to work, and to conquer. This love wraps itself around these poor, weak boys, even as a warm mantle is wrapped around their shivering bodies, and will not let go or be turned aside until its object is attained—the greatest, strongest power on earth, yea, or in heaven, the one thing that can not fail or be foiled of its purpose. It suffers and endures and waits, and in the end—wins, for it is of God and His eternal power is in it. This love should rule in all our courts of justice, and be the foundation of all our laws, the motive force of all forms of punishments. Our object in all our dealings with criminals, either as boys or as men, should be to make them stronger and better of purpose and of life. It is not enough that we, by force, restrain them from further wrongdoing; it is not wise to shut them up in jails or prisons and when their term of imprisonment has expired, let them go out with weakened wills and less desire and encouragement for right living than before.

THE TRUE AIM OF PUNISHMENT.

In every heart, no matter how sin-hardened or degraded, there is still some little germ of good that needs but the right condition to awaken and bear its little blossom of love and praise. To furnish these right conditions, to make wrongdoing of any and every kind seem more terrible and repulsive,

and the right more and more to be desired and sought for, should be the aim of all punishment. All our jails, prisons, and penitentiaries should be reformatories, and the administration of law therein should be such as makes a man better and stronger when he leaves there than when he entered, else what have we really gained by his imprisonment? True, we have prevented his doing wrong for the little time he was there, but have we made any change for good in the real man? Is wrong any more abhorrent or right any more attractive to him than before? We have "vindicated the majesty of the law," you tell me, but what about the majesty of the man? It is the man we want to help, and so that we do this, so that we build up his weak will and make it harder for him to sin again, the majesty of the law may be left to care for itself.

Last of all, should young boys, committed for some slight offence (an offence, nine times in every ten, that grew out of thoughtlessness and a superabundance of youthful life and spirits rather than of any intention or thought of wrongdoing) be thrown into jails, crowded with older, more hardened lawbreakers, whose very presence is contaminating and whose words and deeds can not but have a most evil effect upon the plastic minds of youth? It is a sad fact, one that should "give us pause" in the busy whirl and excitement of life and compel us to think deeply "upon these things," that, if as Judge Lindsey states, "three-quarters of all the crimes committed in the United States are done by boys under twenty-three years of age. "And why not?" the Judge asks, "since the children of parents who die or fail in their duty are taken by the State and sent for their schooling into the streets or jails where they pick up false ideals and criminal arts." This is a bitter arraignment against the State, but one we do not dare brand as untrue, for Judge Lindsey "knows whereof he speaks," and does not make charges he is unable to substantiate.

Shall we rest under this grave charge? Shall we, the great mass of the people, fold our hands in idle ease while daily, hourly, the great tide of crime sweeps on, engulfing so many of those who, under right conditions and given the right help and encouragement, would make peaceful, law-abiding citizens, finding joy and blessings in life and giving it back to others; or shall we shake off our apathy and join the brave few who are working so earnestly for the good of those who in the beginning are ever "more sinned against than sinning?" Shall we not so live that we shall

"Step by step lift bad to good,
Without halting, without rest,
Lifting better up to best?"
as Emerson so wisely bids us?

Cures Lung Diseases.—All Diseases of a Bronchial Nature Yield to Toxic—Asthma and Catarrh Cured Permanently.

The news that permanent relief from catarrh, asthma, and bronchitis can be obtained by the Vienna Toxic treatment, has deluged The Toxic Laboratory, 1269 Broadway, New York, with requests for treatment and they are still sending a free trial of Toxic to every one writing for it.

It is claimed that this remedy has effected thousands of cures both in America and continental Europe, its success being due to the fact that it attacks the cause of the diseases and acts directly upon the mucous membranes. Dr. Zeiner, the eminent bacteriologist, is in charge of the medical correspondence.

The Young Folks

Young Women's Christian Association.

Any Young Woman who is planning to come to Topeka, will find peculiar advantages at the rooms of the Young Women's Christian Association, 623 Jackson Street. Rest rooms, reading room and lunch room are at the disposal of all women at any time. A boarding house directory is kept at the rooms, and also an employment bureau, free of charge. On each Sunday afternoon, at 4:15 a gospel meeting is held to which all women are invited. The first week of October is the time set for the opening of the club work, and the classes in Bible Study, in English, Parliamentary Law, Sewing, Water Color and Travel. The Gymnasium also opens then, with classes in Physical Training under a competent instructor. The printed announcements will be mailed on application to the General Secretary. A cordial invitation is extended to out-of-town women, especially to make use of the rooms.

Because of This.

"O, I love you, love you, love you!"
Whispered 'neath the palm or pine,
Brings an argosy of magic, golden
sail,

And sends one into the forest and another to the mine,
And another cruising down a far sea
trail;

'Tis because of this we labor; 'tis because of this we toll;
'Tis because of this the wars of earth
have been;

'Tis because of this the ocean's bosom
bears a pirate's spoil
And her floors are strewn with whitened
bones of men.

"O, I love you, love you, love you!"
when the blood is young and warm;
Makes us see an angel face against
the pane;

And we kiss a hand toward it as we
wrap ourselves for storm,
And go down the ways to battle for
her gain;

'Tis because of this there's noontide;
'tis because of this there's night;
'Tis because of this that brows both
slant and tower;

'Tis because of this advancing bugles
sound to left and right;
'Tis because of this we glory in our
power.

"O, I love you, love you, love you!"
whispered any time, or where,
Haltingly, or with a cadence deep
and strong,

Has the thrill of martial music and
the peace of mother's prayer,
And beneath its spell no way of earth
is long—

'Tis because of this there's value; 'tis
because of this there's joy;
'Tis because of this all things of
worth have been;

'Tis because of this the graybeard jour-
neys outward as a boy;
'Tis because of this that heaven waits
for men.

—Sol. S. Long, Winfield.

How Sam Houston Came to the Cherokee Indians.

Here is a story of Sam Houston as told in the Indian School Journal. Sam Houston was one of the heroes of the Alamo, that relic of the Mexican siege, where a small body of brave Texans resisted a Mexican force of nearly ten times their number, and nearly all perished rather than surrender:

The little boy, Sam, at very immature years, growing restive under the restraint of rigid home rule, and declaring that he would rather "measure deer-tracks than tape in his brother's store," forthwith ran to the Cherokee Indians, who, at that time, were his near neighbors, says L. T. S., in the St. Louis Republic.

The chief, Oolooteka, being captivated by the bright, intelligent lad, adopted him as his son, and gave him the name of "Coloneh" ("The Rover"). Ever afterward the warmest affection existed between the two.

In the course of time the chief moved from Tennessee to Alabama, and "Coloneh" returned to his own home. Years passed, and many honors were won by "The Rover" in his native State. Finally, in the height of his popularity and happiness, he was elected Governor of Tennessee. Then a shadow, sacred, yet unrevealed, crossed his life and changed the tenor of his way.

Resigning the gubernatorial chair of Tennessee, he determined to wend his steps to the wigwam of the old Cherokee, his adopted father, where he was assured of a welcome greeting and hearty blessing.

When he departed from his friends and embarked in a steamer on the Cumberland River, the evidences of affection presented a scene of touching tenderness. After a long and tiresome journey, he reached the shore near the old chief's wigwam after nightfall and sent a messenger to the old man to tell him that Coloneh, The Rover, was at the landing.

Oolooteka, with all his family, hastened to meet his adopted son. Embracing him with great affection, he said:

"My son, many moons have gone since we met and my heart has often wished to know where your footsteps beat the path; and then I heard you were a great chief among your own people and held the big councils of your braves.

"After this my heart grew sad, for I heard that a dark cloud had fallen on

the white trail you were walking, and I wanted to take your hand and lead you out to the light again. You turned your thoughts to my wigwam. The Great Spirit told you. I am glad. You have many wise counsellors in your country, but we have none. We are in trouble, and the Great Spirit sent you to us to be our friend and take trouble away from us. Our hearts are near to you, and you will tell our sorrows to the Great Father, General Jackson.

"My wigwam is your home; my people are yours; your blanket and buffalo robe hang on the deerhorn; come, rest with us."

Such a greeting softened the bitter gloom that the last few weeks had brought to The Rover's heart; he was at rest and at home at last.

The chief was rich in flocks and herds and lived on a large plantation, worked by servants that he owned. Living like the patriarchs of old, simply, abundantly, his tent and his bountiful board were always welcome to visitors and friends.

The venerable chief was tall and straight and exhibited none of the feebleness of age. With courtly grace he moved among his people and presided at their council fires with the dignity of a king.

While among them, Sam Houston studied the Indian character with that thoughtfulness that made his knowledge of it almost perfect. His mastery of the terse language and restless thought of untutored minds displays great skill in employing Indian phraseology, indicative of rare genius.

A Rare Bird.

The reported sale in London of the skin of a great auk for \$2,000 marks a decided increase in the price of specimens of this bird, which as late as 1891 sold for \$650. With little probability that the seventy-odd known specimens will ever be added to, there is every reason to believe that, even at \$2,000, this is a good investment. Only five examples of this flightless bird appear to be in this country—there being one each in the Smithsonian Institution, Philadelphia Academy of Sciences, American Museum of Natural History, Museum of Comparative Zoology at Cambridge, and Museum of Vassar College. Only two of the seventy-odd known great auk eggs exist in this country. Singularly enough, the egg of this bird commands nearly as high a price as the bird itself.—The Country Calendar.

The Little Ones

If I Were Queen.

If I were Queen of Anywhere,
I'd have a golden crown,
And sit upon a velvet chair,
And wear a satin gown.
A knight of noble pedigree
Should wait beside my seat,
To serve me upon bended knee
With things I liked to eat.
I'd have a birthday cake each day,
With candles all alight—
I'd send the doctors all away,
And sit up late at night.
—St. Nicholas.

How Frankie Was Cured.

"Come Frankie! It's time to get up; a nice time to pick a few more quarts of berries to fill that crate before the sun gets hot. Little boys like you ought to be up with the birds. I can hear the robins singing now. Hurry, Frankie, papa is waiting."

The boy addressed opened his eyes lazily, and yawned. "I'm so sleepy, mama; why need I hurry? I want one more nap; I'll get up pretty soon."

A few minutes elapsed, and once more the mother called loudly at the foot of the stairs: "Frankie! Frankie!"

"Yes, coming," came in a drawling tone from the sleepy boy, who in about fifteen minutes more came down stairs.

The days that followed were very hot ones, and as there were berries to pick, chickens to feed, errands to run, and hay to spread, Frankie's courage seemed to grow less each day. I do not mean that his parents gave him too much to do, but they understood that a strong, healthy boy of thirteen years ought to be able to help father and mother a great deal about farmwork, and letting him have his part to do while a boy would interest him and teach him to be industrious. They had given him two rows of choice strawberries and four currant bushes all for his own. He also had some doves, two broods of chickens, and a calf; enough to make any boy contented, one would think.

But, somehow, Frankie did not seem to enjoy work of any kind that summer. "Mama," he said, "my head aches,

and I don't feel like it;" and if he was doing even the slightest tasks, he would grumble, "Oh! how hot it is!"

Mama knew that a boy who could play ball or hide-and-seek, when the boys came to see him, must have some disease, or he would be able to work more, and she spelled it l-a-z-y. She thought of a remedy, and she and Frankie's papa agreed one night that they would try it.

Next day Frankie complained as usual, "It's too hot; I don't feel like picking berries or spreading hay. I just wish I didn't have to live on a farm. My cousin Perley don't have to do such things in the city; he has a good time. I wish I'd never been a farmer's boy."

"You can go to your cousin Perley's to-morrow, if you wish."

Frankie looked up, his face all aglow. "Do you really mean it, mama?"

"I said so," she answered, "I think you need a change." So the plans were made, and the next day Frankie started for the city.

"Have a good time, my boy," said papa, as he left him at the station.

"You'd just better think I will; oh! I will have a happy time; when I get back, I shall be no farmer's boy."

A delightful week followed at the cousin's city home and then, somehow, Perley did not seem to be feeling very well. He couldn't eat much, and the doctor ordered a change and country air. "Can you take him for the summer?" wrote his mother to Mrs. Ellis, Frankie's mother.

"Yes," came the answer, "it will only be our boys changing places."

And so he went. "I shall miss you so much, Perley," said Frankie to his cousin, "but you won't like living on a farm, I can tell you; no doubt you'll be back before a week. Meantime, I can play with Phil, Alice, Harry, and baby Florrie."

The time sped on. One day Perley wrote the following:

Dear Frankie: I am having a lovely time. Have been picking your choice rows of strawberries, and eating them, too, by handfuls. They were the best and handsomest I ever saw. Don't you wish you had been here to have some? I enjoy all your pets. The doves are so cute. Your calf grows so, I guess you won't know him, when you get back. I love to feed him. I wish you would give me one of your broods of chickens to take back to the city with me. But I shall be sorry to go home; it's so nice on the farm. I love to rake and spread hay. Uncle lets me drive the horse and ride horse rake some. You needn't hurry about coming home for I'm Uncle's farmer boy. Good-bye.
COUSIN PERLEY.

P. S.—I've taken your place in the ball game. Have fine times with your mates.

When Frankie read the letter, he felt hurt and almost angry. The tears gathered in his eyes and a few fell. The idea of his cousin eating his fill of his choice strawberries and he couldn't get any of them. And Perley liked haying and all his pets and was going to take his place on the farm. His papa and mama didn't seem to want him, but he would write them. So he sent the following letter:

Dear Mama: I'm tired of the city. It's much hotter than it was at home. Guess I'm well enough to help papa now. Please meet me at the station soon, will you? With love, Your
FRANKIE.

Seeing Frankie was well cured of his laziness, his parents allowed him to come home, and now he will never complain again because he has work to do on the farm. He will not go to the city another summer, but his cousin, Perley, will come out and help him, and they will have nice times working and playing together.—Nettie A. Perham, in Farm Young Folks.

Santa Claus Has a Gun This Year.

A special wireless telegram from the North Pole advises us that Santa Claus this year is loaded down with guns, not only for boys and girls, but for the boys and girls of larger growth—in fact, for all who enjoy a life in the open and who desire to train the hand and eye to accuracy in the wholesome sports of hunting and target shooting.

We presume that Santa Claus has been stirred up particularly by the advertising of the Stevens Rifles and Shot Guns that are appearing in our advertising columns about this time. If you will take a look at them you will not wonder why Santa Claus chooses Stevens Firearms for his presents this year.

If you are interested to learn about the wide range of manufacture in Stevens Firearms, their high grade quality, popular prices and suitability for young or old of either sex, read the advertisements and send for the handsome Christmas Catalogue, which they offer.

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 Cor. Secretary.....Mrs. N. I. McDowell, Salina
 Rec. Secretary.....Mrs. W. D. Atkinson, Parsons
 Treasurer.....Mrs. H. B. Asher, Lawrence
 Auditor.....Mrs. Grace L. Snyder, Cawker City

Our Club Roll.

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

The Long-Felt Need.

"I do not think that city people have any idea of the loneliness of farm life for women, where it is a common thing never to see another woman for a month or more at a time; when roads are very bad, these women are not able even to get to town to do needed marketing for often two or three months at a time. Not even so often, if the horses are used at the farmwork, for the farm wife seldom is allowed a horse kept exclusively for her own driving, but must put up with the horse used in the team when a "day off" can be caught. We have a church congregation not far away, but if one happens not to be a member of that particular denomination, she is not recognized in its social life. I wish we could have a nice social society where religion and politics would not matter."

The above is quoted from an agricultural paper. It is a cry from a hungry heart—a cry for companionship. This is only one of hundreds who feel this need. The church ought to supply it through its women's societies, but there are so many beliefs and dogmas in the church of Christ, which have not yet become unified, and it is not always easy for every one to feel at home in a church of a denomination different from his own. The club supplies this long-felt need, and it is through the club or circle that relief must come. The country is the place where the club is most needed. It brings the women together at stated times, and even if nothing else is gained except to come in contact with one another, it breaks the monotony and loneliness. It is possible to have a club in every neighborhood, if only some one will make the start.

Miscellany

Pure Food and Drugs.

For many years thoughtful persons have been astonished to know that through cupidity or carelessness, or both, much of the food bought in the markets and many of the drugs procured for the alleviation of human ills have been adulterated or misbranded. The last Congress enacted a sweeping law to remedy this evil. Since a remedy for the evils that have probably done much to undermine the health of people is vitally important to everyone of us, it is worth while that we become informed of the details of the act. Its provisions follow:

ADULTERATION OR MISBRANDING UNLAWFUL.
 Section 1. That it shall be unlawful for any person to manufacture within any Territory or the District of Columbia any article of food or drug which is adulterated or misbranded, within the meaning of this act; and any person who shall violate any of the provisions of this section shall be guilty of a mis-

demeanor, and for each offence shall, upon conviction thereof, be fined not to exceed five hundred dollars or shall be sentenced to one year's imprisonment, or both such fine and imprisonment, in the discretion of the court, and for each subsequent offence and conviction thereof shall be fined not less than one thousand dollars or sentenced to one year's imprisonment, or both such fine and imprisonment, in the discretion of the court.

Sec. 2. That the introduction into any State or Territory or the District of Columbia from any other State or Territory or the District of Columbia, or from any foreign country, or shipment to any foreign country of any article of food or drugs which is adulterated or misbranded, within the meaning of this act, is hereby prohibited; and any person who shall ship or deliver for shipment from any State or Territory or the District of Columbia to any other State or Territory or the District of Columbia, or to a foreign country, or who shall receive in any State or Territory or the District of Columbia from any other State or Territory or the District of Columbia, or foreign country, and having so received, shall deliver, in original unbroken packages, for pay or otherwise, or offer to deliver to any other person, any such article so adulterated or misbranded within the meaning of this act, or any person who shall sell or offer for sale in the District of Columbia or the Territories of the United States any such adulterated or misbranded foods or drugs, or export or offer to export the same to any foreign country, shall be guilty of a misdemeanor, and for such offence be fined not exceeding two hundred dollars for the first offence, and upon conviction for each subsequent offence not exceeding three hundred dollars or be imprisoned not exceeding one year, or both, in the discretion of the court: Provided, That no article shall be deemed misbranded or adulterated within the provisions of this act when intended for export to any foreign country and prepared or packed according to the specifications or directions of the foreign purchaser when no substance is used in the preparation or packing thereof in conflict with the laws of the foreign country to which said article is intended to be shipped; but if said article shall be in fact sold or offered for sale for domestic use or consumption, then this proviso shall not exempt said article from the operation of any of the other provisions of this act.

Sec. 3. That the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce and Labor shall make uniform rules and regulations for carrying out the provisions of this act, including the collection and examination of specimens of foods and drugs manufactured or offered for sale in the District of Columbia, or in any Territory of the United States, or which shall be offered for sale in unbroken packages in any State other than that in which they shall have been respec-

tively manufactured or produced, or which shall be received from any foreign country, or intended for shipment to any foreign country, or which may be submitted for examination by the chief health, food, or drug officer of any State, Territory, or the District of Columbia, or at any domestic or foreign port through which such product is offered for interstate commerce, or for export or import between the United States and any foreign port or country.

Sec. 4. That the examinations of specimens of foods and drugs shall be made in the Bureau of Chemistry of the Department of Agriculture, or under the direction and supervision of such Bureau, for the purpose of determining from such examinations whether such articles are adulterated or misbranded within the meaning of this act; and if it shall appear from any such examination that any of such specimens is adulterated or misbranded within the meaning of this act, the Secretary of Agriculture shall cause notice thereof to be given to the party from whom such sample was obtained. Any party so notified shall be given an opportunity to be heard, under such rules and regulations as may be prescribed as aforesaid, and if it appears that any of the provisions of this act have been violated by such party, then the Secretary of Agriculture shall at once certify the facts to the proper United States district attorney, with a copy of the results of the analysis or the examination of such article duly authenticated by the analyst or officer making such examination, under the oath of such officer. After judgment of the court, notice shall be given by publication in such manner as may be prescribed by the rules and regulations aforesaid.

Sec. 5. That it shall be the duty of each district attorney to whom the Secretary of Agriculture shall report any violation of this act, or to whom any health or food or drug officer or agent of any State, Territory, or the District of Columbia shall present satisfactory evidence of any such violation, to cause appropriate proceedings to be commenced and prosecuted in the proper courts of the United States without delay, for the enforcement of the penalties as in such case herein provided.

Sec. 6. That the term "drug," as used in this act, shall include all medicines and preparations recognized in the United States Pharmacopoeia or National Formulary for internal or external use, and any substance or mixture of substances intended to be used for the cure, mitigation, or prevention of disease of either man or other animals. The term "food," as used herein, shall include all articles used for food, drink, confectionery, or condiment by man or other animals, whether simple, mixed, or compound.

ADULTERATION.

Sec. 7. That for the purposes of this act an article shall be deemed to be adulterated:
 In case of drugs:
 First. If, when a drug is sold under

or by a name recognized in the United States Pharmacopoeia or National Formulary, it differs from the standard of strength, quality, or purity, as determined by the test laid down in the United States Pharmacopoeia or National Formulary official at the time of investigation: Provided, That no drug defined in the United States Pharmacopoeia or National Formulary shall be deemed to be adulterated under this provision if the standard of strength, quality, or purity be plainly stated upon the bottle, box, or other container thereof although the standard may differ from that determined by the test laid down in the United States Pharmacopoeia or National Formulary.

Second. If its strength or purity fall below the professed standard or quality under which it is sold.

In the case of confectionery:
 If it contain terra alba, barytes, talc, chrome yellow, or other mineral substance or poisonous color or flavor, or other ingredient deleterious or detrimental to health, or any vinous, malt, or spirituous liquor or compound or narcotic drug.

In the case of food:
 First. If any substance has been mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength.

Second. If any substance has been substituted wholly or in part for the article.

Third. If any valuable constituent of the article has been wholly or in part abstracted.

Fourth. If it be mixed, colored, powdered, coated, or stained in a manner whereby damage or inferiority is concealed.

Fifth. If it contain any added poisonous or other added deleterious ingredient which may render such article injurious to health: Provided, That when in the preparation of food products for shipment they are preserved by any external application applied in such manner that the preservative is necessarily removed mechanically, or by maceration in water, or otherwise, and directions for the removal of said preservative shall be printed on the covering or the package, the provisions of this act shall be construed as applying only when said products are ready for consumption.

Sixth. If it consists in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance, or any portion of an animal unfit for food, whether manufactured or not, or if it is the product of a diseased animal, or one that has died otherwise than by slaughter.

MISBRANDING.

Sec. 8. That the term "misbranded," as used herein, shall apply to all things, or articles of food, or articles which enter into the composition of food, the package or label of which shall bear any statement, design, or device regarding such article, or the ingredients or substances contained therein which shall be false or misleading in any particular, and to any food or drug prod-

Food to work on is food to live on.
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He does both better on

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uct which is falsely branded as to the State, Territory, or country in which it is manufactured or produced.

That for the purposes of this act an article shall also be deemed to be misbranded:

In case of drugs:

First. If it be an imitation of or offered for sale under the name of another article.

Second. If the contents of the package as originally put up shall have been removed, in whole or in part, and other contents shall have been placed in such package, or if the package fail to bear a statement on the label of the quantity or proportion of any alcohol, morphine, opium, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis indica, chloral hydrate, or acetanilide, or any derivative or preparation of any such substances contained therein.

In the case of food:

First. If it be an imitation of or offered for sale under the distinctive name of another article.

Second. If it be labeled or branded so as to deceive or mislead the purchaser, or purport to be a foreign product when not so, or if the contents of the package as originally put up shall have been removed in whole or in part and other contents shall have been placed in such package, or if it fail to bear a statement on the label of the quantity or proportion of any morphine, opium, cocaine, heroin, alpha or beta eucaine, chloroform, cannabis indica, chloral hydrate, or acetanilide, or any derivative or preparation of any of such substances contained therein.

Third. If in package form, and the contents are stated in terms of weight or measure, they are not plainly and correctly stated on the outside of the package.

Fourth. If the package containing it or its label shall bear any statement, design, or device regarding the ingredients or the substances contained therein, which statement, design, or device shall be false or misleading in any particular: Provided, That an article of food which does not contain any added poisonous or deleterious ingredients shall not be deemed to be adulterated or misbranded in the following cases:

First. In the case of mixtures or compounds which may be now or from time to time hereafter known as articles of food, under their own distinctive names, and not an imitation of or offered for sale under the distinctive name of another article, if the name be accompanied on the same label or brand with a statement of the place where said article has been manufactured or produced.

Second. In the case of articles labeled, branded, or tagged so as to plainly indicate that they are compounds, imitations, or blends, and the word "compound," "imitation," or "blend," as the case may be, is plainly stated on the package in which it is offered for sale: Provided, That the term blend as used herein shall be construed to mean a mixture of like substances, not excluding harmless coloring or flavoring ingredients used for the purpose of coloring and flavoring only: And provided further, That nothing in this act shall be construed as requiring or compelling proprietors or manufacturers of proprietary foods which contain no unwholesome added ingredient to disclose their trade formulas, except in so far as the provisions of this act may require to secure freedom from adulteration or misbranding.

Sec. 9. That no dealer shall be prosecuted under the provisions of this act when he can establish a guaranty signed by the wholesaler, jobber, manufacturer, or other party residing in the United States, from whom he purchases such articles, to the effect that the same is not adulterated or misbranded within the meaning of this act, designating it. Said guaranty, to afford protection, shall contain the name and address of the party or parties making the sale of such articles to such dealer, and in such case said party or parties shall be amenable to the prosecutions, fines, and other penalties which would attach, in due course, to the dealer under the provisions of this act.

PROCEDURE.

Sec. 10. That any article of food, drug, or liquor that is adulterated or misbranded within the meaning of this act, and is being transported from one State, Territory, District, or insular possession to another for sale, or having been transported, remains unloaded, unsold, or in original unbroken packages, or if it be sold or offered for sale in the District of Columbia or the Territories, or insular possessions of the United States, or if it be imported from a foreign country for sale, or if it is intended for export to a foreign country, shall be liable to be proceeded

against in any district court of the United States within the district where the same is found, and seized for confiscation by a process of libel for condemnation. And if such article is condemned as being adulterated or misbranded, or of a poisonous or deleterious character, within the meaning of this act, the same shall be disposed of by destruction or sale, as the said court may direct, and the proceeds thereof, if sold, less the legal costs and charges, shall be paid into the Treasury of the United States, but such goods shall not be sold in any jurisdiction contrary to the provisions of this act or the laws of that jurisdiction: Provided, however, That upon the payment of the costs of such libel proceedings and the execution and delivery of a good and sufficient bond to the effect that such articles shall not be sold or otherwise disposed of contrary to the provisions of this act, or the laws of any State, Territory, District, or insular possession, the court may by order direct that such articles be delivered to the owner thereof. The proceedings of such libel cases shall conform, as near as may be, to the proceedings in admiralty, except that either party may demand trial by jury of any issue of fact joined in any such case, and all such proceedings shall be at the suit of and in the name of the United States.

Sec. 11. The Secretary of the Treasury shall deliver to the Secretary of Agriculture, upon his request from time to time, samples of foods and drugs which are being imported into the United States or offered for import, giving notice thereof to the owner or consignee, who may appear before the Secretary of Agriculture, and have the right to introduce testimony, and if it appear from the examination of such samples that any article of food or drug offered to be imported into the United States is adulterated or misbranded within the meaning of this act, or is otherwise dangerous to the health of the people of the United States, or is of a kind forbidden entry into, or forbidden to be sold or restricted in sale in the country in which it is made or from which it is exported, or is otherwise falsely labeled in any respect, the said article shall be refused admission, and the Secretary of the Treasury shall refuse delivery to the consignee and shall cause the destruction of any goods refused delivery which shall not be exported by the consignee within three months from the date of notice of such refusal under such regulations as the Secretary of the Treasury may prescribe: Provided, That the Secretary of the Treasury may deliver to the consignee such goods pending examination and decision in the matter or execution of a penal bond for the amount of the full invoice value of such goods, together with the duty thereon, and on refusal to return such goods for any cause to the custody of the Secretary of the Treasury, when demanded, for the purpose of excluding them from the country, or for any other purpose, said consignee shall forfeit the full amount of the bond: And provided further, That all charges for storage, cartage, and labor on goods which are refused admission or delivery shall be paid by the owner or consignee, and in default of such payment shall constitute a lien against any future importation made by such owner or consignee.

Sec. 12. That the term "Territory" as used in this act shall include the insular possessions of the United States. The word "person" as used in this act shall be construed to import both the plural and the singular, as the case demands, and shall include corporations, companies, societies, and associations. When construing and enforcing the provisions of this act, the act, omission, or failure of any officer, agent, or other person acting for or employed by any corporation, company, society, or association, within the scope of his employment or office, shall in every case be also deemed to be the act, omission, or failure of such corporation, company, society, or association as well as that of the person.

Sec. 13. That this act shall be in force and effect from and after the first day of January, nineteen hundred and seven.

Approved, June 30, 1906.

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is the title of a pamphlet distributed free by the Union Pacific on the proper building and maintenance of country roads. It describes at length the split log drag for grading and surfacing, and points out the remarkable results and benefits which will accrue to the farmer who uses it. Inquire of E. L. Lomax, General Passenger Agent Union Pacific R. R. Co., Omaha, Neb.

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THE FARM MAGAZINE CO., FLOOR T WORLD-HERALD BLDG. OMAHA, NEB.

Dairy Interests

A Common Herd Well Cared For.

When farmers are told of herds that average 250 pounds of butter-fat per year, one frequently hears the remark that it is practically impossible for the average man to find 20 or 30 cows good enough to make so high an average. They agree that it may be possible to reach such results at experiment stations, but not under actual farm conditions. We wish to say that it is quite possible for any wide-awake farmer to pick up a herd of cows in almost any neighborhood, which, if properly cared for, will average from 250 to 300 pounds of butter per year per cow. In the fall of 1904 the Michigan Experiment Station purchased 20 grade Shorthorn cows in the vicinity of the experiment station for the purpose of ascertaining, first, what may be done in the way of grading up an ordinary farm herd by the use of pure-bred bulls, and, second, to find out what effect proper feeding and management have on the milk-producing power of such cows. For the most part the cows began to freshen in September of the following year, and since that time a record has been kept of each cow's milk and butter-fat produced during the first year. The results of this record and an outline of the work the station intends to carry on has just been published in bulletin form.

The milk of each cow has been weighed daily and a composite sample of each week's milk used for the determination of butter-fat. At the end of each week the number of pounds of milk produced were multiplied by the per cent of fat, as shown by the composite test which gave the total pounds of fat produced during the week. By increasing the fat by one-sixth of its own weight, its equivalency in butter was secured. From these records it appears that the 20 cows produced on an average during the year, 6,259 pounds of milk containing 4.08 per cent of fat, or a total of 255.65 pounds of fat, equivalent to 298.25 pounds of butter. In addition to this, 5,007 pounds of skim-milk was the average secured from each cow. This amount was estimated by considering that 80 per cent of the whole milk was removed as skim-milk. This is an under rather than an over estimate, as many creameries find that each 100 pounds of whole milk produces 85 pounds of skim-milk. The feed consumed by the cows was valued as follows: Clover hay, \$5; corn silage, \$2.50; green corn, \$2; succotash, \$1.50; roots, \$2; cornmeal, \$20; wheat bran, \$18; oats, \$20; dry beet-pulp, \$15; dry molasses beet-pulp, \$16; gluten-feed, \$20; oil-cake, \$28; and pasture for the season \$5. The butter produced was valued at 20 cents per pound the year round. This is considered a conservative estimate, since the creameries and milk-condensing factories in Michigan are

paying a higher average price than 20 cents per pound of butter represented. The skim-milk produced was valued at 20 cents per hundredweight. The care of the cows was considered to be counterbalanced by the value of the manure and calves. It is stated in the bulletin that account was kept of the labor involved in caring for the herd, and it did not amount to more than the value of the manure and calves.

There was considerable difference in the economy with which the different cows produced butter. It varied from 44.4 to 8.7 cents, whereas the average cost was 11 cents per pound. Nineteen of the 20 cows were kept at a net profit varying from \$60.51 to \$26.10, whereas one cow was kept at a net loss of \$9.88. The average profit per cow for the whole herd was \$38.58. The bulletin directs special attention to the high value of two cows, Nos. 13 and 17. The former produced 422 pounds and the latter 433 pounds of butter during the year, whereas the poorest cow, No. 16, produced only 48 pounds of butter. The net profit from the two good cows averaged \$60.45 per head, whereas, as stated before, the poor cow was kept at the loss of \$9.88. The average net profit for the two good cows and the poor one was \$36.94, as compared with the average net profit of the whole herd, which was \$36.58.

The striking thing which these figures bring out is that a single poor cow may often counteract the large profit the very best cows make to such an extent that the average of a few of the best and a few of the poorest cows is no higher than that of the remainder of the herd. The records reported show two things: First, the absolute necessity of farmers testing their cows so as to enable them to intelligently weed out the poor ones; and second, that careful feeding and good management will do a great deal towards bringing up the general average production of an ordinary herd composed of grade cows.

While it is desirable, and under some conditions highly desirable, to use pure-bred cows in the dairy, it is often impractical for farmers to start in dairying in that manner. The average man will have to start out with as good common cows as he can find. Give them the proper feed and good care and then grade up the herd by means of pure-bred bulls of the dairy type. The Michigan experiment will in a few years prove to be a very interesting one, in that the herd of 20 cows has been divided into four lots of five each and each lot will be bred to registered bulls. One lot will be bred to a Jersey, one to a Holstein, one to a Guernsey, and the other to a Shorthorn bull. The calves from each line of breeding will be bred in the same manner as their dams, with a view of eventually securing high grades, or practically speaking, pure-breds. It will be interesting to note the results of these different lines of breeding, and especially interesting to compare the dairy-bred herds with the herd that will be bred to Shorthorn bulls. The average cost of feed for each cow in the herd was \$33.07; the minimum \$21.47, and the maximum \$39.23. The return for \$1 worth of feed averaged \$2.11; the minimum was 54 cents, and the maximum \$2.65.—Farmers' Tribune.

Some Dairy Problems.

A friend and customer of mine, who used to be a breeder of good dairy stock, much of which to my knowledge he sold at fair prices, came to me the other day and said: "I want to buy a good male to use in my herd. I have somewhat gotten out of the breeding business, but I still have some of my old cows and some of their best daughters, and I think I will try to raise my own cows at least. Of course, I never advertised much when I was breeding a surplus, and when I had anything to sell I was forced to take such prices as I could get from some neighbor or local cow-dealer, and now when I want to buy a few cows to replenish my herd, I simply have to pay more for them than I think they are worth to look at, and they may be worth even less when it comes to feeding and milking them"

Now, I happen to know that this customer of mine, in telling me so much, and none of which he need have told me, was not by any means telling me all. I knew that while he had some most excellent foundation stock, he was often inclined to use indifferent males in his herd, so that he had no right to expect uniform herd improvement; that the young of his herd did not always receive that care and attention so necessary to keep the growing cow in the way she should go. I knew that he was surrounded by neighbors who did not believe in any cow costing over \$40, and declared a man was a fool to take a

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There is no possible reason why any buyer of a Cream Separator should be content with less than the DE LAVAL, and there never was a more promising time to make this most profitable of all farm investments.

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Direct from the Factory on Free Trial. NO MONEY IN ADVANCE. We ask no deposit, no note, nothing to bind you. We depend entirely upon the work that the Cleveland will do on your place to make the sale. If you don't want it after giving it a fair trial, send it back. We can afford to make this offer because the Cleveland is The Only High Grade Separator Sold at a Reasonable Price. Our guarantee covers these points: Easiest Running—Easiest to Clean—Most Durable. Send for Free Catalogue and full particulars.

CLEVELAND CREAM SEPARATOR COMPANY,
Dept. H, 34 Michigan Avenue, N. W. Cleveland, Ohio.

calf that might be vealed for \$8 or \$10 and feed her two years or more into her stature of a cow when he could go to any cow sale and buy a good enough cow for \$30 to \$40, "with a calf at her side."

Then these good neighbors of his did not believe in any special-purpose cows. Gad! they wanted cows that could stand something, they did. They didn't want any of these here puny, little Alderneys, that you had to "nuss" and take care of like a baby, that would give a calf no bigger'n our "old Tom cat," and when you wanted to beef her, why, she would eat up a whole crop of nubbins and then not show no more fat than a fence-rail. No sir-ee! they wanted great big cows, they did.

Then, again, my friend did not advertise, and somehow or other in these days business men find both profit and inspiration in printer's ink, judiciously used.

We observe in this incident that this man was getting back to first dairy principles. He began to learn that the men who have good cows are trying to hold onto them, and when they are sold they do not go hawking around the country at thirty to forty dollars a head. He knew that the proof of the cow was in owning and feeding and milking her; and that in cows, as well as in cow owners, "beauty is only skin deep," and a very good looker may be a poor performer.

For myself, I think the breeding dairyman is in a business of great and enduring permanence and stability. More than ever before the markets of the world are calling for good, rich, clean milk, and butter that is above suspicion. There are always liberal customers for good dairy-products, as there are for good dairy-cows, but we sometimes have to hunt them up.

Our little light under a bushel may be entirely overlooked by the customer who is won by the other fellow so interestingly and persistently blowing in his own horn.

Dairy-cows are now high; dairy-products are also, and likewise very much so dairy-feeds. The tides of the dairyman and breeder are no exception to the tides of other business men—they ebb and flow, and it may be that by the time my customer has grown some good cows from the sire I had the pleasure

**Convulsion,
Fits, then
Epilepsy.**

Dr. Miles' Restorative Nervine has been so successful in curing these brain-wrecking diseases that there is every reason to believe that even the most hopeless cases can be benefited, if not fully restored.

We will be pleased to refer any one thus afflicted to many who now enjoy the blessing of health, after years of hopeless suffering.

"I have a son that had brain fever when two years old, followed by fits of the worst type, and he was pronounced incurable. I spent hundreds of dollars for him, without relief. After about fifteen years he became so bad that we sent him to Longcliff hospital for the insane, at Logansport, Ind. He was there nearly three years, but he continued to grow worse, so we brought him home July 30, 1902, in an awful condition. He had lost his mind almost entirely. He hardly knew one of the family; could not even find his bed; was a total wreck. He had from 5 to 10 fits a day. We were urged to try Dr. Miles' Nervine, and before the first bottle was used, we could see a change for the better. We have given it to him ever since, and he has had but two very light spells since last August, 1903, and then he was not well other ways. We pronounce him cured, as he can work and go anywhere. If any one wishes to ask any questions concerning this, they are at liberty to do so."

E. H. BUNNELL, Lincoln, Ind.
Dr. Miles' Nervine is sold by your druggist, who will guarantee that the first bottle will benefit. If it fails, he will refund your money.
Miles Medical Co., Elkhart, Ind.

SERVICE TABLE

Every farmer and breeder of stock should have one. Tells just when animals are due at a glance. Save the young by knowing when to look for them. Absolutely correct. Only 10c. Send today.
E. W. SHOLTY, 508 W. Allen St., Springfield, Illinois

Saves Hours of Cleaning

Of course your wife would try to wash even the worst cream separator bowl properly twice every day. But why ask her to slave over a heavy, complicated "bucket bowl," like either

12 1/2 lbs. 12 lbs. 8 1/2 lbs. 10 1/2 lbs. 6 1/2 lbs.



of the four on the left? Why not save her hours of cleaning every week by getting a Sharples Dairy Tubular Cream Separator with a simple, light, tubular bowl, easily cleaned in 3 minutes, like that on the right? It holds the world's record for clean skimming.

Sharples Tubular Cream Separators are different—very different—from all others. Every difference is to your advantage. Write for catalog M-166 and valuable free book "Business Dairying."

THE SHARPLES SEPARATOR CO.
West Chester, Pa.
Toronto, Can. Chicago, Ill.

of selling him the ebb may be on in the cow tide.

It will appear to me that the men who are making good cows and making money out of them are the men who are in the business for keeps. They know they have a substantial business that no trust, no fashion, no new invention can supplant, and they win out by staying in. Yes, indeed, feeds are high. Taking wheat bran as a standard, it simply soars. It is quoted at \$21 a ton in car-loads. The best oil-meals and glens cost over thirty dollars a ton. Why by-products from the wheat-grinding mills should be steadily going up while the raw material, wheat, and the refined product, flour, are both coming down, is beyond the opaque comprehension of the plain farmer. There are many strange tricks of trade not embraced in the plain farmer's philosophy. It appears even if we can not understand certain facts we must accept them, and the high price of bran is a fact.

The man who under reasonable expenses is selling his milk at six or more cents a quart can use these high-priced feeds in a full ration and finds a profit. The man—yes, the men who are selling milk or butter-fat at the "run of the market" will find that they must have no poor cows in their list, if they put wheat bran and oil-meal very liberally into the ration.

It is a fact that many dairymen are conducting dairies under very unfavorable market conditions. Their milk or butter simply goes to market, to the storekeeper, to the milkman, or to a non-competitive creamery. Gross returns are very low, and the net gains must be very low indeed; yet even this great class of dairymen finds, or seems to find, enough profit in the business to keep at it. This class, and it is a tremendously large one, must be saving of feeds and outlay. Better cows, better fed and tended, would often help, even with low prices for products. This is the class of dairymen against which one feels like crying out a warning, when one sees how many of them are wasting time and opportunity through lack of knowledge of advanced methods of doing their work.

They tell us much concerning the great prosperity of the American farmer. I would not be accused of crying "Wolf," but the prosperity that is so remarkable in its aggregate may be in individual cases almost discouragingly small. The average farmer or the average dairyman makes money very slowly. What he accumulates is added a little at a time—a little from the cows, a little from the pigs, a little from the crops, and as little as may come in from any one source, it still may be so important in making up his individual aggregate that each small line must be kept going. His prosperity is often most correctly spelled "frugality." It is a most wise provision of Providence that in this industry, frugality, and self-denial, he has no time to dream dreams of acquiring great wealth. Am I wrong in stating a few plain facts? The writers and talkers outside of our craft give us farmers enough platitudes to disgust us. It doesn't help us any to shut our eyes to true conditions. We are all right. We are doing right when we do the best we can, and learn the most we can. We are most nearly doing the work of the Master—we are feeding the sheep. We can't all be money-changers in the temple.—W. F. McSparran in Farm and Fireside.

How Oleomargarine Is Made.

FROM REPORT OF UNITED STATES DEPARTMENT OF AGRICULTURE.

Many correspondents have inquired for information concerning the manufacture of oleomargarine. The best available information is to the effect that it was first manufactured in France, instead of the United States, as many persons supposed. It originated in 1869, at the instance of the French Government having offered a prize for the discovery of the best substitute for butter at a decreased cost. A Parisian chemist, M. Mege-Mouries, won the prize. The industry was early introduced in the United States, but the figures and history prior to 1869 are indefinite and unreliable.

The number and character of ingredients of oleomargarine make them susceptible of almost an infinite number of combinations, and to-day nearly every manufacturer has his own formula, and endeavors to impress his own individuality as a manufacturer upon his product. This fact is also responsible for the varying grades and prices.

Practically all the oleomargarine made in this country is produced by the simple process of churning a melt-

ed mixture of oleo-oil and neutral lard with milk, cream, or melted butter to give it the butter flavor, and coloring matter to give it any desired shade of yellow, in semblance of butter. In the cheap grades cottonseed-oil is often substituted for a portion of the oleo-oil and neutral lard, but never to the total exclusion of either. The French chemist was fully persuaded that the butter-fat contained in milk was absorbed from the animal tissues of the cow, and his attention was therefore directed to the discovery of a process that would separate from beef fat the oil similar to that of milk. That he succeeded, the magnitude of the oleomargarine business thoroughly attests.

In order to give further information, the following formulas, showing different ingredients and their variation in quantity, are represented:

CHEAP GRADE OLEOMARGARINE.	
	Pounds.
Oleo-oil.....	495
Neutral lard.....	265
Cottonseed-oil.....	315
Milk.....	255
Salt.....	120
Color.....	1 1/4
	1,451 1/4

Will produce from 1,265 to 1,300 pounds.

MEDIUM HIGH-GRADE OLEOMARGARINE.	
	Pounds.
Oleo-oil.....	315
Neutral lard.....	500
Cream.....	280
Milk.....	280
Salt.....	120
Color.....	1 1/2
	1,496 1/2

Will produce from 1,050 to 1,080 pounds.

HIGH-GRADE OLEOMARGARINE.	
	Pounds.
Oleo-oil.....	100
Neutral lard.....	130
Butter.....	95
Salt.....	32
Color.....	1/2
	357 1/2

Will produce about 352 pounds of oleomargarine.

The Toad and the Wren.

Nothing is more important than to give protection to the birds. Take, for instance, the wren; we have lost this bird to a very great extent on our cultivated estates, and it is one of the most valuable birds of the entire list. This species is going out because the English sparrow gets into their nests and destroys the young, and if any are left the red squirrel finishes them.

When the wren is nesting in the spring, it will protect one-quarter of an acre of cauliflower or cabbage-plants from any injury whatever by the cabbage or cauliflower worm, which is the product of the very beautiful, yellow butterfly which we see along the roads in the summer, in mud-holes and puddles. This butterfly is the parent of the cabbage worm, also imported from Europe. The wren, when she is raising her family, will fly back and forth over a quarter of an acre of these plants, and pick all the worms off with which to feed her young; yet we have not the wrens, and the result is that much cauliflower is sacrificed on Long Island and in New Jersey.

Another friend, the toad, is one of the most valuable animals on the land. He is a great scavenger, coming out at night and roaming about the garden and under the plants; he is looking for these worms, and he eats bugs and beetles of all kinds. He has been seen springing upon the leaves of the cauliflower and cabbage-plants and devouring the worms. He is one of our most valuable friends, and should be protected and cultivated.

In the Paris market they are put up in baskets and sold like so many strawberries; the market gardeners buy them and take them to their gardens and turn them loose.

How about cultivating the wren? I would give this suggestion: Last summer I found some very beautiful nests of wrens, particularly upon Mr. Morgan's place in Highland Falls and also at Irvington, on Mr. Phillip Schuyler's place; the wrens were really quite abundant there, the only places where I have met them the past year. They should have houses made so that neither the red squirrel nor the English sparrow can get into them. The openings to a wren house should be made not larger than a silver half-dollar; that will admit the wren, but neither a red squirrel nor the English sparrow can get through. The result is that the young are protected. It would be wise to make these houses and put them up near the residence or under the porches, because the wren is a domestic bird; it likes to live about our homes. Make these houses and put them up in trees or under the piazza, and the result might be that we would re-establish in many places this very beautiful and useful family of birds.—G. T. Powell in American Cultivator.

FROM GIRLHOOD TO WOMANHOOD

Mothers Should Watch the Development of Their Daughters—Interesting Experiences of Misses Borman and Mills.



Every mother possesses information which is of vital interest to her young daughter.

Too often this is never imparted or is withheld until serious harm has resulted to the growing girl through her ignorance of nature's mysterious and wonderful laws and penalties.

Girls' over-sensitiveness and modesty often puzzle their mothers and baffle physicians, as they so often withhold their confidence from their mothers and conceal the symptoms which ought to be told to their physician at this critical period.

When a girl's thoughts become sluggish, with headache, dizziness or a disposition to sleep, pains in back or lower limbs, eyes dim, desire for solitude; when she is a mystery to herself and friends, her mother should come to her aid, and remember that Lydia E. Pinkham's Vegetable Compound will at this time prepare the system for the coming change, and start this trying period in a young girl's life without pain or irregularities.

Hundreds of letters from young girls and from mothers, expressing their gratitude for what Lydia E. Pinkham's Vegetable Compound has accomplished for them, have been received by the Lydia E. Pinkham Medicine Co., at Lynn, Mass.

Miss Mills has written the two following letters to Mrs. Pinkham, which will be read with interest:

Dear Mrs. Pinkham:— (First Letter.)
"I am but fifteen years of age, am depressed, have dizzy spells, chills, headache and back-

Lydia E. Pinkham's Vegetable Compound Makes Sick Women Well.

ache, and as I have heard that you can give helpful advice to girls in my condition, I am writing you."—Myrtle Mills, Oquawka, Ill.

Dear Mrs. Pinkham:— (Second Letter.)
"It is with the feeling of utmost gratitude that I write to you to tell you what your valuable medicine has done for me. When I wrote you in regard to my condition I had consulted several doctors, but they failed to understand my case and I did not receive any benefit from their treatment. I followed your advice, and took Lydia E. Pinkham's Vegetable Compound and am now healthy and well, and all the distressing symptoms which I had at that time have disappeared."—Myrtle Mills, Oquawka, Ill.

Miss Matilda Borman writes Mrs. Pinkham as follows:

Dear Mrs. Pinkham:—
"Before taking Lydia E. Pinkham's Vegetable Compound my periods were irregular and painful, and I always had such dreadful headaches.

"But since taking the Compound my headaches have entirely left me, my periods are regular, and I am getting strong and well. I am telling all my girl friends what Lydia E. Pinkham's Vegetable Compound has done for me."—Matilda Borman, Farmington, Iowa.

If you know of any young girl who is sick and needs motherly advice, ask her to address Mrs. Pinkham at Lynn, Mass., and tell her every detail of her symptoms, and to keep nothing back. She will receive advice absolutely free, from a source that has no rival in the experience of woman's ills, and it will, if followed, put her on the right road to a strong, healthy and happy womanhood.

Lydia E. Pinkham's Vegetable Compound holds the record for the greatest number of cures of female ills of any medicine that the world has ever known. Why don't you try it?

If the dealer is satisfied the customer must be!

Geo. W. Pitkin Co.,
Paint Makers Chicago, Ill.

Dear Sir:

We have handled your Barn Paint at our Kokomo Yard for some 20 years or more. We have been able to find no barn paint that gives as general satisfaction. Our annual sales on this paint are from 600 to 1000 gallons. We consider it the best paint we can buy for the price.

Very truly yours,
O. E. Faddock Lbr. Co.

June 19 - '06

Read the above testimonial carefully. It is of personal interest to every farmer in America. Doesn't it appeal directly to you? If you have never used Pitkin's Barn Paint, isn't it money in your pocket to learn of a paint sold for only 85c a gallon that has given general satisfaction for twenty years? Would a dealer say, "We consider it the best paint we can buy for the price" if there was a better value for the money on the market? Doesn't a dealer handling 600 to 1,000 gallons a year receive the very best propositions that any paint manufacturers, anywhere, have to offer?

Ask your dealer about PITKIN'S BARN PAINT. Maybe he has had even longer experience with it than the above named firm. We've been making paint for 38 years—we're the pioneers in the West, in fact.

Write today for a FREE TRIAL CAN, COLOR CARDS AND BOOKLET—all sent FREE

Rural Dept. L. GEO. W. PITKIN CO., Chicago, Ill.
Originators of Ready-to-Use Barn Paint.

The Poultry Yard

CONDUCTED BY THOMAS OWEN.

Protect Your Poultry-Houses.

Protect your poultry-houses from the cold winds that are sure to blow before the winter is over. Many people who take great pains to protect the north and west sides of the poultry-houses think they can afford to neglect the south side. The prevailing cold winds are from the north and west, and it is generally understood that the utmost care must be taken to shut them out. But occasionally a cold wind comes from the south and it is an exceedingly difficult matter to keep the poultry-house at a comfortable temperature when the cold wind is from this direction. The windows are on the south side, or should be, and however close fitting they may be, there will be crevices through which the wind will find an entrance, and if there has been any neglect in the lining of the wall, the result will be a cold poultry-house. We dread those cold south winds more than any other, and expect a decrease of eggs while they prevail, even when we have done our best to exclude them. The north and west winds don't bother us so much. With tar paper and banking we can effectually shut them out, and maintain a comfortable temperature when they are blowing the coldest. Exercise the same care with the lining of the south wall of the poultry-house as any other. When you have done all in your power, you will find the house none too warm during a piercing south wind. It is true that some poultry-houses have open fronts. But these are perfectly air-tight on all sides but the south, so that no current of air can possibly blow through them. Besides, they are built very wide, fourteen or sixteen feet in width, so that there is a lot of warm air-space between the north wall and the south windows. Curtain front poultry-houses can also be kept warm, but are made on the same principle of a perfectly air-tight inclosure, excepting only the south side. If there is no place for the air to get out, there is no place for it to get in and it is that which makes a warm house. There are no air-currents to cause drafts and therefore no chance for the freezing weather outside to hurt the chickens that are in the north end of the house.

Poultry Notes.

Poultry shows in this State are more numerous this year than ever before. The premium lists are beginning to come in, and from the middle of November till the middle of February there will be continuous lines of shows. Our advice is to attend your local show whatever you do, and show as many birds as you can, and then if you find out that you have something extra in the chicken line, send it to the State Show and gain a State reputation and some gold coin.

If you are intending to exhibit your birds this season at any show, it is time you were getting ready for it. It won't do for you to come to the State Show with your birds, expecting to win first premiums and say "You just picked up the birds as they ran." There is lots of preparation necessary to win prizes at a State Show. First of all, see that your birds have no disqualifications. The first thing a judge does when examining a bird at a show is to look for disqualifications, and if there are any, to throw the bird out of competition at once. Strange as it may seem, dozens of disqualified birds are sent to the State Show every year, and those who send them not only lose the entry money that they paid for them, but have the mortification of being pointed out as breeders who did not know a disqualified bird when they saw one. There is no excuse for this whatever. Take your Standard in your hand and see that none at least are disqualified that you send to the show. After seeing to this, you will find that the legs and toes of the birds need cleaning and greasing. If the birds are white or buff, then plumage must be washed. If short in weight, you must push them in the matter of feed. There are a dozen other things that must be attended to before sending birds to a show. Better commence at once.

Table scraps are the best possible food for chickens, but don't throw them to the fowls in big chunks. Cut them up into small pieces of a suitable size for a hen to swallow. Then each hen will have a chance to obtain her share at the feeding-trough. If

the scraps are given as they are gathered from the table, the more masterful hens will secure the largest pieces, and make good their right to their possession. The others must be content with their leavings, and the consequence is that some of the hens will have a very light breakfast. Feeding that permits some hens to be gorged, and others left with only half a meal, is bad feeding. The plan is particularly bad in feeding table scraps, as harmful results are sure to follow the habitual eating of this kind of food to the point of stuffing. Feed table scraps only once a day, preferably in the morning, and then reduce them to a form which will insure their even distribution to the flock. Don't give them in such quantity that will cause the hens to turn away from the feeding-trough with bulging crops. These scraps are often of a very rich nature in meat and fat, and a little of it goes a good way. But if fed right and in moderation, there is no food that will make hens shell out more eggs than table scraps.

A correspondent from Missouri, to whom we replied by mail, asked the following question: "Can you give me the name of a party that has been successful in hatching and raising chickens during the winter season? I want to know of some one that would be willing to tell me how the chicken-house should be built, heating apparatus, etc. I wish to try this industry and am anxious to obtain information so that I may not waste what money I have in the effort." We were obliged to tell him that we did not know of anybody in this section of the country that made the hatching and rearing of chicks in winter, a business. There are many such in the neighborhood of large cities, such as Chicago and St. Louis, and we do not see why such an industry should not pay in this section. We should be glad to hear from any of our readers who, in a small way, have started in this business, and should like to know their methods and the cost of a small plant.

Poultry at the Kansas State Agricultural College.

The experiments that have been carried on at the Kansas State Agricultural College within the past few years in all departments have been of great value to the State. The work with poultry is rather new, and in fact is not yet made by the authorities a regular department. The work done, however, has been so valuable that the regents have each year practically doubled the appropriation, so that this year considerable valuable work is expected. A very practical man has been employed to give his whole time to the poultry work, and to give immediate attention to all experiments. The whole is under the supervision, however, of Prof. Oscar Erf, of the dairy department, with Mr. W. A. Lamb, the assistant, in charge.

Some very important experiments are now in progress, and others are to be taken up soon. Possibly the one now being carried on promising the most interesting results is a feeding test for finding (a) which combination is most profitable to feed, (b) to find which combination is the best for egg-production. Six different pens are in this test, and the feeds are as follows: Pen 1, beef scraps and corn; pen 2, casein (dried milk) and corn; pen 3, wheat, chops, casein, and corn; pen 4, wheat and corn; pen 5, millet and corn; pen 6, beef scraps and Kafir-corn. This experiment will end February 1, 1907, and by March 1 the report will be ready for publication.

Another test is with five pens of different breeds being fed the same food, to determine which breed is the most profitable for egg-production. Of course it may not be safe for the experimenters ever to publish any results on this, as their lives might be in danger.

Another very interesting experiment has been under way for some time to determine how long a male will influence the offspring from hens. To make this test a White Brahma rooster was put in a pen with White Leghorn hens, left with them for four weeks, and then the hens were left without a male in the pen for twenty days, when a White Rock rooster was put in the pen. Ten days after this sixteen eggs were set, and five chicks of the sixteen showed plainly the marks of the White Brahma breed, while the others showed marks of the White Rocks. Eggs that were set one day later and two days later produced chicks with no marks of the Brahmas.

Another test which is being carried out here, as at many other stations, is to determine how long the eggs will

Farmer's Account Book and Five Year Diary of Events

An Indispensable Book

Providing for a record of exact information about every item of transaction or event on the farm for 5 years. It is divided into two divisions, Diary in one and accounts in the other. In the Diary there is space for five years. Here it shows you the occupation of the day; here are any special incidents that you wish to remember the date of.

The Account part is indexed (read indexes) handy arrangement we think.

Hired help. This is for your labor account; shows the name of the one hired, time worked, wages paid, how paid, etc.

Expense; shows all the outlay for such items as Groceries, Labor, Clothing, etc. You can tell when you paid your Insurance, Taxes, how much they were; in fact, this department will show to a penny what it costs you to run the farm and also what you get for every cent of it.

Live-stock account has a double ruling, sales and purchases for each kind of stock being side by side, and as this is to be for five years it makes an interesting comparison. Then over here you have a history of each deal that you make.

Grain and fruit are ruled and printed in the same way, also space for sales on butter and milk or cream, eggs or poultry, in fact there is space for everything raised on a farm and all you have to do is to make the figures. It certainly is an easy matter to have your affairs in shape if you have a system like this.

The inventory sheets are short but businesslike, you fill in under the proper headings the value of the different kinds of stock, grain, tools, bugles, wagons, etc., and the total is of course, the amount of your resources; then under this other heading you fill in anything you happen to owe on these things, and the difference is your actual worth. This is left in the book and the next year you do the same thing and the difference is your profit for the year.

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Leather and Cloth \$2.50; Heavy Board \$3.00. Address

The Kansas Farmer Co. Topeka, Kansas



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Compiled by G. B. Fiske. Illustrated descriptions of a great variety and styles of the best homemade nests, roosts, windows, ventilators, incubators and brooders, feeding and watering appliances, etc, etc. Over 100 illustrations. Over 125 pages. 5x7 inches. Cloth ..\$0.50

Poultry Feeding and Fattening

A handbook on the standard and improved methods of feeding and marketing all kinds of poultry, covering all branches, including chickens, broilers, capons, turkeys, water fowl; how to feed under various conditions and for different purposes. Illustrated. 160 pages. 5x7 1-2 inches. Cloth ..\$0.50

American Standard of Perfection

A complete description of all recognized varieties of fowls, as revised by the American poultry association at its twenty-eighth annual meeting. It contains all changes in and additions to the constitution and by-laws, and the text of the standard, as authorized to the present time. Illustrated 300 pages. 5 1-2x3 inches. Cloth, net....\$1.50

THE KANSAS FARMER CO.

Topeka, Kansas

WALNUT GROVE FARM

...FOR SALE...

Upon the advice of several specialists I am going to New Mexico for my health. On this account I must dispose of all my Kansas property, including the famous Walnut Grove farm, the most complete and profitable stock farm in Kansas. This includes 130 acres of the best land in Kansas, two miles from Emporia. Over 200 good O. I. C. hogs. All our Barred Plymouth Rocks, 25 Collies, 44 head of cows, 8 head of horses, the best farm house in the State. Also one small farm house, 2 large barns, 2 large cattle-sheds, one 300-foot hen house, one 250-foot broiler house, 20 brooder houses, capacity of plant, 4,000. The best hog house in the West, double-deck cement floors; many small hog houses. This is not an experiment, but a successful stock farm. Price, \$25,000 cash.

H. D. HUTTING, Emporia, Kans.

be fertile after the male has been removed from the pen.

Another test being made is to find how long eggs will keep in a temperature of 60° F., and for this test clean, fertile eggs, clean, infertile eggs, dirty, fertile eggs, and dirty, infertile eggs are being used.

On November 1 an experiment was begun on twenty-four varieties of hens furnished by the general public. They will all be fed and cared for alike and forced for egg-production, each hen to be trapped and credited with eggs laid, and a general record kept of amount and cost of feed for eggs produced. The experiment will end November 1, 1907.

A very interesting feeding test will begin shortly with six pens of chickens. Five capons will be stuffed and five will be fed from crates; five cockerels of the same breed will be stuffed and five will be fed from crates; five pullets also of the same breed will be stuffed and five will be fed from crates; thus the tests will be made for methods of feeding, and also to determine whether capons, cockerels, or pullets will produce the greatest gain in the given time.

The remarkable interest shown by Kansas farmers in the poultry business and the great magnitude of the business and its financial importance justifies very extensive experiments here at the farmers' college. For the benefit of this business, the experiments carried out here will be wholly from a practical standpoint with a desire of getting practical results, results that will be of use to the farmers of Kansas and poultry people generally who are working on any of these experiments. All parties able to submit from time to time to the department here valuable data will confer a great favor. All correspondence should be addressed either to Prof. Oscar Erf or to Mr. W. A. Lamb.

Breeding to Increase Egg-Production.

MAINE EXPERIMENT STATION BULLETIN.

In 1898 the Maine Agricultural Experiment Station designed and constructed fifty trap-nests and put them in use by the pullets kept that year. From time to time, the work has been extended until now 200 trap-nests are in use by a thousand hens.

By trap-nest it is possible to know the exact daily work which every hen is doing. At the end of the year those that had laid 160 eggs, or over, were selected and saved for breeders. They were bred to males whose mothers had laid 200, or more, good eggs per year. No female has been used in the breeding pens, for six years, whose mother did not lay at least 160 eggs in her pullet year. No males have been used as breeders unless their mothers laid above 200 eggs per year. The breeding-pens are now filled with birds of both sexes, that have six generations of mothers and fathers before them, that were bred under these rigid rules of selection.

The stock commenced with in 1898 had been laying about 120 eggs per year for several years, as shown by the flock records. During the last two years, the hens have averaged 144 eggs each, during their pullet year. There seems to be reason to conclude that the producing capacities of the hens have been increased by about two dozen eggs per year. Perhaps this increase is not all due to the selection and breeding. The dry feeding and open-air housing, doubtless, have contributed to the improvement. But, reason about it as one may, the fact remains that not a drone or small producer, backed only by beauty of form, feature, or color, has had a place in the breeding of these birds in any of the last six generations.

The purpose of this work must not be misunderstood. The attempt is not to produce a stock of birds that shall average to produce 200 eggs per year. If, by continued work, a family of birds can be permanently established that with reasonable treatment will yield 12 dozen eggs each per year in flocks of 100, it will be a matter of great consequence to the poultry industry. These yields are already being obtained in the station flocks. There is no reason why the stock should not yield as well in other hands, but in order for succeeding generations of birds to do so, it will be necessary to at least use male birds whose breeding has been based on performance.

The question is frequently asked if the stock is not likely to be weakened by inbreeding, since male birds are not purchased from outside flocks. There is no reason to go outside for fresh blood. This season there are 82 hens in the breeding pens, each of which has yielded 200 to 251 eggs in a year. The different matings made with so many birds makes easy the selection

of only distantly related males and females when making up the breeding pens. The number of the breeding birds carried makes easy the avoidance of inbreeding, and this is strictly guarded against, as it is doubtful if the inbred hen has sufficient constitution to enable her to withstand the demands of heavy egg-yielding.

During only one season, and then with but two small pens, have birds as closely related as first cousins been bred together. Line breeding is followed, the matings being only with distantly related birds. The birds are vigorous, of good size, and able to stand up under hard work. They have good, large, yellow legs and yellow beaks. They are well feathered and barred, but they are not bred for the fanciers or the show-room, although there are many fine specimens in the yards.

As evidence that the function of heavy egg-yielding has become fixed in the stock, attention is called to the fact that many male birds have been sent out to farmers and breeders in this and other States, with which to improve the egg-yields of their flocks. The many voluntary statements, from the purchasers, telling of the early and heavy egg-yields from the pullets gotten by these cockerels, is substantial testimony to the utility of the stock; and added to the known average increase of two dozen eggs per bird for the hens in the station flocks argue well for the breeding.

The only reliable method of selecting breeding stock is by aid of the data secured by the use of trap-nests. It is, however, only investigators, large operators, and breeders who make a business of producing birds and eggs for breeding purposes, for sale, who can afford the equipment and expense of operating trap-nests. Most poultrymen and farmers who carry small flocks are usually too busy to give the regular attention required by any reliable and satisfactory trap-nest. They can better afford to buy the few males required each year from some one who makes breeding stock by trapping a specialty.

There are one or two concerns that advertise to teach how to pick out the pullets that are to be good layers, and how to pick out the hens that have laid well. The price for the system is \$10 by one of the concerns, with a bond of \$1,000 to keep the secret. The warm friends of both systems tried them on some pens of trap-nested birds at the station with known records, and both parties went away sorrowing at the results of their work. Their systems were unknown to the writer, but it does not matter for both were completely valueless as applied here.

Two others came to show that it was not necessary to use trap-nests. One claimed to be able to tell the laying capacities of pullets by the positions of the pelvic bones; while the other was sure he could tell the yields for the coming year, to within eight or ten eggs, by the length and shape of the toe nails. Another was sure that large combs are infallible indications of great egg-laying capacities.

There are 80 birds in one yard at the station, each one of whom has laid from 200 to 251 eggs in a year. So far as can be discovered, they differ from each other sufficiently to upset any theory of selection thus far put forward. One feature is common to all these hens. They all have strong constitutions.

A year ago last August and September, 29 pullets were selected on the range that were laying in the brooder-houses, or about commencing doing so, as shown by their red combs, and their prating and following the caretaker about the field, talking about the things they were going to do, in true hen language, which is easily understood and not to be mistaken, by any one who knows chickens. These young birds were carried into the laying-house, banded, and given the regular treatment for laying hens. Records were kept with each individual for 365 days forward from the day on which each one gave her first egg.

Four birds died during the year, and the 25 remaining averaged laying 180 eggs each. Two of the four that died had done good work, one having laid 148 eggs up to July 30, and the other 150 up to April 7. Eight of the 29 birds laid over 200 eggs each. The only poor layers in the lot were two of those that died, one laying 58 to March and the other 113 to June.

The average production of all the pullets kept in the regular work last

PLYMOUTH ROCKS.

WHITE ROCKS and WHITE WYANDOTTES—Young and old breeders for sale at attractive prices. W. L. Bates, Topeka, Kans.

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

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SPECIAL SALE ON BARRED PLYMOUTH ROCKS. I will sell 80 yearling hens to make room, at \$1.00 each. These hens are barred to the skin. All my last season's pen breeders, the kind that produce exhibition cockerels. Right here is a chance to get some. No. 1 stock at a low price. Let me mate up a trio or a pen that will start you right. I will also sell 10 cocks including the 2d and 5th prize cockerels at the Kansas State show of 1906. Description, price and photographs of any winners sent free. I will also sell cockerels until December 1 at \$1.50 each, sired by my first prize males. Write for prices on exhibition stock. Satisfaction guaranteed or money refunded. A. H. Miller, Bern, Kans.

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Good for Eggs, Good to Eat and Good to look at W. P. Rocks hold the record for egg-laying over every other variety of fowls; eight pullets averaging 280 eggs each in one year. I have bred them exclusively for twelve years and have them scoring 94 to 96%, and as good as can be found anywhere. Eggs only \$2 per 15; \$5 per 45, and I prepay expressage to any express office in the United States. Yards at residence adjoining Washburn College. Address **THOMAS OWEN, Sta. B, Topeka, Kans.**

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ROSE COMB BROWN LEGHORNS EGGS, 15 for \$1.50 for \$2.50, 100 for \$4. Mrs. John Holshey, Bendona, Kans.

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SINGLE-COMB WHITE LEGHORN cockerels, \$1 each; two or more 80 cents each. Fine white pure, thoroughbred birds. Also a few Barred Plymouth Rock, 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, Illinois.

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W. R. TALBOTT, Prop. Hebron, Nebr.

year was 144 eggs per bird. The average of 180 made by this lot, and the small number of poor yielders in it, show the advantages of selecting the early layers for breeding purposes. Those selected were of the most forward pullets.

To the farmers and small poultrymen who do not use trap-nests, this plan

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THE MODEL POULTRY FARM—Yorkshire swine, Toulouse geese, Pekin Ducks and Wyandotte chickens. Winners of 38 prizes and 5 specials. Now is the time to order your breeding stock for next spring. A square deal guaranteed. Eggs in season.

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Notice of Final Settlement.

The State of Kansas, Shawnee County, ss. In the Probate Court in and for said County. In the matter of the estate of John B. Lewis. Creditors and all other persons interested in the aforesaid estate, are hereby notified that I shall apply to the Probate Court in and for said County, sitting at the Court House in the City of Topeka, Shawnee County, Kansas, on the 3d day of December, A. D. 1906, for a full and final settlement of said estate. Dated Topeka, Kansas, October 17, A. D. 1906. **ROBERT STONE,** Executor of the estate of John B. Lewis, deceased.

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WE HAVE for sale one of the best ranch and farm propositions in Kansas. Write us for particulars. We are in the big four country. Corn, cattle, hogs and alfalfa. J. C. Hoyt, Eldorado, Kans.

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FOR TRADE—A \$12,000 Stock General Merchandise for a well improved farm, good land, prefer location in Eastern Kansas, west or north Missouri or Iowa land. Will pay no commission to agent, trade direct with owner. Address H. H. Stewart, General Merchant, Mich Hill, Mo. Farm must be clear of encumbrance.

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FOR SALE—240 acres 2 1/2 miles from Glen Elder, Kans. Good six room house, stable, granary, well and windmill, well fenced and cross fenced, all smooth level land, 45 acres pasture. The best upland farm in this vicinity for sale at the price. Will sell 160 if desired. Price 240 acres, \$8,500. Reasonable terms. S. E. Hobart, Glen Elder, Kans.

FOR SALE—160 acre Eastern Kansas prairie farm, improvements nearly new. 1 1/2 miles from railroad, creamery, and school; rural delivery, telephone, 5 miles from the State or Baker Universities. Price, \$45 per acre. F. M. PIPER, Route 10, Lawrence, Kans.

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ANSWER THIS. Do you want to buy a farm? Do you want to buy a ranch? Do you want to buy a stock of goods? Do you want to buy western land? Do you want to buy Texas land? Do you want to trade for anything? Do you want to get our list? Do you want to sell your farm? Do you want to sell your property? Write today.

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ALFALFA RANCH
480 acre ranch in Scott Co., Kansas; six miles from Hesley, about 100 acres creek bottom land, 2 miles running water, stone house, barn and cattle sheds, good timber. An excellent alfalfa and stock ranch. Price, \$4,000. Apply to Albert E. King, McPherson, Kans.

MITCHELL COUNTY, KANSAS FARMS—Also thousands of acres of the choicest lands in the western counties. Soil perfect and smooth, at \$6.00 and up; 20 years resident on the ground. Special opportunity at this time in Rooks county, on line of new railroad now being built. A choice creek bottom farm, near town, at \$24.00. Write me your wants; I can produce the goods and at best prices. W. P. Curtis, Beloit, Kansas.

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Land in Central Kansas at prices from \$17 to \$90 per acre. We have improved farms, ranches, grass lands and city property for sale at reasonable prices. We have a general merchandise store for sale. Will invoice about \$6,000. The furniture and fixtures in hotel doing good business; for sale or trade for \$1,750. Easy terms. It costs you nothing to write for information.

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Pictures and descriptions of the Tree that grows Muskmelons, the Plum Tree that has fruit and no leaves, and other semi-tropical fruits. Also information about twelve million acres of rich, highly productive low cost farm, timber and grazing lands in the state of Sinaloa, Mexico. Address SINALOA LAND COMPANY, Merchants Trust Building Department No. 1, Los Angeles, California

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We sell Norton County lands where wheat, corn and alfalfa grow in abundance. Write us for list of farms and full particulars.

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We have them for sale; fine, black land, which grows Corn, Wheat, Clover and Bluegrass on every acre, and located in Cass county, Mo., 35 to 40 miles south of Kansas City. Send for list or come to see us.

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In the fertile Chino Valley, 60 minutes from Los Angeles. Only \$75 to \$50 per acre—1/4 cash, balance 1 to 4 years. Several crops a year. No cold or frost. Write for illustrated booklets today.
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We have choice county and township refunding bonds, denomination \$500 and \$1,000, will sell in any quantity. Can be resold when money is wanted. Safer than bank; interest earned better than time deposits.
A dozen quarter sections smooth Western Kansas farm lands, left with us, for cash at a bargain. Will double in value in eighteen months.

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80 acres, 60 cultivated, balance pasture, some timber and bottom; 4 room house, large family orchard, wheat brought \$24 per acre last year, \$15 this year; price \$1600. Write Minneapolis, Florence or Salina, Kans., for lists. We have all kinds and sizes.

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DICKINSON COUNTY, KANSAS FARMS FOR SALE

160 acres nice improved bottom farm, corn, wheat, and alfalfa farms, price \$45 per acre. 320 acres bottom land, price \$50 per acre. 160 acres farm, mostly bottom lands, price \$35 per acre. 320 acre farm, price only \$25 per acre. If you want a farm, write what kind you want. I have several farms for sale, owned by non-resident people, also farms owned by estates that are for sale cheap.

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in Trego County, Kansas for \$10 an acre. This is a snap and will not last. Be quick!
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Quarter section of good land at \$60 per acre; it is a bargain. Write for full particulars.

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320 acres well improved farm adjoining small town, all good soil, corn, wheat, and alfalfa land; 20 acres now in alfalfa; farm under fence, good pasture and meadow, fine water, good orchard; 8-room house, cattle barn, 32 by 100, horse barn, 16 by 45, granary and implement house 22 by 130, calf barn 16 by 24, several other buildings; price \$12,000; terms, one-half cash, balance on time.
200 acre farm, bottom land, mostly under cultivation; 6 miles from Lindsborg; good buildings; \$10,000.
240 acre well improved farm, 4 miles from good market; \$8,500.
160 acre farm on Smoky Hill River, 1 mile from Lindsborg; \$11,000.
160 acre farm, one-half bottom, one-half upland, buildings, fences; \$5,500.
160 acre farm, 5 miles from Lindsborg; \$3,800.
160 acre farm, 7 miles from Lindsborg; \$2,800.
80 acre farm, 3 1/2 miles from Lindsborg; \$3,800.
160 acre good land in Meade County; \$1,000.
160 acres all level land, in Logan County, will be sold cheap.
Other bargains to offer, write for list and prices.
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WATER, SOIL, CLIMATE,

Are all there in the **New Lands** opened up along the Canadian Pacific Railway's **Great Irrigation Canal** just completed in **Southern Alberta, Canada**. If you are prepared to grasp **A Great Opportunity**, and are looking for information, a card dropped to the Canadian Pacific Irrigation Colonization Co., Dept. N., Calgary, Alberta, Canada, will bring to you literature fully describing the great tract of land

Just Opened to Settlement

Agents Wanted.
FOR SALE Farms—Bargains; 500 farms, stock ranches, Kansas or Missouri. Before you buy, sell or exchange, write for my free lists. F. H. Humphrey, Fort Scott, Mo.

JUST ISSUED
Farm Grasses of the United States
By W. J. SPILLMAN
Agrostologist, U. S. Department of Agriculture
An intensely practical discussion of the farm grasses of the United States of America is presented in this volume. It is essentially a resume of the experience of American farmers with grasses, and it is safe to say that no other work has covered the ground so thoroughly. No attempt has been made to give a connected account of all the grasses known in this country, but the aim has been rather to give just the information which a farmer wants about all those grasses that have an actual standing on American farms. The whole subject is considered entirely from the standpoint of the farmer. One of the most valuable features of the book is the maps showing, at a glance, the distribution of every important grass in the United States; and the reasons for the peculiarities in this distribution are fully brought out. The principal chapters treat on the grass crop as a whole and the relation of grass culture to agricultural prosperity, meadows and pastures, the seed and its impurities; the bluegrasses; millets; southern grasses; redtop and orchard grass; broom grasses; grasses for special conditions; haying machinery and implements; insects and fungi injurious to grasses, etc., etc. The methods followed on some pre-eminently successful farms are described in detail, and their application to grass lands throughout the country is discussed. The discussion of each grass is proportional to its importance on American farms.
This book represents the judgment of a farmer of long experience and wide observations regarding the plan in agriculture of every grass of any importance in American farming, in its preparation its use as a text book in schools as well as a manual of reference for the actual farmer has constantly been kept in mind. The book is most conveniently arranged and splendidly indexed, so that the reader may find any subject at a glance.
Illustrated, 5x7 inches. 248 pages. Cloth. Price, postpaid, \$1.00.
KANSAS FARMER COMPANY
TOPEKA, KANSAS

Profitable Farm Forestry.

PRESS BULLETIN OF THE OHIO AGRICULTURAL EXPERIMENT STATION.

The opinion is quite general among farmers, as well as men in other callings, that forest-trees can not be grown with profit to the planter, and that future generations alone can reap the benefits. This opinion is based on the knowledge that our native trees require, under natural forest conditions, from fifty to seventy-five years to grow to marketable size.

This is true of trees growing in the natural forest, where they are compelled to fight an unceasing battle, the result of which is "the survival of the fittest," but the time required to grow trees to a marketable size is much shorter when the early struggle for existence is practically eliminated, as may be done in artificially planted forests.

There is at least one phase of forestry which gives promise of good financial returns within a period of from twelve to fifteen years, and that is the growing of trees suitable for posts, poles, and ties as a farm-crop. In support of this statement, the following figures show what has been done, as indicated by careful estimates, made by a representative of the Ohio Agricultural Experiment Station, of the salable posts in several Catalpa speciosa and black-locust groves, which were planted in Ohio from fifteen to twenty-five years ago.

In making these estimates, a number of trees in each grove were carefully measured. In computing the value of the product per acre, first-class posts were estimated at 10 cents each and second-class at 6 cents each.

Eight catalpa groves from twenty-one to twenty-five years old, none of which had received careful attention in the way of pruning, cultivating, or thinning, and most of which had been planted too closely, showed an average yield of 2,777 posts per acre, 63 per cent of which were first class, valued at \$238.08 per acre or \$10.30 per acre each year since the trees were planted.

Estimates were made of the product of but one locust grove. This grove had not been seriously damaged by borers and the trees had grown under favorable conditions. The number of posts produced per acre was 3,560, 90 per cent of which were first class, valued at \$341.76 per acre, or \$17.98 per acre per year, the grove being nineteen years old.

Bulletin 158 of the Ohio Experiment Station gives a full report of the investigation of these groves, together with a discussion of the merits and demerits of the catalpa, locust, Osage orange, and mulberry for post production, and cultural suggestions for growing them.

THE INTERNATIONAL SUNDAY-SCHOOL LESSON.

(Copyright, Davis W. Clark.)

Fourth Quarter, Lesson VI. Matt. xxvi, 36-50. November 11, 1906.

Jesus in Gethsemane.

The harvest moon lighted coldly a weird scene—pale faces of tombs peering down into a shadowy valley; a brook on its way to a Sea of Death, and running red with the blood of two hundred thousand lambs slain that day; gnarled old olive-trees, whose twisted trunks seemed to express for the vegetable world that tribulation under which the whole creation groaneth.

As Jesus passed the snowy porches of the temple, and came down into the forbidding chasm, would He not recall to Him how His great progenitor, thrust out of the same city, had crossed this very brook Cedron with face toward the wilderness; how as he went up the further side, he wept and had his head covered and went barefoot.

The separation of the disciples into two hands was not an act of caprice or favoritism. In this instance, paradoxically, the station most remote from the Shepherd was the safest. The feeling that can be touched for human infirmity showed itself in the very disposition which Jesus on this occasion made of His followers. And if even on the burning edge of His inscrutable sorrow He could still think of and provide for the safety of His own, will He neglect us now, that He is exalted to the right hand of the Majesty in the heavens?

The two who had asked to be baptized with His baptism, and the one who had first acknowledged Him the Son of God—these three, the same who had gone with Him to the Transfiguration height—were deemed best inured to go with Him into the depth of His humiliation. Jesus wanted the consciousness that human sympathizers were near; wanted to be guarded from intrusion; wanted that there should be witnesses, so that the scene might be

transmitted to the Church. The disciples were drowsy, but not wholly disqualified for this threefold purpose. Even to these comparatively hardy companions He does not bluntly announce the nature of His ordeal, lest He should terrify them. He says only, and considerately, that He goes to pray.

The source and nature of Jesus' agony is inexplicable. If you say it was natural shrinking from the hour and article of death, then I must say Jesus appears to have died less heroically than many a martyr—nay, even infidel, heathen, or apostate. The suffering of Jesus seems to be unlike in nature, and to surpass in degree human anguish with which we are familiar.

I suggest that, though the suffering manifested itself in His physical nature, the chief seat of it was in His moral nature. It was reversed on Golgotha. There only one word out of seven indicated any degree of moral suffering.

Away with the idea that Jesus had a sense of personal condemnation, as if He were the object of His Father's wrath, and so that, in that sense, Gethsemane was the "Hell of the Son of God." It occurs to me that He so became one with us as to appreciate the grief and sorrow of the whole race with such a keenness and to such a degree as that it became his very own, and well-nigh insupportable. May not this have been that cup which, if it were morally possible, He wished might be supplanted by some other?

It is with Him only a question of means. His unshaken purpose is to do His Father's will. The Father is not harrying the Son on to do something from which He revolts. Father's will is Son's delight.

The loneliness of Jesus is nowhere more conspicuous and touching than in Gethsemane. He coveted human sympathy. It failed Him. He looked for comforters, but found none. He trod His wine-press alone, unhelped.

The quality of Jesus' submission is not depreciated by the agony through which He passed. It is rather enhanced. His perfection is manifested thereby. The Captain of salvation is made to appear as He really is—perfect to us through the medium of His suffering.

It is sweet to think that from the top of this same mount, at whose base Jesus suffered such agony, He ascended in triumph until the cloud of the Divine presence received Him out of the sight of man. He stooped here; He conquered there.

Cancerol Has the Confidence of the People.

A record of successful cancer cures of people from every part of the Union and in every situation about the body contained in a valuable free book, which will be sent free to those interested. Write to-day. Address Dr. L. T. Leach, Indianapolis, Ind.

The Youth's Companion in 1907.

The Youth's Companion announces among the attractions of its 52 issues in 1907, two hundred practical papers, serviceable to young people who have their way to make in the world, helpful in their insistence on worthy ideals in every relation of life, useful in the home—particularly the regular series, "Till the Doctor Comes."

It contains two hundred and fifty capital stories—humorous stories, character stories, stories of life on the farm, in the great cities, on the sea, in the wilderness. Among them will be five serial stories by five Companion favorites: Hamlin Garland, Adeline Knapp, Ralph Barbour, Grace Richmond, and Holman F. Day. There will be a series, also, based upon incidents in American history, illustrative of life and times in America from the first colonial planting to the close of the Civil War.

It will also contain one thousand short notes, giving concisely, clearly, and accurately the important news of the times in public affairs, and in the fields of science and industry.

Three hundred contributors give assurance that every need and every taste among Companion readers will be satisfied. Governor Folk, of Missouri, Edward Everett Hale, Margaret Deland, Col. T. W. Higginson, Commander Eva Booth, of the Salvation Army, Gen. A. W. Greely, and Ion Perdicaris are among them.

There will be two thousand one-minute stories, anecdotes, bits of humor—sketches which take not more than a minute to read. They are always new, always well told, and in great quest by preachers and after-dinner speakers.

A full announcement of the new volume will be sent with sample copies of the paper to any address on request. The new subscriber for 1907 who sends \$1.75 for the new volume at once will receive free all the remaining issues for 1906, including the double holiday numbers; also the Companion's four-leaf hanging calendar for 1907, lithographed in twelve colors and gold.

Subscribers who get new subscriptions will receive \$16.290 in cash and many other special awards. Send for information to The Youth's Companion, 144 Berkeley Street, Boston, Mass.

To Save in the Kitchen.

Arrangements have been made by which every lady reader of this paper can secure a valuable cook book, "The Enterprising Housekeeper," simply by sending her name and address to the

Golden State Limited . . .

It is contemplated to resume daily service of this popular train on November 11, 1906, for the fifth season.

We take pleasure in announcing that it will be composed of entirely new equipment throughout—the latest designs from Pullman shops, including many new features.

Mission style dining cars, stateroom and drawing-room sleeping cars, and new unique buffet-observation cars—also finished in Mission style.

Daily from Chicago, St. Louis and Kansas City to Los Angeles, Santa Barbara and San Francisco.

A Quality train for the "Quality." Won't YOU plan to try it this season?

A. M. FULLER, G. P. A.
Topeka, Kansas.



Profitable Stock Feeding

By H. R. SMITH, of the Nebraska Experiment station, is a winner.

A second and larger edition has just been printed. It has been adopted as a textbook in the Agricultural colleges of Twenty States. As a compendium of facts for the farmer it is universally pronounced to be the best book of the kind ever printed. It is more fascinating than a novel to all interested in the feeding and judging of live stock. It contains more than 400 pages of clear cut information concerning the feeding of Cattle, Horses, Hogs, Sheep and Poultry. The parts devoted to judging animals are profusely illustrated. Bound in Vellum de Lux; printed on the best grade of paper.

Price, Postage Paid - - - - \$1.50.

In order that this book may have a wide distribution The Kansas Farmer Company makes the following special offer, good until January 1, 1907:

- Profitable Stock Feeding - - - - \$1.50
- One Renewal Subscription to The Kansas Farmer - \$1.00
- One New Subscription to The Kansas Farmer - \$1.00
- Total - - - - \$3.50

ALL FOR \$2.00.

Address, **THE KANSAS FARMER CO.,**

625 Jackson St.

Topeka, Kansas

EXTREMELY



LOW RATES

To California, Oregon, Washington, and Points East.

Home-seekers' rates to points in Arizona, Colorado, New Mexico, Texas, Indian Territory and Oklahoma, on the 1st and 3d Tuesdays of each month.

Steamship Tickets to and from all parts of the world. Lowest rates and best lines represented.

Address **T. L. KING,**

C. P. & T. A.

TOPEKA, KANSAS

\$35 Per Head

At Less Than Half Their Value.

Having leased the farm and going to California for the winter, I offer for quick sale my herd of Shorthorn cattle. I herd bull, 17 young cows and heifers all safe in calf, 8 young bulls and 6 young heifers. A number of the cows were bred by George Bothwell and all sired by such bulls as Grand Victor, Prince Croker Victor, Rosemond Victor 4th and Nonpariel Baron. Everything old enough is guaranteed to be a breeder. You may write any reasonable guarantee and I will sign it and make deposit with same. Any one coming to look at cattle write me beforehand so I can meet you at train

30 miles east of Kansas City, on Wabash R. R.

WILLIAM SCANLON, Orrick, Mo.

Enterprise Manufacturing Co., of 235 Dauphin St., Philadelphia, Pa., asking that it be sent to her. This book gives over 200 recipes for delicious and economical dishes that will be appreciated at any table.

Labor in the kitchen is made lighter by the use of the Enterprise meat and food choppers and other well-known Enterprise machines. No woman realizes how much unnecessary work she has been doing, and how easily she could avoid it, until she learns how it could be done by the use of the Enterprise meat and food choppers cost, and the surprising amount of work they will accomplish. By their use, any kind of

meat, raw or cooked, can be chopped in a moment's time. They cut easily, rapidly, and as fine as desired, and are almost as quickly cleaned as the old-fashioned chopping-knife. Any kind of meat, fish, or vegetables may be chopped with these machines, and the many delicious dishes possible to prepare with them are surprising.

"The Enterprise Housekeeper" has been prepared at a considerable expense, the recipes it gives only being perfected after hundreds of experiments. Every reader of this paper should have one, and it will be well to get requests in as soon as possible—before the present edition is exhausted.

Is Our Present Public School System in Accordance with the Farmers' Best Interests?

(Continued from page 1171.) studies, etc., our country schools are doing practically nothing along that line. The urgent need for instruction in agriculture and home-keeping in our country schools is a strong plea for consolidation. It is almost impossible to have satisfactory results under our present system. Secretary Wilson said: "One of the most hopeful signs of progress in agricultural education is the movement for the establishment of secondary schools of agriculture and the introduction of nature studies and the elements of agriculture into the rural schools."

"I believe that the time has come for the Department to take a more active part in encouraging the introduction of nature study and elementary agriculture into the curricula of rural schools, for the purpose of developing the natural tendencies of the pupils to observe and take an interest in the natural phenomena surrounding them and of fostering in them a love for the country and its pursuits."

With the increased interest in country life which is beginning to be manifested in different parts of the country, there is good reason to hope that our rural schools will be much improved in the near future. Without doubt, the improvement of our rural schools, so that every child throughout the length and breadth of our land may have an opportunity for education which will prepare him for good citizenship and most efficient industrial service, is one of the greatest questions which should engage the attention of our people. Our country schools should be so organized and maintained that in them the children will be shown the attractive side of country life, and will be taught the dignity and worth of rural occupations, so as to incline them toward the study of the sciences that relate to agriculture.

BUILDINGS.

We may be very careful in selecting teachers, pay much attention to the curriculum, have aspirations toward establishing schools that will encourage our children in obtaining high school and college training, but these avail little unless we guard the health of our children that they may be in condition physically to be educated. We can not hope for weak-eyed, nervous, stoop-shouldered, over-sensitive children (who only a few years before we sent rosy and well from our country houses) to make well-rounded men and women.

Our country schoolhouses and the way in which our children reach them is responsible in a large degree for these infirmities. Our school-buildings should be artistic in design, but by all means sanitary and comfortable, well-lighted, heated, and ventilated, and situated on well-kept grounds.

It seems our proper business is improvement. Daniel Webster exulted in the conviction that our country was full of benefit to human freedom and happiness everywhere. Independence and State rights have been filled by our fathers. But there is open to us a noble pursuit to which the spirit of the times strongly appeals. Our proper business is improvement. Let us improve by building wise practise upon sound theory, which is within the reach of every one of us. When was opportunity staring us more in the face?

Every farmer has it within his power to give his children the richest heritage possible to give a child—a good education through the process of evolution in our country schools. Shall we not profit by the example of our Quaker brother who said: "If there is any kindness, any good that I can do, let me do it now; I shall pass this way but once." Remember this, our children need better schools now. Our opportunity for making them better is now. We shall pass this way but once. Brown County has the natural resources and the intelligent citizens to lead the State in the education of the country children, but Dickinson County at Lorraine has a consolidated school superior to any country school in our county.

I have had a letter from the superintendent at Lorraine telling of the success of the school at that place. The States of Ohio, Indiana, Wisconsin, and Illinois and several of the Southern States are successfully carrying out the graded work with high school courses, elementary agriculture, and the domestic science being added to the curriculum. What has proved beneficial and practical for other rural communities should spur us on to a realization of our duty to educate our children, all of our children, the very best we can.

The outgoing of the heart to another means the incoming heaven to yourself.

Mechanics' Wages at San Francisco.

It is estimated that the cash paid to mechanics for their part in rebuilding San Francisco will amount to \$190,000,000. Following is a list of wages at present in force:

Table listing various trades and their wages, such as Bricklayers (\$7 to \$9), Cement-workers (\$6), Plasterers (\$7), Lathers (\$7), Carpenters (\$5 to \$7), Blacksmiths (\$4.50), Painters (\$4.50), Horseshoers (\$5), Tinners (\$5.50), Sign-writers (\$5.50), Sheet-metal workers (\$5.50), Boiler-makers (\$4), Teamsters (\$4), Stationery engineers (\$5), Tile-setters (\$5), Cabinet-makers and inside finishers (\$5 to \$6).

The Editor's Job in Oklahoma.

To run a newspaper, says the Center, Okla., News, all a fellow has to do is to be able to write poems, discuss the tariff and money questions, umpire a baseball game, report a wedding, saw wood, describe a fire so that the readers will shed their wraps, make one dollar do the work of ten, shine at a dance, measure calico, abuse the liquor habit, test whisky, subscribe to charity, go without meals, attack free silver, defend bimetalism, sneer at snobbery, wear diamonds, invent advertisements, overlook scandal, appraise babies, delight pumpkin raisers, minister to the afflicted, heal the disgruntled, fight to the finish, set type, mold opinions, sweep the office, speak at prayer meetings, stand in with everybody and everything.

Is There Money in Good Stock?

Col. John D. Snyder attended and assisted in five hog sales this week, in which were sold 291 hogs for \$20,441.50. Figure the average for the lot, then deduct \$5 per head, or even \$10 as an outside limit for extra expense in selling and interest on original investment for good breeding for foundation stock, and then ask yourself does it not pay and pay well too.

O. Martinson, living one mile south of Seabrook, in Shawnee County, had a remarkable sale on November 5. Owing to ill health, Mr. Martinson offered his milk herd for sale. The herd included 23 animals, some of them being 2 years old. They averaged over \$40 per head. One Holstein cow with a nice heifer calf at side sold for \$135, one for \$66, and one Shorthorn cow for \$65. The entire herd showed careful treatment with an abundance of alfalfa. A span of yearling colts sold for \$185. The sale was well handled by Col. Geo. R. Hungate.

Beware of Imitators.

The Combination Oil Cure for Cancer and Tumor has its imitators. The Original Oil Cure may be had of the Originator—Dr. D. M. Bye, 316 N. Illinois St., Indianapolis, Ind., Free books upon request.

A Shoe That Suits All.

The Bentley & Olmstead Company, the great wholesale dealers in boots, shoes, and rubbers, of Des Moines, Iowa, have this to say about their business:

"Our firm was started in 1873 by Mr. Bentley. From 1883 it was Bentley & Olmstead. In 1900 it was incorporated as Bentley & Olmstead Company. You will see by this that we have been here for some time.

"Frankly and to the point, we wish to say that we understand the needs of Western farm communities, just a little bit better than any other firm in the West. We have studied the matter carefully for a great many years, and we find that the bulk of the consumers of the West, that is to say the farmers, are people who want a dollar's worth for a dollar. They are willing to pay a fair price if they can get an article that will give them the results. Therefore, we do not cater to the cheap trade. We have no shoes that are not solid in every respect, and in this particular our house is unique, for nearly every other house in the West or East is attempting to make up lines for all classes of trade, the cheap trade, and the good, solid, high-grade trade.

"When a dealer asks us for a cheap shoe, we tell him frankly that he must look elsewhere. When we say 'cheap,' we use the word advisedly—we mean shoddy or weak, low-grade material which never will and never did give wearing results in ratio with the high-grade material.

"We are specializing on the 'Buffalo Calf' shoe. This is a shoe that is built for the man who works, the farmer, mechanic, and laboring man. We put everything into it which it is possible to put in that will make it strong, and after doing this, we have affixed a price which is as low as we can afford and are pushing it. To-day, of the 'Buffalo Calf' line alone, which comprises only nine styles, we are selling over \$300,000 worth every year. This is only a small detail of our line, which is a gen-

KANSAS FARMER.

Established in 1863.

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

SUBSCRIPTION PRICE: \$1.00 A YEAR

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

ADVERTISING RATES.

Display advertising, 20 cents per line, agate (fourteen lines to the inch). Continuous orders, run the paper, \$1.82 per inch per week. Special reading notices, 20 cents per line. Special rates for breeders of pure-bred stock. Specials: Want Column advertisements, 10 cents per line of seven words per week. Cash with the order. Electro must have metal base. Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price. To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.

All new advertising orders intended for the current week should reach this office not later than Monday. Change of copy for regular advertisement should reach this office not later than Saturday previous to publication. Every advertiser will receive a copy of the paper free, during the publication of the advertisement. Address all communications to

KANSAS FARMER CO.,

325 Jackson St., Topeka, Kans.

Special Want Column

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

CATTLE.

FOR SALE—Bull calves from prize-winning Holstein cows. Good ones and cheap to early buyers. Hughes & Jones, Route 2, Topeka, Kans.

SPECIAL SALE—4 extra good Angus bulls, aged 18 to 20 months, at low prices for quick sale. These are low blocky bulls, good herd headers. Also 11 heifers bred or open. Write for prices. R. H. Clay & Son, Pleasant Hill, Mo.

WANTED TO BUY—One bull, and four to six cows of heavy milking breed. Write to Thomas W. Houston, Leavenworth, Kans.

SPECIAL SALE—5 straight ruckshank Shorthorn bulls for sale at bargain prices for quality. H. W. McAfee, Topeka, Kans.

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

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

SWINE.

FOR SALE—Seven Poland-China boars, April and May farrowed, sired by Kee, On Jr., by Kee, On and Imerial Chieft; also seven Shorthorn bulls. Adaan Andrew, Girard, Kans.

O. I. C. SWINE—Choice young stock for sale. Prices reasonable, satisfaction guaranteed. Wm. W. McGie, Osage City, Kans., R. F. D. No. 8, phone C 3100.

POLAND-CHINA BOARS—Of serviceable age, choice A rit arrow. Now ready for sale. Write or call on H. C. Horner, 1385 Lane St., Topeka, Kans.

FOR SALE—Thoroughbred Duroc-Jersey pigs, boars large enough for service. Prices right. I. W. Poulton, Medora, Kans.

POULTRY.

WHITE WYANDOTTES exclusively, some good breeders and some fine young stock for sale at prices that will suit you. J. H. Brown, Clay Center, Kans.

ROSE COMB WHITE LEGHORNS—A few cockers—15 50 cents. Mrs. John Hill, Viola, Kans.

GREAT BARGAINS In fine poultry. Fourteen of the best varieties. Send for circular and prices. T. J. Pugh, Fullerton, Neb.

WHITE WYANDOTTES.

If you need the highest quality for breeders or show birds at reasonable prices write me. Cockers now ready for shipment. Illustrated catalogue free. Address G. A. Wiebe, Box A, Beatrice, Neb.

SHEEP.

FOR SALE—30 choice American Merino rams. Good as the best; heavy shearers. Bred by Wallbridge of Russell, Kansas. S. D. Yoxall, Weskan Kans.

FOR SALE—Oxford Down sheep of high quality, one ram 2 years old, a few ram lambs, a few ewe lambs, a few Lred ewes, at reasonable prices; all stock registered. Perry Goodell, Hutchinson, Kans.

eral line, but this shows you the results we are getting on our special shoe.

"We are glad to report that we have had several inquiries from farmers throughout the West with reference to the 'Buffalo Calf' shoes, who have quoted THE KANSAS FARMER. We are trying out your paper as well as several others, and are trying out this method. If we find it successful, we will go into it further.

"Our trade extends from the Mississippi River to the Pacific Coast and is growing rapidly every year. In fact we have shown an increase of sales, month by month, over the corresponding months of the year previous, for over nineteen months. This, we think, is largely due to our advertising."

There is something wrong with the heart when it hurts you to see others happy.

You can not give a quart of love out of a half-pint heart.

HORSES AND MULES.

FOR SALE OR EXCHANGE for clear land, seven head of Standard bred race horses, mares, geldings, stallions, several cows, Shorthorn bull, also a good homestead 160 in Kansas, Wallace County. Will sell furniture and fixtures and give a lease for a term of years on the best Hotel in Nebraska. Miller Hotel Co., Wymore, Neb.

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

FOR SALE—One black team, 6 and 7 years old, weight 2800 pounds. Mr. and Mrs. Henry Schrader, Wauneta, Kans.

CUT PRICES on registered Clydesdale horses, Shorthorn and Jersey cattle, P. C., O. I. C. and Duroc-Jersey hogs; 40 varieties of poultry and pet stock; pure seeds and nursery stock. Money saving catalogue 10 cents. A. Madsen & Son, Atwood, Kans.

SCOTCH COLLIES.

COLLIES—More of those richly bred pups, ready to ship; sired by a grandson of Ormskirk Galopin. From \$4 to \$7. A. P. Chacey, North Topeka, Kans.

REAL ESTATE.

WRITE W. J. O'CONNOR, Eureka Springs, Ark., for fruit and mineral lands in Northwest Arkansas.

MISCELLANEOUS.

WANTED TO SELL—Old established weekly newspaper and job office in one of the best Southern Kansas gas towns; cheap at \$1500. Address E. E. W. care Kansas Farmer.

ENGLISH FOX TERRIER DOGS—A grand litter of puppies for sale. Will clean the premises of all varmints such as skunks, coons, rats, etc. Also a fine watch dog. J. H. Brown, Clay Center, Kans.

WANTED—A man to run dairy on shares, modern equipment new, and thoroughbred Jersey herd. For further particulars address D. C. Darroch, M. D., Fredericksburg, Texas.

WANTED—When the season opens, Kafir corn and sunflower seed; also wheat, barley, corn and oats. Wm. Rotsted Company, 63 West Kinzie St., Chicago.

THE CEMENT WORKERS HAND BOOK tells farmers all about cement work, how to build walls, floors, walks, tanks, cisterns, blocks, posts, etc. Fourth edition revised. Cloth bound. Send 50 cents to W. H. Baker, Wadsworth, O.

WANTED—Ladies to work on piece work, \$3 per dozen. All material furnished. No canvassing; steady work. Stamped envelope. Best Mfg. Co., Champlain Bldg., Chicago, Ill.

6,000 FERRETS—Some yearlings, especially trained for rats. Book and circular free. Levi Farnsworth, New London, Ohio.

HONEY—8 cents per pound. Write A. S. Parson, 514 S. Main St., Rocky Ford, Colo.

WANTED—Non-union moulders. Call or write Topeka Foundry, 318 Jackson St., Topeka, Kans.

WANTED—A good second-hand grain separator. Dr. Barker, Chanute, Kans.

WANTED—Position, man with small family to work on stock ranch. Call on or write W. D. Weston, Ottawa, Kans.

WE WANT a responsible, energetic man at every post office and in every neighborhood, to take subscriptions for Farm and Ranch and Holland's Magazine. Besides the liberal commissions and rebates which we pay, \$500 in prize money will be distributed among local workers on January 1, 1907. Whether you can work exclusively or at spare time, it will pay you to write for terms and full instructions. Contest Department, Texas Farm and Ranch Publishing Company, Dallas, Texas.

WANTED—At once, sound young men for firemen and teammen on railroads; high wages; promotion; experience unnecessary; instructions by mail at your expense; hundreds of good positions now open. Write National Railway Training Association, 620 Paxton Block, Omaha, Neb.

Stray List

October 25, 1906.

Labette County—A. E. Townsend Clerk. STEER—Taken up by T. A. Hoard in Edna, September 19, 1906, one 2-year-old light red steer, underbit and crop off right ear, valued at \$15. Also one 1-year-old red and white spotted steer, underbit and crop off right ear, valued at \$15.

Week Ending November 1. Jackson County—N. P. McConnell Clerk. COW—Taken up by Geo. W. W. in Pottawatomie Reserve October 25, 1906, one 8-year-old dark brown pony, saddle marks on back, no other.

Notice of Appointment. State Kansas, Shawnee County, ss. In the matter of the Estate of Rebecca G. Hughes, late of Shawnee County, Kansas.

Notice is hereby given that on the 30th day of October A. D. 1906, the undersigned was, by the Probate Court of Shawnee County, Kansas, duly appointed and qualified as Administrator of the estate of Rebecca G. Hughes late of Shawnee County, deceased. All parties interested in said estate will take notice, and govern themselves accordingly.

TROUTMAN & STONE, attorneys.

[First published in The Kansas Farmer, Nov. 1, '06]

Publication Notice.

In the District Court in and for Shawnee County, State of Kansas: To Rachel McCullough, John McCullough, Sarah J. Cathers, J. S. Cathers, Lizzie Wood, John Wood, Isaac N. Throckmorton, Mrs. Isaac N. Throckmorton, David Throckmorton, Mrs. David Throckmorton, and George Throckmorton, or the unknown heirs, devisees, executors, administrators and trustees of said Rachel McCullough, John McCullough, Sarah J. Cathers, J. S. Cathers, Lizzie Wood, John Wood, Isaac N. Throckmorton, Mrs. Isaac N. Throckmorton, David Throckmorton, Mrs. David Throckmorton, and George Throckmorton, you are hereby notified that you are hereby notified that you are hereby notified that you have been sued by A. J. Ferguson in the District Court of Shawnee County, Kansas, the action being Number 24101, and that you must answer or plead to the petition in said action filed by said A. J. Ferguson, on or before the 15th day of December, 1906, or the said petition will be taken as true and judgment will be rendered against you and each of you therein, quieting said A. J. Ferguson's title as against you and each of you to certain real estate situated in Shawnee County, Kansas, and described as Lot Number One Hundred Twenty-nine (129) on Chandler Street in Metsker's Second Addition to the City of Topeka, and adjoining and adjoining that you and each of you have no right, title, interest or equity in or to the said real estate, and that you be forever barred and foreclosed from setting up or claiming any interest, right, title or equity in said real estate. FRED C. SLATER, (Seal) Attorney for the plaintiff, A. J. Ferguson. Attest: I. S. CURTIS, Clerk of the District Court.

Gossip About Stock.

(Continued from page 1175.)

and breeding. Mr. Ensor also has a number of good pigs by Periclese that are very choice and are for sale. Write him about these pigs. They are worth it.

Hall Bros. & J. P. Newell announce in this issue their forthcoming Short-horn sale to be held at Carthage, Mo., November 22. In this advertisement is mentioned some of the attractive features of the offering, but any one interested in the advancement of the Shorthorn breed will want a copy of the catalogue, not only to get the breeding of the sale offering, but for its artistic and educational features as well. These gentlemen are putting up a splendid lot of cattle, both individually and in blood lines, and the fact that a number of them are bred to the champion, Master of The Grove, and to Choice Goods Model, one of the best sons of Choice Goods, makes it one of the most desirable offerings to go in the sale-ring this year. The H. E. Hayes' sale to be held at Olathe, Kans., on the day following, makes it possible to attend both at the expense of one trip. Write either gentleman for catalogue.

Scours in Pigs.

This is one of the most dreaded diseases that confronts breeders. More animals are lost or made runts from it alone than all the other ailments known to hogmen, and while there are many remedies in use none of them have proven entirely satisfactory to the user except Anti-Scour. The manufacturers of this remedy feel so confident that it will do what they claim for it that they have offered to refund the purchase price wherever the buyer has felt that he had not had value received, but up to date they have never received a complaint. If you are raising hogs, no matter how few, you should send a dollar and have a box on hand. One pig saved by its use will pay for the medicine and yield you 500 per cent on the investment. See their advertisement in this paper.

Profit for You.

The little book, "Farm Science," but recently off the press, is justly regarded as the equal in practical suggestions, plain teachings, and unquestioned authority, of anything ever published exclusively for the farmer. Its character will be seen when we say that it was specially prepared for The International Harvester Company of America, Chicago, at an expense of several thousand dollars.

The book treats exhaustively such live, present-day farm subjects as fertilizing, preparation of soil, crop-growing, alfalfa, hay, small grains, the dairy and farm powers. Best of all, every one of these topics is handled by a specialist—men of large practical experience in addition to being scientifically qualified to speak on matters in their line. The authors are Jos. E. Wing, expert agriculturist, Ohio; Prof. P. G. Holden, the corn-culture expert, Iowa; W. F. Brown, farm specialist, Ohio; C. G. Hopkins and Prof. Fred R. Crane, of the Illinois College of Agriculture; Prof. Thomas Shaw, late of the Minnesota Experiment Station; Prof. Clinton D. Smith, director Michigan Experiment Station; Hon. Willett Hays, Assistant Secretary of Agriculture, Washington, D. C. The 128 pages of the book are taken up by these eight specialists on their chosen subjects, so it will be seen with what thoroughness each topic is treated.

The book is meeting the demand among farmers which it deserves. A large edition is being rapidly exhausted. It is only necessary to send in the postage for its mailing, three 2-cent stamps, to receive a copy. We advise our readers to send for it promptly before the issue is exhausted.

It Pays to Buy This Hay-Press.

The Auto-Fedan Hay-Press, manufactured at Topeka, while a comparatively new institution, is meeting with unqualified success and is readily selling its entire output throughout the country. The users of the press are enthusiastic in its praise. W. L. Niver, Luverne, Iowa writes as follows: "We pressed over 12 tons in four hours and thirty-five minutes last Thursday, running 301 bales!" Geo. Barber, Osawatimie, Kans., says: "I like my press and think it does the finest work I ever saw. Easy draft and fast work. Just finished a \$130 job. I have more work than I can do."

P. M. Pheasant, Austin, Texas, writes: "Our press works fine. The biggest work we have done in baling hay was 100 bales in one hour. We have baled cane 1 1/2 feet long, 50 bales per hour. The hay-baling men are surprised. They wish they could sell their presses and get one like this."

Cures Nine Cripples Out of Ten.

Zolfo, Fla., February 2, 1906. Dr. B. J. Kendall Co. Gentlemen:—Find enclosed two-cent stamp for your "Treatise on the Horse and His Diseases." I am a user of Kendall's Spavin Cure, and it will cure any nine cripples out of ten, and do the other one good. Very truly yours, H. G. MURPHY.

Agents can make an average of \$7 per day selling the pump equalizers made by the Equalizer Mfg. Co., Wascoca, Minn. Write them for particulars and mention this paper.

It is easy to waste enough strength dodging your duties to do them twice over.

Grain in Kansas City.

Receipts of wheat in Kansas City yesterday were 295 cars; Saturday's inspections 156 cars. Prices were 1/4c lower, with the demand rather slow. The sales were: Hard wheat—No. 2 hard, 1 car 72 1/2c, 1 car 69c, 2 cars 68 1/2c, 44 cars 68c, nominally 67 1/2c @ 73c; No. 3 hard, 1 car 72c, 1 car 71c, 1 car 70c, 2 cars 69c, 1 car 68c, 1 car

67 1/2c, 7 cars 67 1/2c, 4 cars 67 1/2c, 8 cars 1 car 68c, 1 car 67 1/2c, 2 cars 67c, 1 car 66 1/2c, 4 cars 66c, 10 cars 65 1/2c, 2 cars 65 1/2c, 11 cars 65c, 2 cars 64 1/2c, 2 cars 67c, 1 car 66 1/2c, 1 car 66c; No. 4 hard, 64c, 1 car 63 1/2c, 6 cars 63c, 1 car 62 1/2c; no grade hard, 1 car live weevil 64c.

Soft Wheat—No. 2 red, 12 cars 70c; No. 3 red, 1 car 69c, 3 cars 68c, 1 car 67 1/2c, nominally 66 1/2c @ 69 1/2c; No. 4 red, 2 cars 65c; rejected red, 2 cars 65c; no grade red, 1 car live weevil, 66 1/2c, 1 car live weevil, 65 1/2c.

Spring Wheat—No. 3, 1 car 63c. Mixed Wheat—No. 2, 2 cars 68 1/2c, 1 car 68c; No. 3, 1 car 67c, 1 car 64c, 1 car durum 62c; No. 4, 1 car 63 1/2c, 1 car 63c.

Durum Wheat—No. 2, 2 cars 63c, 2 cars 62 1/2c. Receipts of corn were 41 cars; Saturday's inspections were 26 cars. Prices were 1/4c @ 1/2c lower. The sales were: No. 2 white, 5 cars old 42 1/2c, 1 car new 41c; No. 3 white, 2 cars old 42c, 8 cars new 40c; No. 4 white, 3 cars 39c; No. 2 mixed, 3 cars old 41 1/2c; No. 3 mixed, 2 cars 40 1/2c, 9 cars 40c, 6 cars 39 1/2c; No. 4 mixed, 2 cars 39c, 1 car 38 1/2c; No. 2 yellow, 2 cars 42c, 4 cars 41 1/2c.

Receipts of oats were 36 cars; Saturday's inspections were 20 cars. Prices were 1/4c @ 1/2c lower. The sales were: No. 2 white, 12 cars 33 1/2c; No. 3 white, 1 car 33c, 1 car 32 1/2c; No. 2 mixed, nominally 32 1/2c @ 32 3/4c; No. 3 mixed, nominally 31 1/2c @ 32 1/4c, 1 car red 32 1/2c.

Barley was quoted 41 @ 43 1/2c; rye 57 @ 60c; flaxseed, \$1; Kafir-corn, 70 @ 75c per cwt.; bran, 85 @ 97c per cwt.; shorts, 92 @ 97c per cwt.; corn-chop, 75 @ 81c per cwt.; millet-seed, 75 @ 90c per cwt.; clover-seed, \$7.50 @ 11.

Kansas City Live-Stock Market.

Kansas City, Mo., Nov. 5, 1906.

Since last Monday cattle receipts have been moderate each day, including to-day, and the market has ruled firm all the time. Medium class short-fed steers have been killing out badly and buyers take good grassers in preference, but as the latter are not always available, and the short-fed steers are a little better each week, this prejudice against them is disappearing. The supply to-day is 17,000 head, containing a liberal share of Colorado and New Mexico cattle of all kinds. The proportion of stockers and feeders this fall has not been as great as in other years, partly because the range cattle have been in better flesh this year, more of them going to packers for that reason, and partly because a good many cattle have been sold in the country to go into feed lots. Also, a good many owners that formerly sold their feeders are feeding them themselves this year. Because of this packers' purchases this fall have been nearly as large as last, and the proportion of the total receipts they have secured is much larger, as the total supply has not been as large this fall as last. The market to-day is steady to strong in spite of a heavy run at Chicago and adverse reports from there. Best steers last week sold at \$6 @ \$6.25, but quality was lacking, and the market was not fully tested. Nothing about the ordinary is here to-day, top \$5.50. Good dry-lot steers sell from \$5.60 upwards, short-fed steers \$4.50 @ 4.75, bulls \$2.15 @ 3.50, veals up to \$6.50, heavy calves \$3 @ 4.50, stockers \$2.75 @ 4.25, feeders \$3.40 @ 4.60, most of the range stockers and feeders between \$3 @ 4.

The hog market has a downward tendency, although receipts are not at a volume to justify much of a break. Run was 49,000 last week, 7,000 here to-day. Prices advanced after the middle of last week, but are 10 @ 15c lower to-day, top \$6.20, bulk of sales \$6.10 @ 6.15. Heavy hogs and mixed weights now sell a little higher than light weights, pigs at \$5.50 @ 6. Moderate receipts are predicted.

Sheep and lamb receipts are pretty good yet, but will soon be much smaller, 28,000 here last week, run 7,000 to-day. The market has been good, prices 15 @ 25c above a week ago, and strong to 10c higher than Friday. Choice Missouri lambs sold the middle of last week at \$7.60, nothing choice since, best yearlings \$6, wethers \$5.75, ewes \$5.50. Feeding lambs bring around \$6, other country grades \$4 @ 5, generally not very desirable. J. A. RICKART.

South St. Joseph Live-Stock Market.

South St. Joseph, Mo., Nov. 5, 1906.

Arrivals of cattle for the opening market of the week were about normal but included quite liberal proportion of native steers. In quality, however, the steers were sadly lacking and this perhaps had some effect in causing a slow, weak market, many steers selling around 10c lower, while in some instances cattle that just suited the buyers were sold at steady prices. The best steers here sold at \$5.55 for a short-fed medium weight size but the bulk of offerings sold between \$4.75 @ 5.25. The market for butcher stock of all kinds held thoroughly active tone without changing prices and it looks safe to let fat cows and heifers come freely. Canners, bulls, and calves are also selling quite readily at unchanged prices. There is good demand for stock cattle of all kinds where quality is not lacking, but anything on common order regardless of weight is being sadly neglected.

The week opened on a further decline in prices for hogs, receipts showing a small increase, thus giving the packers plenty of play for a lower movement. The receipts at five leading points were about 7,000 larger than on the previous Monday and the market ruled generally 7 1/2 @ 10c lower. It is the time of year now for a normal increase for the number of hogs coming, and it is likely that the high mark has been seen for some time. Hogs that are fat and ready may as well be sent forward. The bulk to-day sold at \$6.05 @ 6.10 with tops at \$6.15 and a small contingent of roughish packing mixed sold as low as \$6.

The market for sheep was fairly supplied to-day but included quite a sprinkling of feeder grades, and nothing choice or fancy on the fat mutton order. The demand for all slaughter stock was fairly active and prices held steady while feeders met slow outlet at weak prices. HASKELL.

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SHORTHORNS—Ravenwood Admiration 136157, by the champion Lavender Viscount. Also one of his good sons and some heifers.
HEREFORDS—Soldier Creek Columbus 4th 258179 by the \$5,100 Columbus 17th. Also two good bulls sired by him.
Also one good **ANGUS** coming yearling bull.
HOGS—A few of the best from 200 spring pigs—**DUROC-JERSEYS, POLAND-CHENAS, BERKSHIRES, TAMWORTHS, and YORKSHIRES.** Only the tops will be sent out on order.
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DUROC - JERSEYS
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Home of the great breeding boar Fancy Chief 24923, assisted by Dandy Orion 33879, Fancy Topnotcher 40339 and Prince Wonder 42455. Four of the best boars in the state.
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Concordia, Kansas

Nemaha Valley Herd Durocs and Polled Durhams
70 good strong pigs by such boars as Valley Chief 15211, Kant-Be-Beat, Wont Be Beat Again, Lewiston Top Notcher and others. If you need a boar write me. I also offer my herd bull GLOSTER CHIEF 4th, sired by Gloster Chief 2d, for sale. This is a deep red fellow with plenty of size and finish. Young stock for sale at all time. Bred sow sale February 6, 1907.
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D. M. TROTT Abilene, Kans., famous Duroc Jerseys and Poland-Chinas.
COUNTY SEAT HERD DUROC-JERSEY SWINE
Geo. Briggs & Son, Clay Center, Neb.
Young stock for sale.

DUROC-JERSEYS—Large-boned and long-bodied kind. Spring pigs either sex. Prices reasonable.
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SUNFLOWER HERD OF DUROC-JERSEYS—Fall and spring pigs for sale, of both sexes, sired by Klondyke Prince, an 800 pound hog. Samuel Boston, Prop., Smith Center, Kans.

Gold Standard Herd. 75 head of pedigreed Duroc-Jersey spring pigs for sale cheap. Chas. Dorr, Route 6, Osage City, Kas. Mention this paper.

DEEP CREEK HERD DUROC-JERSEYS
Spring boars for sale, also gilts of the very best breeding. Write for description and prices. U. O. ANDERSON, Manhattan, Kans.

10 Duroc-Jersey Boars for Sale
The best of breeding. Fine and large pigs farrowed in March and early April. I can please you. Write me now. Geo. F. Dorsch, Cook, Neb.

Pigs Shipped on Approval.
200 head of Durocs, all ages, representing the blood of Combination, Valley Chief, and a son of Kant-Be-Beat.
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Registered Duroc-Jersey Swine
Up-to-date breeding, choice individuals. Farrowed from February 27 up to October 1. Either sex, pairs or trios, not a kin, at \$12.50, \$15, \$20 and \$25 per head, for 60 days only. G. E. NEWTON, Whiting, Kans., (Successor to Newton Bros.)

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Fall and spring males, and the gilts bred and to be bred, for sale. Blood lines: Top Notcher, Ohio Chief, Improver 2d and the Wonder family.
R. F. NORTON & SON, Clay Center, Kans.

Duroc-Jerseys
Big, blocky, handsome boars of March and April farrow. Write
Buchanan Stock Farm, Sedalia, Mo.

STAADT'S DUROCS
Spring pigs for sale sired by Nelson's Model, the first prize winner at Neb. State Fair. Prices moderate and satisfaction guaranteed. J. F. Staadt, Ottawa, Kans.

OUR SPRING PIGS are now ready, sired by Crimson Wonder Jr. 33735, Kerr's Champion 34469. Trios not a kin at \$35. September bred gilts, bred to Crimson Wonder, at \$18 to \$20 each, registered. Mr. and Mrs. Henry Schrader, Wauneta, Kans.

Egypt Valley Durocs.
Herd headed by Egypt Lad 34023. Stock always for sale. Choice fall boars and gilts, reasonable. Also six fine gilts, bred to Lora's Lad, to farrow in April; will also sell some tried sows. Write for prices and particulars. H.W. STEINMEYER, Volland, Kans.

Peerless Stock Farm
DUROC-JERSEY HOGS
Correspondence solicited. Inspection invited.
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My herd bull, Expansion, for sale. No swine for sale now. Spring sale, February 13, 1907.
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Choice breeding stock for all. For the breeder, the stockman and the farmer. Prices the lowest, quality and breeding the best. Herd headed by EUREKA TIP-TOP 43641, sired by the great World's Fair grand champion, Tip-Top Notcher 20729; and PERICLES 27247, by Josephus 19125, the Kansas State Fair grand champion. Write your wants or call and inspect my herd. Address
J. F. ENSOR, Olathe, Kans.

Oak Grove Herd of Durocs
Herd headed by Choice Goods H. 36471 by Hunt's Model, and Corrector's Model 34381. Forty fine spring pigs for sale from such sons as Labaugh's Choice 46682, Oak Grove Queen 12004 and Miss May 112006, a granddaughter of Improver II. If you want good ones write me.
SHERMAN REEDY, Hanover, Kans.

WILSONS' DUROCS
I have for sale a few gilts and boars sired by Ohio Chief. I also have a number of fine boars carrying the leading blood of the Duroc breed. Can please you in something good.
R. N. Wilson, Chester, Nebraska

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Home of The Famous Fancy Herd Registered DUROC-JERSEY SWINE

Home of The Famous Fancy Herd Registered DUROC-JERSEY SWINE
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Concordia, Kansas

Nemaha Valley Herd Durocs and Polled Durhams
70 good strong pigs by such boars as Valley Chief 15211, Kant-Be-Beat, Wont Be Beat Again, Lewiston Top Notcher and others. If you need a boar write me. I also offer my herd bull GLOSTER CHIEF 4th, sired by Gloster Chief 2d, for sale. This is a deep red fellow with plenty of size and finish. Young stock for sale at all time. Bred sow sale February 6, 1907.
WM. BRANDOW, Humboldt, Neb.

Byron Herd of Duroc-Jerseys
I have a fine lot of spring pigs for sale, large, heavy-boned fellows of popular breeding. I also conduct farm and live stock sales anywhere. Write for dates to P. J. George, Byron, Neb.

PIONEER HERD OF DUROC-JERSEY SWINE
Herd headed by Red Chief, 1st prize winner at Hutchinson, assisted by Chief Grand by Ohio Chief. Sows of equal merit. 15 large growthy males and 25 sows, some bred. To these males I breed big boned, quick feeding females. Describe what you want and write for prices.
N. E. SAWYER, Cherryvale, Kans.

ROCKDALE'S DUROCS
I am offering my entire crop of spring gilts, fall yearlings, and six tried sows. All bred and safe in pig to Chandler's Wonder Paulina, Improver 3d, and Chief Perfection. Write your wants or come and see. Satisfaction guaranteed.
J. F. CHANDLER, Frankfort, Kans.

Lone Star Durocs
We will have over 50 fine boars for sale this fall, representing the best blood lines in the country. Orders booked after July 1, and shipments will be made to responsible parties on approval.
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A fine lot of early boars for sale reasonably. They were in demand at Lincoln where we sold seventeen head, and they will please you. Write for prices.
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Spring Durocs for sale sired by Model H 37967, the best son of the great Higgins Model; also Shakespeare 3d, and other noted sires; also some fall boars that will be a credit to any herd. Write for prices.
J. E. JOINES, Clyde, Kansas
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Elm Creek Herd Duroc-Jerseys
Herd headed by Parker Mac 28283. First prize winner State Fair 1905 and Kansas Wonder 2d 43263. In my herd are such sows as Loudon's Bird 48482, Miss Orion 69668, and Rose Wonder. 100 spring pigs for sale now. Write me.
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O-Ta-Top-Farm Durocs
Herd composed of best blood in the west. Headed by O-Ta-Top Notcher, out of Tip-Top Notcher who sold for \$5,000. Spring pigs for sale price \$15 to \$25.
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Vick's DUROCS are bred for usefulness. Two yearling herd headers for sale, sired by Improver II, dams Kansas Belle, by Morton's Prince 18797. Two yearlings sired by Meddog, dams Prairie Queen 106772, also spring pigs by Vick's Improver 47385, Red Top 32241, Fancy Chief 24923 and other noted sires. Correspondence invited. Visitors coming to Junction City and phoning me will be called for.
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The Crimson Herd Durocs
At head of herd, Red Perfection and Pathfinder. Early spring pigs of both sexes for sale. I also have about 40 August and September pigs sired by Pathfinder, and Red Perfection who sired the winning litter, Topeka, 1905, which I will sell for \$10 each. Buy them now and save express charges.
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Herd headed by Smith Wonder 46985. A fine lot of boars and gilts for sale, carrying the blood of Kansas Wonder 23755, Jumbo Jr. 28015, Orion 6280, 6d Chimax 23861, Joe 28271, Oom Paul 2d 17679 and Second Surprise 20289. Phone from Silver Lake.
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Herd headed by Young Model 33111, a son of Higgins 2251. Pigs for sale from such sows as Antelope 97668, a granddaughter of Ohio Chief, Fancy Xenia 47490 and Lela H. 87086. Z. Ireland, Chester, Neb.

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This stuff is the cream of my herd and I am pricing it right. Grant Chapin, Groome, Kans.

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The great preventive and cure for HOG CHOLERA. Indorsed by more good breeders than any other remedy. We also put out a Dip at \$1 per gallon, in 5 and 10 gallon cans. Freight prepaid. Guaranteed as good as any Dip on the market or money refunded. Address
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Kansas Herd of Poland-Chinas has bred gilts and W. K. C. Leghorn cockerels. F. P. Magulre, Hutchinson, Kans.

Stalder's Poland-Chinas
I have pigs for sale from the leading strains of the country. Prices reasonable. Write for full particulars.
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A. and P. SCHMITZ, ALMA, KANS.
Breeders of Poland-China Hogs.
We have for sale at reasonable prices 10 gilts bred to Challenger 38349; also a boar pig by Compromise 88203. Write us for prices and full description.

East Creek Poland-Chinas
Stylish Perfection 40813, sweepstakes boar at Nebraska State Fair, 1906, at head of herd. Bred sow sale February 13, 1906. H. B. Walters, Wayne, Kan.

The Useful Type of Poland-Chinas
Herd headed by Model King 34830, by Mischief Maker. Growthy spring pigs for sale.
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MY POLAND-CHINAS
are the big prolific kind that the farmer likes to raise. Will have some fine boars for sale this fall. Write for prices. Mention the Kansas Farmer.

Elerbeck's POLAND-CHINAS
are from the leading strains of the heavy type. Good boars and gilts for sale. Write for information.
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Cedar Lawn Stock Farm
My herd is headed by the Great MAJOR M. 31527, by Blaine Tucumseh 29338. We breed the big fellows with plenty of finish. Our sows are all heavy boned animals and producers of large litters. If you want to breed the large type, write us for prices on boars and gilts.
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Purplebloom Poland-Chinas
60 spring pigs sired by Kansas Chief and Lengthy Perfection Sunflower and King Cole. Have a few bred sows for sale representing the leading Tucumseh and Perfection strains. I also have 30 head of richly bred Shorthorn cattle—bulls 18 months to 2 years old, cows and heifers. Will hold Shorthorn and Poland-China sale December 12. Write me your wants.
GEO. W. WRIGHT, Phone at Farm, Windom, McPherson County, Kansas

Yukon Polands
Spring pigs for sale sired by the great boar Perfect Tucumseh 27-89 S, and out of sows of equal breeding. Also a few choice ones by a son of Medler. Write me for full particulars.
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.. Axline's .. POLAND - CHINAS
Best Breeding and Individuality.
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JOHN BOLLIN, Route 5, Leavenworth, Kans.
Breeds and Sells Popular Poland-Chinas
The State and World's Fair winning boars Nemo L's Dude and The Picket in service. Bred sows and serviceable boars for sale.

B. M. BELL, - Beattie, Kansas Poland-Chinas.
Herd boar, Bellmetal by Expansion, assisted by Highland Prince.
200—For Sale; 80 Boars, 120 Gilts—200
Competent judges have said that I have the largest and best lot of spring pigs in the country. Write me and come to see them.

POLAND-CHINAS
ELM GLEN FARM POLAND-CHINAS.

Size, breed, character and fashionable breeding. Stock all ages for sale.
WM. KNOX, South Haven, Kans.

CEDAR GROVE HERD

Of pure-bred POLAND-CHINA HOGS. We will have some bargains this season to offer the public.
J. A. Hebrew, Stockton, Kans.
Mention Kansas Farmer when you write.

Square Deal Stock Farm
Wm. D. Calder, Prop., Bancroft, Kans.
We have for sale pigs by Square Deal 36749, he by Highland Chief Jr., others by Calder's Chief 40896, grandson of Kansas Chief 28250. 80 head to select from.

Decatur County Herd of Poland Chinas
Fall boars all sold; am now booking orders for March and April pigs; sixty head to select from; also a choice lot of bred sows at farmer's prices. A square deal guaranteed. Write me your wants.
R. H. WEIR, Route 3, Oberlin, Kans.]

A. J. Hinckley, Milo, Kan.
Breeder of fashionable Poland-Chinas
Will have some fine boars for sale this fall. Write for breeding and prices. Mention Kansas Farmer when you write.

Fall Boars I have six fall Poland-China boars for sale by Keep Coming, a son of the noted Keep On. These are not ordinary individuals but animals for herd headers.
O. B. SMITH & SON, Cuba, Kansas

Dawley's Poland Chinas are a distinct type of their own. Herd headers for sale sired by E. L. 2d, Spallbinder, Grand Chief, Sunflower Perfection, On and On, Keep on, Nonpareil and other noted sires. Prices moderate and satisfaction guaranteed.
Frank Dawley, Waldo, Kansas

C. F. Hutchinson, Bellaire, Kansas
Thirty Years a Breeder of Poland-China Swine

We raise the big fellows that farrow large litters. The kind that fills the pork barrel. Write us for list of our winnings at Nebraska and Kansas State Fairs. Our herd boar, Bright Look weighs 1,000 pounds in show condition. Stock for sale. If you want the big kind write us.

Evergreen Herd of Poland-Chinas
We have some fine spring pigs got by noted sires and out of sows that are as good as the best. Write us for breeding and prices.
J. A. Mosher, Rydal, Kansas

Maple Valley Stock Farm
The grand breeder Mo. Chip 2d is at the head of my Poland-China herd. My foundation stock is the best that money can buy and I guarantee my stock. Have a few more sows and gilts bred for spring farrow at reasonable prices. Correspondence solicited and visitors always welcome.
C. P. BROWN, Route 2, Whiting, Kans.

Oak Grove POLAND-CHINAS...
Nemo L's Dude, prize-winner and sire of winners, and Sir Darkness out of Darkness and by Chief Perfection 2d in service. A few boars for sale.
GUS AARON, Route 5 - Leavenworth, Kans.

Popular Poland-Chinas
Fashionably bred, big kind. Lots of Chief Perfection 2d blood. Entire crop of spring pigs both sexes. One yearling boar weighing 600 pounds and a 2-year-old weighing 750 pounds, ready for buyers
P. L. WARE & SON, Paola, Kansas

ON AND ON BOARS
Several choice boars for sale. One spring boar by On and On 61783, dam by Chief Perfection 2d 42559. One fall yearling grandson of Mo's Black Perfection. Dam 60 per cent Chief Perfection 2d, and others extra good. Also a few young Galloway bulls and several young Holstein bulls.
H. N. HOLDEMAN, MEADE, KANS.

Sunflower Perfection
and I's Chief, by Grand Chief, head our herd; 60 spring pigs by above sires. Top males of early farrow for sale. Gilts reserved for brood sows.
J. R. STEWART & SON, Portis, Kansas
When writing mention The Kansas Farmer.

Frank Michael, Summerfield, Kan.
BREEDER OF Pure Bred Poland-China Swine
Size and quality are the requirements of my herd. Write me your wants.
Mention Kansas Farmer