

KANSAS FARMER

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MASTERS AND SERVERS.

Every generation finds society in a stage of transition. In the ages of the past and of the present, migration has been contemporary with transition of conditions and relations of mankind. Possibly, the near future is to witness a reduction in migration as compared with aggregate populations. Possibly, this prospect may be accountable to a degree for excessive anxiety of the present as to the urgency of transitions to come. In all time man has been a restless animal, changing locations and changing conditions of his existence with rapidity that may have had some relation to his intelligence and his freedom of action.

In all ages there have been masters and servers in the world of industry. The masters have been the strong, the alert—at times the unscrupulous—the enterprising, those capable of initiative. The servers have included the profligate, the indolent, those incapable of carrying responsibility, the weak. Naturally, the masters have taken, as their share of the common heritage and the results of human effort, liberal shares of the good of the world. Eminent teachers have impressed the duty and the advantages of justice and of generosity, and have directed attention to the wrong and the impolicy of oppressive use of the power of the masters.

The migrations of the race have done much to obliterate the distinctions between masters and servers by leaving behind artificial barriers, by bringing the affluent to poverty, and by placing opportunity nearly equally within the reach of all of the diligent. New countries are, therefore, democratic because of comparative equality of opportunities, and because the immigrants are not chained to the traditional differences that existed before the migration.

The settlement and development of the United States has afforded a conspicuous and rapidly moving example of the democracy of new settlements and the development of aristocratic conditions with the coming of stability. The early settlers on the Atlantic shores became bound together and obliterated their distinctions in a large degree by reason of common necessities, common hardships, common dangers, and common hopes. A more perfect equalization took place among the people who, a little later, crowded out to the newer settlements. In the few generations since colonial times, there have been almost as many migrations. In each of the older communities, barriers between master and server have arisen, and with an instinct remarkable for its universality, the master and the server have taken their places on their respective sides of these barriers.

The barrier of the ages, slavery, was brushed aside a generation ago. It had always divided honors and ignominy with wealth, and after the death of slavery, wealth became the great artificial barrier by which the master was enabled easily to maintain his supremacy over the server.

Not in every case does the poor remain on the serving side of the barrier; neither is the wealthy secure in his position of mastery. Education does much for the former. And diligence, industry, perseverance, frugality, and honesty will generally transfer the worker to the masters' side of the barrier. Indolence and profligacy will frequently transfer their votaries sooner or later to the servers' side.

But those capable of the sustained effort of mastery, those possessed of

all of the five essentials of mastery, viz., diligence, industry, perseverance, frugality, and honesty, in eminent degree are not over plentiful. He who lacks any one of the first four and possesses the last—honesty—will distrust the propriety of his place among the masters. He who possesses all five in eminent degree is in great demand by the owners of the barrier, for he is the material of which capable managers are made, masters who are cheap at any price.

The great majority, however, appear to gravitate to the servers' side of the line, because its conditions are not as strenuous as the requirements of mastery.

As communities become older, there develops a third class, viz., the idle rich. These have not heretofore been so numerous in America as to excite much apprehension, and the fact that they have generally become so profligate as to waste their substance in riotous living, thereby condemning themselves or their offspring to the serving class, has tended to keep their numbers from greatly increasing. By placing their interests in incorporated companies or in securities, their affairs to be administered by hired masters, the idle rich have now some prospect of permanency in this country.

But the way of escape for servers has heretofore been migration, much as in more primitive times the slave attained freedom, by running away from slavery. The change is proceeding with rapidity. In colonial times all barriers were escaped by pushing further inland. Later, new freedom and perfect equality were found by all who crossed over the Alleghenies. The Mississippi Valley afforded what appeared to be an unlimited land of even chances. Uncle Sam took a hand and offered a free farm to every one who would possess and till it. The Great Plains country was filled in a few decades. The valleys in the mountains and the Pacific slope are filled as rapidly as made available through irrigation. The old song,

"Uncle Sam is rich enough
To give us all a farm,"

can not be sung any more.

During the years in which the song was sung, the strong and the enterprising from both sides of the barrier between masters and servers rushed to the new and equal opportunities. In the newer of the communities formed, barriers are as yet little in evidence; but in the centers of population, even in these new countries, much more in the older communities, there is appearing a dividing line which may be easily passed in one direction, but is difficult to surmount from the other side. The fact that there are lands for settlement in the Canadian Northwest, in New Zealand, and in other parts of the world is exerting much the same influence on the situation in this country as the free homes of this country exerted upon European countries. It renders less intense the action of the forces which establish distinctions in society and divide the industrial world into masters and servers.

A feature of the situation is the rapid gathering of people into cities and towns. The developments of modern industry favor the movement to town by taking into the factory much of the work formerly done in the household. Old people still living saw the spinning and weaving done at home. The opening years of the present century are witnessing the transfer of the churning from the kitchen to the great factory in the city. To do the immense

amount of work performed in the cities requires many hands.

The conditions of labor in the city and in the country differ greatly. Not long ago the editor of THE KANSAS FARMER received a letter from an Eastern city, in which the writer requested assistance in locating a friend on a farm as a laborer. He was anxious for this friend to come to Kansas because addicted to periodical drunks which it was hoped that "the strict supervision of labor," with the aid of the prohibitory law, would be impossible to the farm-hand. This city man expected that farm-hands were managed in something like military fashion, in squads and companies—a sort of modified factory control under conditions to make it effective at all hours.

The boy on the farm who has a yearning to get away from the vocation of his fathers may well consider the drift to the city, what changes are in progress in conditions affecting employment, especially in the cities where few are masters and many are servers. He may well cherish and help to bring about coming improvements in conditions on the farm, realizing that with the ownership of his opportunities for employment, he is master of his own destiny, while in the press-gang of the great city he, with thousands of drifters, is made to suffer first, last, and all the time the brunt of every deviation from prosperity by being deprived of the opportunity for labor. He may well consider the narrowing tendency that gives city servers in the great majority of cases distorted views of human rights. He should know that the majority of city servers come to old age without adequate provision for the time of infirmity.

Philanthropists who have charge of relief institutions have long known the danger of keeping a youth long in such an institution. Their expression is that he is certain to become "institutionalized." This means that his aspirations to become independent and self-sustaining fail to develop, dwarf, and disappear. He becomes a willing dependent, without power of initiative. In the unresisting drift of much of humanity to the positions of servers with limited cares and responsibilities, with small ambitions and docile aspirations, the conspicuous source of restraining and guiding power has been the farm. The farmer boy may not realize the advantages of the training given by the kind of work and thought, which he almost automatically gives to his varied employments. He may well take stock of these and rejoice that he has this rather than the treadmill of city toil, by which his fellow men are becoming irresistibly "institutionalized."

UNCLE SAM IS RESPONSIBLE.

We don't know where THE KANSAS FARMER gathers its statistics, but they are very bad, because they are far from the truth. For instance, last week it printed a map pretending to show the amount of rainfall over Kansas for the week ending June 30. The east two-thirds of Osborne County is credited with less than .50 of an inch and the west third with less than an inch. The truth is that Osborne County got about six inches that week. If THE FARMER's figures are as badly off for the rest of the State as for this county, they should make a change in the staff at once.—Osborne County Farmer.

The weather reports which appear weekly in THE KANSAS FARMER are the official publications of the U. S. Weather Bureau. They are prepared by Director Jennings, of this Bureau, from

reports sent to him from the several counties by official observers, who have standard instruments for ascertaining the facts as reported. THE KANSAS FARMER is responsible only for presenting these reports with fidelity to the copy furnished by Uncle Sam's men.

It develops upon inquiry that Osborne County has but one observer. He is located at Alton. His report for the week in question is in harmony with the reports from observers in adjoining counties. However, Osborne is a big county. Local showers have characterized the precipitation of this season; possibly there may have been a shower that escaped all observers in that region. All cause of complaint may be obviated if some public-spirited citizen in each quarter of Osborne County will procure standard instruments and report observations to Director Jennings, at Topeka. The director will supply franked stationery for mailing the reports. The official observers receive various valuable publications. In Marion County every township has an official observer, who has been provided with a standard rain-gauge by order of the board of county commissioners.

A SNAP FOR FARMER BOYS AND GIRLS.

Beginning on December 27 and lasting until January 5 next, there will be held at the Kansas State Agricultural College, at Manhattan, a series of the most important meetings ever held in the State. It may be called a nine-days' institute. This institute will include, in its various sessions, the boys' corn contest, stock and stock-judging, corn and corn-judging, and then the annual meetings of the Kansas Corn-Breeders' Association, the Kansas State Dairy Association, the Kansas Good Roads' Association, the Kansas Poland-China Breeders' Association, the Kansas Berkshire Breeders' Association, the Draft-horse breeders, and the Aberdeen-Angus breeders.

What a treat this will be! A visit to the beautiful agricultural college, which is the wonderland of Kansas, with nine whole days in which to see the sights and attend all these meetings. What would you not give for this privilege? It is worth working for, is it not?

Now, THE KANSAS FARMER is very much interested in these meetings and it is also very much interested in you. It proposes to give you a chance to attend these meetings, visit the college, and have the time of your life without costing you a cent. It is this way: Any farmer's son or daughter, in Kansas, who will get up a club of 20 new subscribers to the KANSAS FARMER at \$1 each before December 27, 1906, will be given a free trip to Manhattan and return to his home and have his board bill paid in Manhattan during the nine days of the institute.

HOW TO BUILD A MAUSOLEUM.

EDITOR KANSAS FARMER:—I wish you would give some light in THE KANSAS FARMER on how to build a mausoleum large enough for a family—just a plain, inexpensive one. Please tell me how to build it and about what it will cost. We have plenty of rock here for building purposes. S. THOMAS, Russell County.

A mausoleum capable of containing six standard caskets in their cases can be made 8 feet by 10 feet inside measure, and 7 feet high in the clear. According to the views of a leading Topeka undertaker, Geo. B. Palmer, the walls, built of stone, should be two (Continued on page 756.)

Agriculture

Barn Plans and Specifications.
RAYMOND D. HARRISON, JEWELL CITY,
KANS.

GENERAL REMARKS.

This contract includes the furnishing of all materials and labor, of each and every kind required to build and complete the farm barn. The owner will furnish only those articles that are specified to be furnished by him, such as hardware, hay-track, pulley, rope, and fork, all of which are to be properly hung and affixed by the contract-

or. The supports of the track must not be more than 2 ft. 6 in. apart.

ALTERATIONS.

The owner may at any time require alterations, additions, or omissions from the contract and the same shall not affect the validity of the contract or render it void, but the price of such work shall be added to or be deducted from the contract price, as the case may be, such price being in such proportion to the entire job as the changes may affect the same.

Should any dispute arise relative to such charges, they shall be settled by a disinterested and competent party chosen and approved by both the contractor and owner. All orders for alterations that will affect the contract price will be in writing, and no claims

will be allowed at the final settlement for which no written orders can be shown by the contractor.

THE CONTRACTOR.

The contractor is to give his supervision to the work, to furnish all labor and materials necessary to make a complete and workmanlike job, according to the drawings and spirit of the specifications, to the entire satisfaction of the owner, who will have full power to reject all work and material not first-class and of the kind specified.

DRAWINGS.

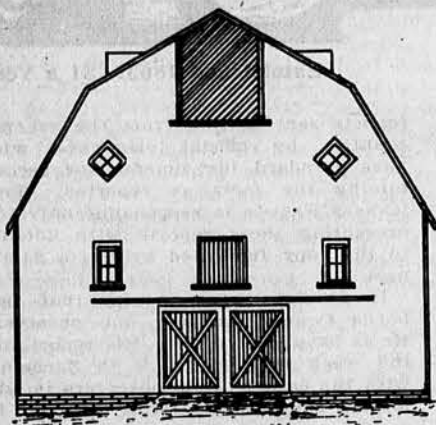
The specifications and drawings referred to are intended to include everything requisite and necessary to the proper and entire furnishing of the whole job, notwithstanding every item

required by the work is not particularly mentioned.

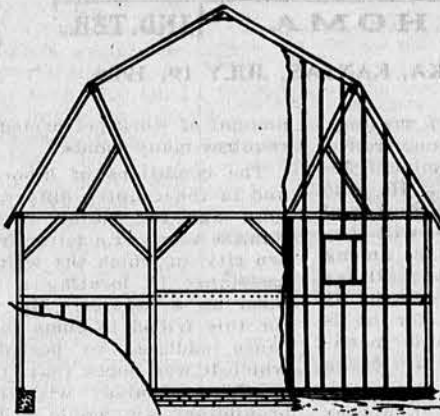
INSPECTION AND ACCEPTANCE OF WORK.

The contractor must understand that all material and labor furnished by him, at any and all times during the progress of the work, and prior to the final acceptance of and settlement for the same, shall be subject to the inspection of the owner, who shall have the right to accept or reject any part thereof; and that the contractor must at his own expense, within a reasonable time, remedy any defective or unsatisfactory materials or work; and in the event of his failure to do so, after notice, the owner shall have the right to have same done and to charge the cost thereof to the contractor to be

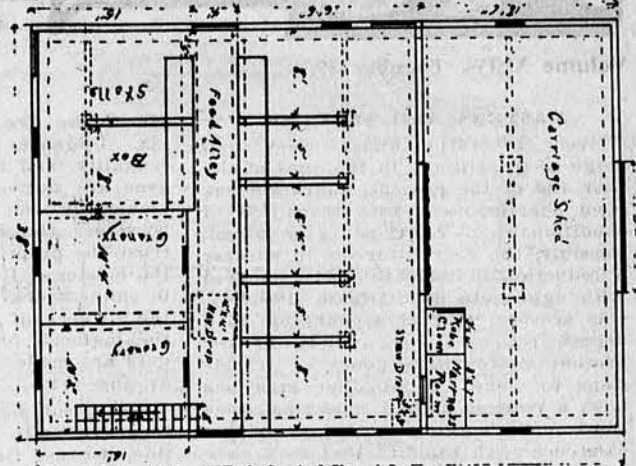
CONVENIENT HORSE BARN.



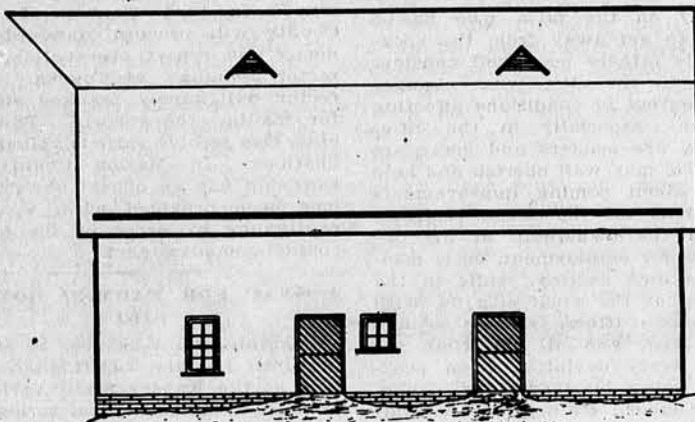
Front Elevation.



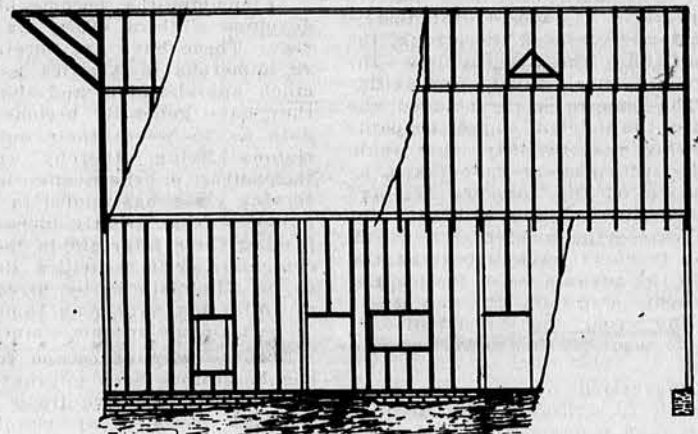
Cross Section.



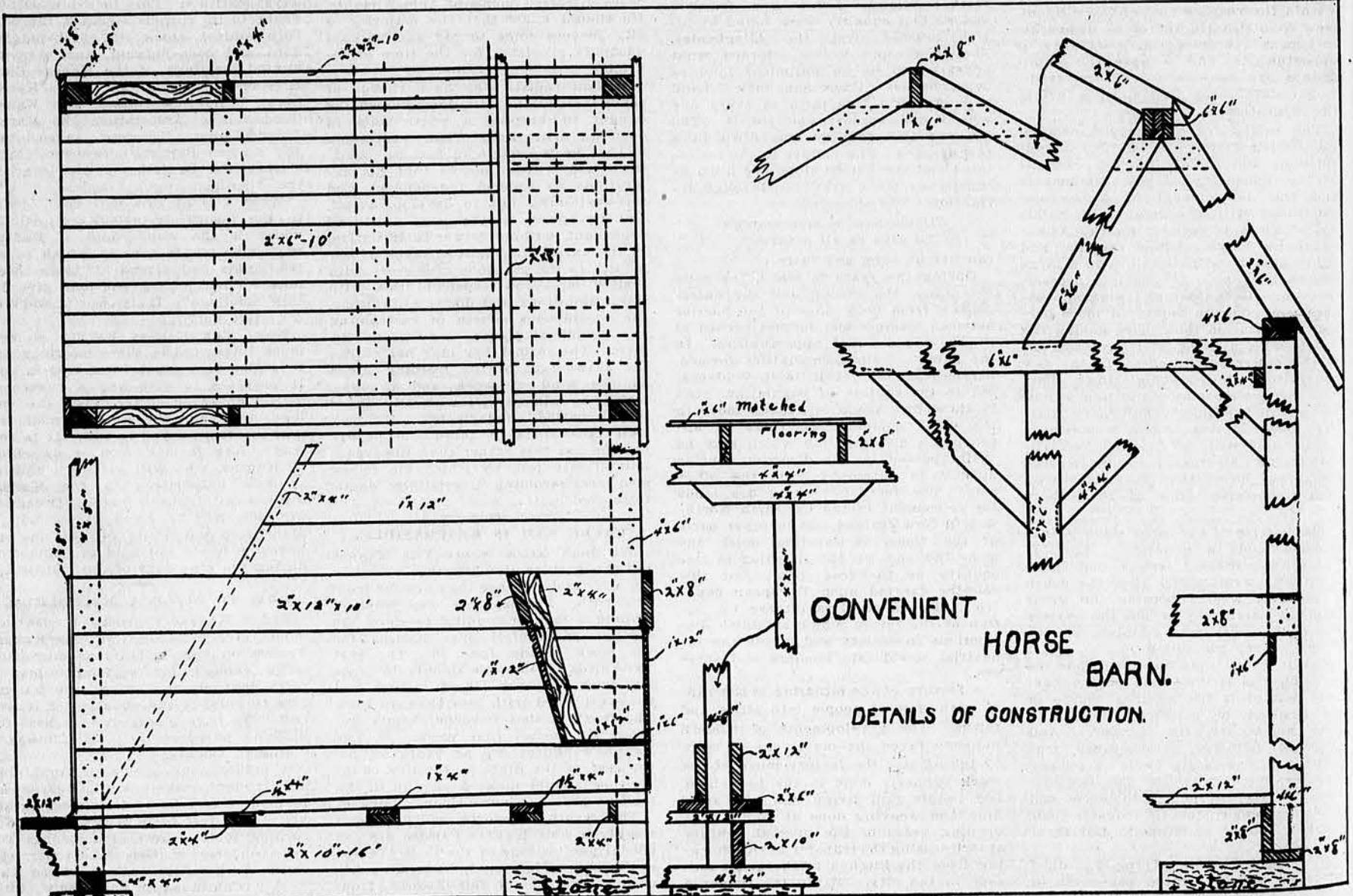
Ground Plan.



Side Elevation.



Longitudinal Section.



CONVENIENT
HORSE
BARN.
DETAILS OF CONSTRUCTION.

taken from the contract price at final settlement.

RESPONSIBILITIES.

The contractor shall be held responsible for all damages to the building, whether from fire, water, wind, or other causes during the progress and prosecution of the work, and until same is finally accepted.

DRAWINGS.

It will be understood that the dimensions, such as are given in the specifications, shall be taken as correct, but in case such dimensions in question are not referred to in the specifications, then the figures shall be taken as they appear on the blue-prints and not according to the measurements of same.

MASON'S SPECIFICATIONS.

Foundation.—All foundation and stone supports shall be at least 1 ft. 6 in. wide, and shall extend in all places at least 6 in. above the natural surface of the ground, and in no case must they extend less than 2 ft. 6 in. below the natural surface of same.

The bottom of the trench shall be level and the external surface of the wall perpendicular and flush with the external edge of the wall-plate. The stone of same shall be laid in cement mortar composed of one part fresh-burned lime, two parts of Kansas Portland cement, and clean, sharp sand eight parts, stone to be laid as closely as possible and all joints to be slushed full of mortar.

Cement Floors.—The cement floors shall consist of 4½ in. of concrete and 1 in. of cement facing.

The concrete shall be mixed as follows: 1 part best Kansas Portland cement, 3 parts clean, sharp sand, and 4 parts broken stone or coarse gravel. The broken stone used must be free from dirt and of a solid composition, and no piece to be larger than a 2-in. cube.

Mixing Concrete.—All concrete to be mixed as follows: The cement and sand will first be thoroughly mixed dry, after which water will be added and the mortar mixed to the proper consistency, then the stone shall be dumped on top and the whole worked over into a homogeneous mass. This concrete shall be tamped in place by suitable tools until the moisture flushes the surface, and it must be deposited as fast as it is mixed and covered with a cement facing of 1 part best Kansas Portland cement and 1½ parts sharp sand, trowelled true and smooth. All measurements for cement and sand must be done with bucket and not with shovel.

All floors, including finishing coat, to be laid in strips 3 ft. wide leaving spaces between strips of the same width. As soon as the strips have set, the alternate spaces are to be filled in with concrete as outlined above. This method is adopted so as to avoid walking on or soiling base, which would prevent the finish coat from properly adhering.

All concrete floors to be marked off into blocks about 3 ft. square. The joints to be cut through to top of base.

SPECIFICATIONS FOR THE CARPENTER.

Timber.—All dimension lumber of the building, and all rough lumber, where no particular timber is specified, shall be of good quality of yellow pine surfaced on one side and one edge, sound, and free from large, loose, or dead knots or other imperfections liable to impair the durability or otherwise weaken the timber.

FRAMING TIMBER.

Wall-plate, 2 by 8 in.; main studs, by 6 in.; top plate, two 2 by 6 in.; partition studs, 2 by 6 in.; corner posts, three 2 by 6 in.; granary studs, 2 by 4 in.; stud to harness room, 2 by 4 in.; corner studs of harness room, two 2 by 4 in.; rafters, 2 by 6 in.; rafters of harness room, 2 by 4 in.; floor joists, by 10 in.; ceiling joists, 2 by 8 in.; gable plate, three 2 by 6 in.; ridge pole, 2 by 8 in.

Framing.—The sills shall be properly cut and framed to fit the foundation and set perfectly level. The corner posts shall be set plumb to a line and well braced, while other framing is in course of erection and framed according to the details of the perfect horse barn.

The floor joists and other important members shall be so framed that there will be no more cutting than is absolutely necessary.

Build partitions where shown in the plan, setting them straight and plumb. Make all corners and angles solid by blocking well spiked together.

Block all partitions in such a manner as to make them vermin-proof where they run down to the sill.

Siding.—Cover the entire sides of the

barn with 6 in. white pine drop siding, leaving such openings for doors and windows as are shown in plans. Cut all joints of same in a workmanlike manner and nail properly every 24 in. with eight-penny wire nails.

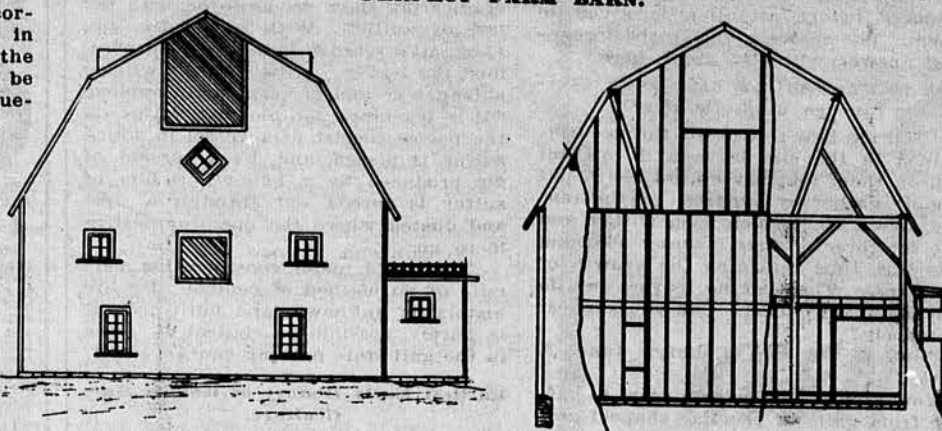
Roof.—The carpenter shall frame and construct, according to the drawings, the roof in the most thorough and workmanlike manner. The roof to be

covered with No. 26 in. room sheathing laid 2 in. apart.

Shingles.—Shingle the entire roof with 6 to 2 in. best quality of Washington red-cedar shingles, laid 4½ in. to the weather and nailed with extra heavy wire shingle nails.

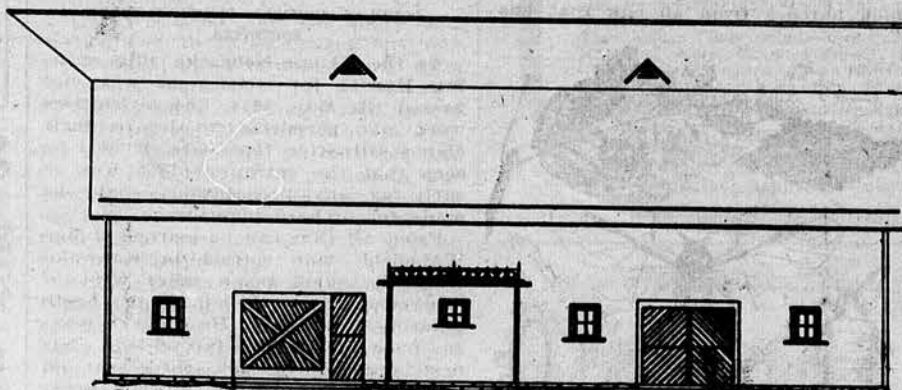
Partitions.—The partition of buggy-shed shall be lined with 6-in. matched flooring nailed properly at each joist.

PERFECT FARM BARN.

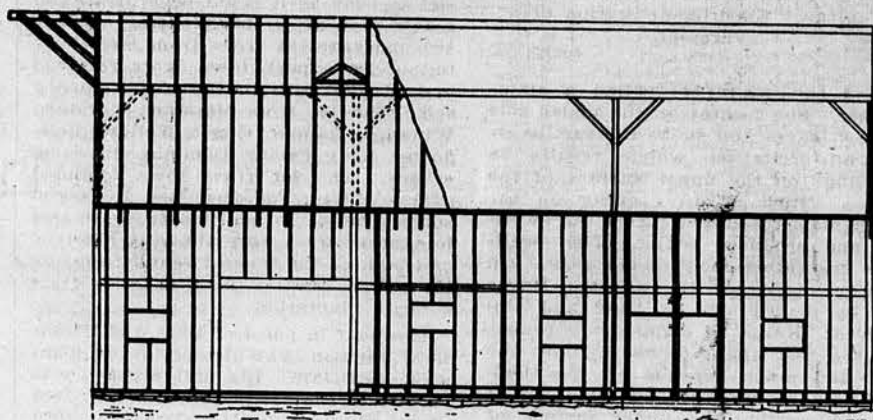


Front Elevation.

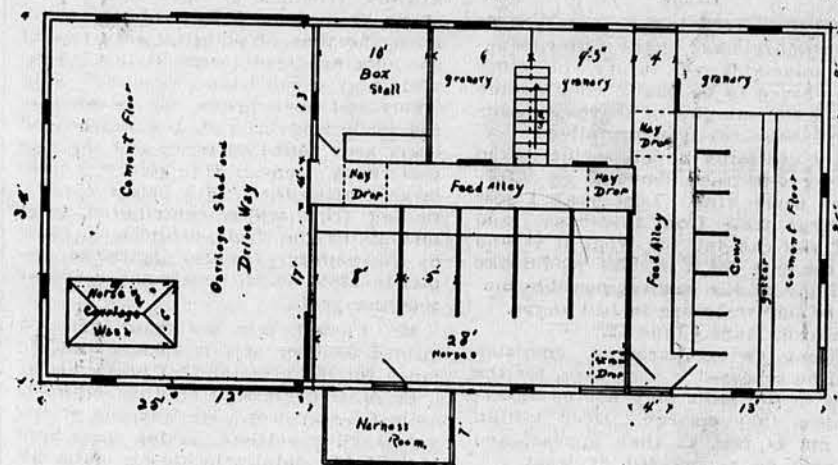
Cross Section.



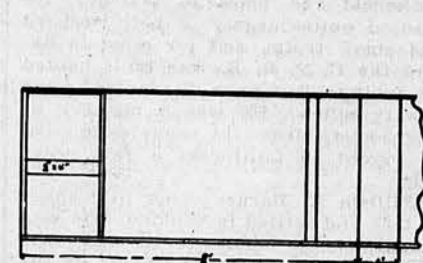
Side Elevation.



Longitudinal Section.



Ground Plan.



COW STALL.

Details.

The insides of all partitions communicating with the horse and cow stalls, and back of same, shall be lined up at least 4 ft. with 2-in. stuff and between all studs 8 in. from the top shall be placed a 1 in. by 6 in., making tight and vermin-proof boxes between all studding. The partition between cow stable and granary and box-stall and granary shall be sheathed for 4 ft. with 2-in. yellow pine, and the remainder shall be sheathed with 6-in. matched flooring. On the inside of the granaries, the sheathing shall be of 6-in. matched flooring and extending up 4 ft. high, at which place it shall be made tight with the outside sheathing by placing a piece between it and same, and between all studding.

Floors.—The floors to the horse stable shall be of 2-in. yellow pine, that part behind the stalls being of 2 in. by 12 in. and laid tight, leaving no cracks and at right angles to the stall-partitions. The floors of stalls shall have a 2-in. drop in 10 ft., and shall be 2 in. by 6 in. yellow pine laid leaving a ¼-in. crack between each plank, and these planks must be beveled at the back end to a 45° angle.

The floors of the stalls shall be built the same as details of the convenient horse barn, and the partitions in this case shall be the same as those shown in the details for the model horse barn.

The hay mow shall be floored with 6-in matched flooring.

Doors.—The double doors shall be 8 ft. in the clear and made of 4-in. matched cedar flooring well braced.

The other doors shall be 4 by 7 ft. in the clear and made of siding, the same as on the barn, laid perpendicular. These doors shall be made in two sections, each being 3 ft. 6 in. high. The joists shall form the inside framework of the doors, but they shall be cased up on the outside with ¾ by 4 in. white pine, leaving no large cracks.

Windows.—The glass for windows shall consist of 7 by 12 in. pane, set in a skeleton frame without weights. All double windows to slide up and down and single ones to slide to right or left, as is most convenient according to their location.

Hardware.—All hardware is to be furnished by the owner, but is to be put in place and affixed by the contractor in the most workmanlike manner.

Painting.—Paint the whole of the exterior woodwork of the barn with three coats of "All Oil" Sherman and Williams Outside Paint of such colors as the owner shall select. Paint the window-sashes with two coats of the same paint and of any color as the owner may select.

Putty all nail holes, cover all knots with shellac, varnish, clean the surfaces properly before applying the paint, and do not paint in dusty weather. Paint the shingle roof with two coats of "All Oil" Sherman and Williams Roof Paint.

A FREE TRIP TO THE KANSAS STATE AGRICULTURAL COLLEGE

With All Expenses Paid for Nine Days.

The Great Farmers' State Institute.

From December 27, 1906, to January 5, 1907, there will be held at the State Agricultural College, Manhattan, Kans., a great series of farmers' meetings, including the Boys' Corn-Growers' Contest, the Corn-Breeders' Association, the State Dairy Association, the Kansas Good Roads' Association, the Kansas Poland-China Breeders' Association, the Kansas Berkshire Breeders' Association, the Draft Horse Breeders' Association, the Aberdeen-Angus Breeders' Association, and a Training School for all in Corn and Corn-Judging and Stock and Stock-Judging.

This trip is absolutely free to any Kansas farmer's son or daughter who will send us a club of 20 new subscribers to THE KANSAS FARMER at \$1 each. Remember that we pay your railroad fare both ways and your board bill for nine days in Manhattan.

You have nearly six months in which to get these subscriptions. Send the names in as fast as you get them. Ask for sample copies. Get busy.

THE KANSAS FARMER COMPANY,
Topeka, Kansas.

Homes for Thousands.

The Shoshone Indian Reservation lands will be opened to settlement August 15. Excursion rates less than one fare round trip, daily, July 12 to 29, \$26.70 from Chicago, via the Chicago & North Western Railway, the only all-rail route to the Reservation border. Rates of registration July 16 to 31. Write for pamphlets telling how to secure one of these attractive homesteads. All agents sell tickets via this route. W. B. Kniskern, Passenger Traffic Manager, Chicago.

Horticulture

Plant-Lice and Mites.

R. E. TUCKER, MUSEUM ASSISTANT IN SYSTEMATIC ENTOMOLOGY, UNIVERSITY OF KANSAS, LAWRENCE.

The small, soft-bodied insects called plant-lice or aphids are difficult to combat, since they suck the juices of plants instead of chewing their food. External remedies must be directed against them—something that will kill by contact on their bodies or by fumes which cause suffocation. The following letters present different cases:

OVERRUNNING THE GARDEN (Rhopalosiphum dianthi, Schrank.)

"I am taking the liberty to send you under separate cover a turnip leaf from our garden, that is covered with lice. These insects appeared about a week ago upon the turnips and now the turnips are nearly dead. The insects are spreading to the rest of the garden now, and are on the beets, lettuce, cucumbers, beans, in fact everything in the garden. They work on the under side of the leaves. Is there anything I can do to exterminate them? I hate to lose the entire garden."

"Kansas City, Kans., June 4."

A bulletin entitled "Common Injurious Insects of Kansas" which contained directions for the making and use of kerosene emulsion was mailed to the inquirer, and the specimens were sent to a specialist in the study of these insects who replied, giving further instructions as follows:

"The insects were Rhopalosiphum dianthi, Schrank. When these are on plants which have a foliage that is easily sprayed with kerosene emulsion, I would advise spraying. Quite often these are on plants which do not admit a solution to come in contact with the aphids. When this is true, a frame should be made which will fit over the vine or whatever the host-plant may be, and, by the use of a fume, the insects can all be exterminated. The frame should support a canvass which is rendered almost air-tight by the use of linseed-oil. The latter will render an eight-cent muslin sufficiently airtight to be used. For originating the fume, a paper known as 'Aphis Punk,' manufactured by the Nicotine Manufacturing Company, of St. Louis, or the 'Nico Fume,' manufactured by the Kentucky Tobacco Product Company, is excellent. A small quantity of this paper will do a great deal of good where the infestation is just becoming severe."

"The aphids which you sent indicate that it is impractical to use an artificial remedy, since the parasites and predatory insects will soon exterminate them. Whenever 25 per cent of a colony is infested with inimical insects as these which you sent are, I deem it impractical to use an artificial remedy, since it is only a question of a short time before the former will be exterminated."

"This year has been an unusually good one in favor of inimical insects in the South, and they will doubtless control the aphids further north. Where host-plants, such as cantaloupes, are going to be planted the coming year, I have methods which will be effectual in holding the melon aphids in check without the use of any fumes or sprays. I do not know whether this will be practical further north than the northern latitude of Texas or not, but think that it will. However, I do not know that the melon industry in Kansas is sufficiently hazarded by this insect to warrant trial of my method or not."

C. E. SANBORN.

"College Station, Texas, June 9."

Any grower of melons who desires to know of Mr. Sanborn's methods should write to him.

THE CUCUMBER OR MELON PLANT-LOUSE (Aphis gossypii, Glover).

"I write you asking information concerning a cucumber pest. It is commonly called 'lice.' This portion of the State has been troubled with it for two years in succession. Will you please tell me what to do to get rid of it or what will prevent it? Please write as soon as convenient as I have such a nice prospect for cucumbers I would like to save them."

"Arkansas City, Kans., June 16."

Plant-lice which commonly infest cucumber- and melon-vines are known by the name of Aphis gossypii, Glover. A similar inquiry regarding this pest was answered by me in THE KANSAS FARMER of August 11, 1904, when advice was given to destroy old vines at end of season, for the purpose of preventing eggs being carried through the winter, also to avoid planting on same ground two years in succession.

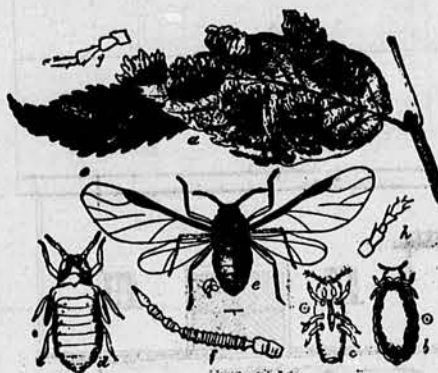
If the vines are not too large to be covered readily, they can be fumed under any tight enclosure—bowls, buckets, or tubs inverted over them—using 1 dram of carbon bisulfide for every square foot of space. One hour is sufficient time for the operation. Early detection of the lice when they first appear on young vines would give timely warning in order that such measures could be enforced under favorable conditions, but generally they have spread and committed their worst damage before attention is given to them. The advice given in the foregoing answer will also apply here.

THE COCK'S-COMB ELM GALL LOUSE (Tetraneura ulmi, De Geer).

"Tell me how to destroy the lice contained in the elm leaves? I can not poison them for they do not chew, but simply gather by hundreds on the tender new twigs which soon wither and die for three or four inches back from the tips, thus retarding the growth of the trees. They eat no leaves, and do not grow any larger. Can you suggest a remedy?"

"Buffalo, Wilson County, June 3, 1905."

Young elms particularly seem to suffer from galls of peculiar shape forming on the leaves, such being noticed in Lawrence this season. The louse which hatches from an egg that has



Cock's-Comb Elm Galls and Lice.—From Third Annual Report Agricultural Experiment Station of Vermont.

passed the winter is called a stem-mother. She locates on the under side of new leaves and sucks the sap, causing an irritation which results in swellings on the upper surface of the leaves. Through an opening on the under side, the insect enters the swelling and produces young. The swellings are called cock's-comb galls. On very young trees the affected leaves can be picked off by hand and destroyed. Kerosene emulsion is probably the best agent to use against the lice, and much depends on the thoroughness of spraying on whatever it is used, so that the under surface of leaves can be touched where the aphids are usually found in greatest number.

MITES ON SAME TREE WITH COCK'S-COMB GALLS.

Since the preceding accounts were written and mailed to the editor, a serious complaint of injury to elms, which proved to be due to cock's-comb galls on the samples of leaves submitted, has been received as follows:

"I am enclosing you branches taken from my elm-trees showing an infection of some kind. Last year I lost four large trees from this cause, and ask if you can tell me what it is and what the cure for it is. We would like your reply at the earliest possible moment as our trees are in bad shape."

"Stafford, Kans., June 22."

Spraying with kerosene emulsion should be repeated if necessary, for the insects in the galls may not be affected unless they emerge. Keep killing them off as fast as they appear, and they may be suppressed at least.

The inquirer wrote again, calling particular attention to the following observations:

"In your reply of June 25, you mention a kind of louse which forms a cock's-comb gall. The leaves with these galls on do not seem to injure the tree particularly; the greatest damage occurs to the leaves having a rusty brown appearance on the under side. These are the leaves that die and kill the tree. I wish you would examine these leaves with that brownish rust on the under side, and see if you are correct in your conclusions in regard to the parasite that is killing the trees."

Closer examination of the leaves revealed what appeared to be the work of mites, but they had evidently forsaken the leaves now thoroughly dried, and only a couple of small, perhaps young, gray-colored spiders were found. However, the remedy previously suggested for killing the plant-lice

by means of a spray of kerosene emulsion would also be effective against mites on the foliage. To be more certain, the matter was referred to Mr. Sanborn, whose reply is here quoted:

"The galls are made by the aphid, Tetraneura ulmi, De Geer, on the elm leaf. I could find no mites on the elm leaves. The work on their ventral sides, however, looks much like the work of a little red mite. The latter has been exceedingly numerous this spring. The most effective method of eradicating them seems to be with the use of sulfur. With a powder gun (Leggett's powder gun is a good one), dust the leaves. A little sulfur will go a long way and is very easily applied. Other machines for blowing sulfur on the leaves consist of a vessel in which sulfur is placed, and, by a current of air produced by a bellows, a film of sulfur is forced out through a tube and dusted where the operator desires it to go."

"The aphid under consideration permits of no method of control. Its life history is unknown, and until then it is barely possible to control it, since in the gall state nothing can get at it."

Earliest Early History of Kansas Horticulture.

SAMUEL REYNOLDS, BEFORE JOINT MEETING OF THE MISSOURI VALLEY AND THE DOUGLAS COUNTY HORTICULTURAL SOCIETIES.

As the Kansas-Nebraska Bill, opening Kansas for settlement was not passed till May, 1854, and as settlers were not permitted to locate their claims till after that date, it will be seen that the spring of 1855 was as early as any preparations could be made for orchard planting.

From all that can be learned, Judge Wakefield, who settled in Kanwaka township, some seven miles west of Lawrence, was the first to begin planting fruit-trees. He came to Kansas from Iowa in the fall of 1854. His first orchard of 100 three-year-old trees from the nursery of Blair Bros., Lafayette County, Missouri, was planted in the spring of 1855 on newly turned sod as soon as it could be broken, and a few days after this planting another 100 one-year-old trees from Suel Foster, of Davenport, Iowa, were received and planted also in the newly turned sod. The lot from Missouri contained Winesap, Rambo, Genet, Yellow Bellflower, King, Swaar, Dominie, and some others. The lot from Iowa included Ortley, Gilpin, Fameuse, Red June, and some others. In addition to those two lots, other trees were annually received and planted for several years, from the Ham Bros. nursery, making in all quite a large plantation.

The next in point of time was Thomas M. Pierson, who also settled in Kanwaka township. His first orchard was planted in the newly turned sod in 1855 soon after Judge Wakefield's first planting. His first orchard consisted of 150 apple-trees from the Mendenhall nurseries, of Indiana. They were root-grafted, trimmed to open heads with stems from 3 to 4 feet. In 17 years from the time of planting only two of the original trees were living. Sun-scald played sad havoc with their long stems and open heads, for as soon as the bark was injured, the flat-headed borer soon found entrance and the tree was soon gone. He planted quite largely after that, with better results, raising fruit which contributed quite largely to the fruit exhibitions made by this county. He also planted peach-pits in 1855, which bore many crops of seedling fruit.

Mr. Pierson was for many years a valued member of this society and did much for the promotion of horticulture. E. A. Colman was another enthusiastic fruit-grower. He was one of the very earliest settlers, having come here in 1854, but did not locate his claim till the next year. He settled in Kanwaka and was a near neighbor of Judge Wakefield and Thos. M. Pierson. He planted quite largely of both orchard and small fruits, and for a while before the U. P. R. R. was built hauled his fruit to Topeka, a distance of some twenty miles. He was a member of this society from its organization till he moved to California a few years ago.

William E. Barnes came to Kansas in 1856 and settled in Vinland. He was an enthusiastic horticulturist, and commenced at once to plant largely of apples, pears, and grapes, all of which grew well under his care. His first vineyard of Concord was a marvel to the people of the county, and many were the excursions made there by the people of Lawrence to feast on that delicious fruit. Mr. Barnes was the first to introduce into Douglas County the Missouri Pippin, an apple that bears younger and more profusely than all

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others. If he had done nothing more for horticulture than this, he would deserve the lasting gratitude of the people of the county. But he has demonstrated that fruit-growing here, intelligently followed, can be made very profitable.

Samuel Reynolds came to Lawrence in 1855 and planted his first orchard in 1858. The soil and location for this orchard of 5 acres were very favorable for the apple. The natural drainage was perfect, the soil good with a porous subsoil, with good air drainage. The result has been many good crops of apples. Quite a number of trees are still living and bearing. Of these may be mentioned the Vandevere Pippin, the Dominie, the Limbertwig, and the Winesap. In 1873 while the trees were loaded with fruit, the grasshoppers made their appearance in August. They were attracted to the orchard and commenced eating the foliage. In less than a month they had eaten every leaf, but left the fruit untouched. Notwithstanding the loss of the foliage, the fruit colored up perfectly well, and the trees looked like huge bouquets of flowers painted by the fairies, a picture without a precedent, and which will never be forgotten.

The secretary now has the very great pleasure of introducing our mutual friend, Major Frank Holsinger. The Major made his settlement in Douglas County in 1857. He located at the head of Washington Creek, some twelve miles from Lawrence. During the spring of 1858 he received from his father in Pennsylvania a lot of nursery stock. This he planted and cared for that season. After preemitting his claim, he returned to his parents in Pennsylvania. Sickness kept him from returning to Kansas till 1860, when the severe drouth of that year still kept him away as it did many others. When the Civil War broke out he enlisted "for the war," and was in continued service from April, 1861, to March, 1867. He returned to Douglas County in the spring of 1868 and found one orchard planted from his nursery stock by a Mr. Henry Webber, the trees then being in bearing. So it will be seen that what the Major began so well was carried on by other hands. The Major deserves and will receive the credit for that pioneer orchard. Since making his home in Kansas, he has been one of the leading horticulturists of the State, and now gracefully fills the presidential chair of the Kansas State Horticultural Society. He has passed the 70-year milestone, but is well and hearty and enjoys life with a large and happy family.

In 1865 N. P. Deming bought 100 acres of land one mile west of the University and planted on it a large apple orchard of a great many varieties. He also planted many cherry- and peach-trees which bore well for seven years, as also did his vineyard. He joined this society and was one of its most active members. He is an expert entomologist, having studied the life history of all the insects which interest horticulturists. He has been for several years past the society's entomologist. Several years ago he sold his farm and retired to city life, but he still keeps up his interest in the society's work.

G. C. Brackett, in 1859, bought a farm on the old California road about 4 miles from Lawrence and covered it with fruit-trees of various kinds. As an extended account of his horticultural work may be found in the State Horticultural Report for 1902-3 on page 9, the reader is referred to that report.

G. Y. Johnson, though not one of the earliest, was one of the early horticulturists of the county. He located near Franklin and planted largely of many varieties of apples. He was a valued member of our society and also of the State society, filling, at times, the president's chair of both.

D. G. Watt is another prominent horticulturist who deserves, though not one of the earliest, a prominent place in this list of early fruit-growers. He has done much for the cause of horticulture, by proving how fine fruit can be grown by intelligent selection and thorough cultivation.

As small fruits form a very important part of horticulture, it should not be ignored in this report. B. F. Smith came here in 1880 and commenced planting strawberries by the acre, and other berries in large quantities. His example gave an impetus to berry-growers throughout the county, so that in favorable seasons the home market is well supplied, with a surplus for outside markets. He has tested many new varieties, held on to those of merit, and discarded others. He is also an expert on fruit nomenclature, being authority on naming apples. He is a valued member of this society.

Wm. Brown came to Douglas County in 1859, but did not take up the cultivation of fruit for some years afterwards. When he did, the loss of time was made good by strenuousness and progressiveness. Mr. Brown has shown us what intensive horticulture can do. He now tests every new variety of strawberry put upon the market. He now has the Cardinal which he thinks is the best yet originated. It has proved the best in both wet and dry weather.

In Douglas County floriculture has not been neglected. Joseph Yewdell, a florist and landscape gardener, trained in England, settled near Blue Mound in 1855. Subsequently, he moved to Delaware Street, Lawrence, where he established himself as a professional florist. He did much to encourage the esthetic taste for flowers, and for beautifying the home.

Captain James Christian, an amateur florist, in 1871 made a fine display of flowers at the court-house from his conservatory on Warren Street. It was kept open for two or three days and was largely attended and greatly admired.

Later on, Mrs. Paul R. Brooks, Mrs. Whitcomb, and Mr. and Mrs. Luther have kept the lovers of flowers well supplied from their greenhouses and conservatories.

It will be seen from the above that horticulture, in all its phases, has held a prominent place in this county from its earliest settlement. It will also be seen that Douglas County was among the first, if not the very first, in testing the adaptability of our soil and climate to horticultural products. Our earliest settlers were so imbued with the taste for horticulture as to make it their first consideration after turning over the virgin soil.

Believing that more and better work could be accomplished by an organized society than by individual effort, those early horticulturists called a meeting for the purpose of forming a county society. This meeting was held in James Christian's law office October 3, 1867. It was to be known as the Douglas County Horticultural society, and according to the terms of the constitution adopted, the organization was to continue for the term of 100 years. The monthly meetings of this society have been held for nearly 40 years quite regularly, with but few omissions. It is the oldest horticultural society in Kansas.

The influence of this society was destined to permeate the whole State, for out of it grew the State Horticultural Society which was organized in 1869. As the details of this organization are matters of history, they need not be given here.

As the parent very properly takes much interest in the development and growth of the child, so this society takes the greatest interest in the State Society. It hopes that its work will continue to be progressive and productive of the best results, and its aims onward and upward.

In spite of all their trials and privations, the earliest settlers were loyal to Kansas, standing by her in every emergency. They loved her for her genial sunshine, her faithful showers, her rich soil, her pure atmosphere, her free schools, free speech, and free press, her enterprising citizens, and the fraternal spirit of her people. They believed that Kansas would, in the not far distant future, be the greatest State in the Union, for material welfare, for intelligence, for sobriety, and morality, and would shine as the most brilliant star in the galaxy of States.

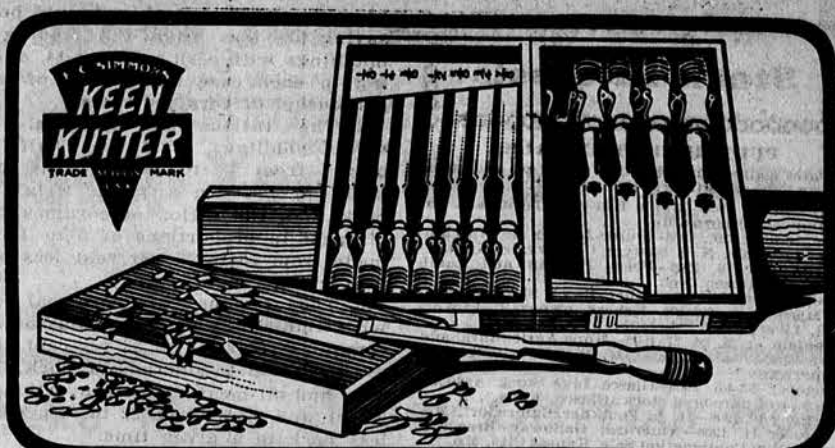
Lice on Cucumber-Vines.

Can you tell me what I can use on my cucumber-vines to destroy the lice, or small insects, that eat the vines? I have some nice vines and there ought to be some way of destroying these lice without injuring the plants. I have a compressed-air sprayer that I could use to spray my vines, if I knew what to use that would be safe and not injure the plants. Would be pleased to hear from you at once.

Norton County. FLOYD COPE.

I have just received a letter from a correspondent in Holton, to whom I recommended a spray of kerosene emulsion diluted with 9 parts of water for the melon- or cucumber-lice, and he states that he has cleaned his vines completely by a forcible spray of caustic potash whale-oil soap, applied from the side of the leaves with such head of pressure that the spray drove the leaves over so that the solution struck the under side.

Theoretically, the caustic potash is not a necessary ingredient in the spray, though it may be of benefit. I should recommend that you try his plan with a strong soap-suds of fish-



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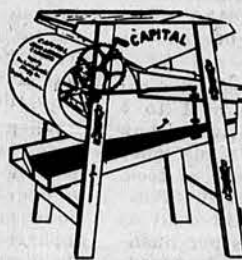
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oil soap if you can get it, or in default of that with a dilution of kerosene emulsion, 1 part in 10 in a strong suds made with cheap, coarse laundry soap. You should understand that kerosene emulsion is made of 2 parts coal-oil to

1 part suds, thoroughly beaten or churned till a stable cream-like mixture results, and this cream is diluted at time of application with 10 equal parts of water. E. A. POPPENO, Entomologist State Experiment Station.

Stock Interests

PURE-BRED STOCK SALES.

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

August 15, 1906—Maple Hill Shorthorn Sale. H. C. Duncan, Osborne, Mo.
 September 20, 1906—Duroc-Jerseys at Hutchinson State Fair, N. B. Sawyer, Cherryvale, Kans.
 September 16, 1906—Peck, Putman and Lamb Bros., Tecumseh, Neb.
 September 25, 1906—Valley Brook Shorthorns, J. J. Mason, Overbrook, Kansas, owner, T. J. Wornall, Liberty, Mo., Manager.
 September 25, 1906—Hope Agricultural and Live Stock Fair & Sale. H. K. Little, Secretary, Hope, Kans.
 October 23-4-5, 1906—Glascow Live Stock Association sale of pure-bred stock, Glascow, Kans.
 October 10, 1906—H. L. Faulkner, Jamesport, Mo.
 October 11, 1906—American Galloway Breeders' Association in combination sale, Kansas City, Mo.
 October 17, 1906—W. J. Honeyman, Madison, Kans.
 October 17, 1906—Poland-Chinas, W. A. Pruitt, Asherville, Kans.
 October 18, 1906—East Lynn Herefords, Will H. Knudsen, Tampa, Kans.
 October 18, 1906—Choice Duroc-Jerseys. C. A. Wright, Rosendale, Mo.
 October 18, 1906—Poland-Chinas, W. A. Davidson, Simpson, Kans.
 October 20, 1906—W. R. Dowling, Norcatur, Kans.
 October 20, 1906—Poland-Chinas, W. A. Davidson, Asherville, Kans.
 October 23-24, 1906—E. A. Eagle & Sons, Agricola, Kans.
 October 24, 1906—Poland-Chinas, Frank A. Dawley, Waldo, Kans.
 October 25, 1906—D. W. Dingman, Clay Center, Kans., Poland-Chinas.
 October 25, 1906—Poland-Chinas. T. J. Triggs, Dawson, Neb.
 October 26, 1906—Poland-Chinas. O. W. Stalder, Salem, Neb.
 October 27, 1906—Poland-Chinas. Chas. A. Lewis, Beatrice, Neb.
 October 28, 1906—Jno. W. Jones & Son, Concordia, Duroc-Jerseys.
 October 30, 1906—Leon Calhoun's sale of Poland-Chinas at Atchison, Kans.
 October 31, 1906—Poland-Chinas. O. B. Smith, Cuba, Kans.
 November 1, 1906—Poland-Chinas. Carl Jensen & Sons, Belleville, Kans.
 November 1, 1906—Frank Zimmerman, Centerville, Kans.
 November 1 and 2, 1906—Herefords and Shorthorns, Kansas City, Mo., W. C. McAvoy, Mgr., Springfield, Ill.
 November 6, 7, 8, 1906—Sale of all beef breeds, Kansas City Sale Pavilion, R. A. Ford, Lawton, Mo., Manager.
 November 8, 1906—T. P. Sheehy, Hume, Mo.
 November 13, 1906—Howard Reed, Frankfort, Kans.
 November 14, 1906—Poland-Chinas. F. R. Barrett, Cadmus, Mo.
 November 16, 1906—G. M. Hebbard, Peck, Kans.
 November 20-23, 1906—Blue Ribbon sale of all beef breeds, D. R. Mills, Mgr., Des Moines, Iowa.
 November 27, 1906—L. C. Caldwell, Moran, Kans.
 December 4, 1906—Poland-Chinas, Lemon Ford, Minneapolis, Kans.
 December 6, 1906—American Galloway Breeders' Association Combination Sale, Chicago, Ill.
 December 11-12, 1906—James A. Funkhouser and Charles W. Armour, sale pavilion, Kansas City.
 Jan. 17, 18 and 19, 1907—Shorthorns, Aberdeen Angus and Herefords, South Omaha, Neb., W. C. McAvoy, Mgr., Springfield, Ill.
 Improved Stock Breeders' Association of the Wheat Belt—November 13, 14, 15, 1906, at Arkansas City, Kans., L. E. Knapp, Nardin, O. T., manager; Dec. 5, 6, 7, 1906, at Anthony, Kans., Chas. M. Johnston, Caldwell, Kans., manager; Dec. 18, 19, 1906, at Wichita, Kans., J. C. Larimer, Derby, Kans., manager; Feb. 13, 14, 15, 1907, at Caldwell, Kans., Chas. M. Johnston, Caldwell, Kans., manager.
 February 19, 1907—Jno. W. Jones & Son, Concordia, Duroc-Jerseys.
 April 3, 4 and 5, 1907—Herefords, Aberdeen Angus and Shorthorns, Kansas City, Mo., W. C. McAvoy, Mgr., Springfield, Ill.
 May 1, 2 and 3, 1907—Aberdeen-Angus, Shorthorns and Herefords, South Omaha, Neb., W. C. McAvoy, Mgr., Springfield, Ill.

Pig-Feeding Experiment.

Bulletin No. 67, Missouri Experiment Station, reports experiments made in feeding pigs. Fifteen lots of 6-months-old pigs, usually five in each lot, were fed, most of them for ninety days, in a comparison of wheat-middlings, linseed-oil-meal, cottonseed-meal, gluten-meal, gluten-feed, and germ-oil-meal used as supplements to cornmeal in dry-lot feeding during the months of December, January, February, and March, 1904-5. Two more lots were fed a year later, during November, December, and January, 1905-6, in a comparison of ear-corn and cornmeal, both being fed with linseed-oil cake. The following is the summary of the results:

1. The rations of linseed-oil-meal and cornmeal in proportion of 1 to 5 were eaten in larger quantities than any other feeds tested, and made more pork, with smaller expenditure of feed, than any other ration involved. Estimating the cost of linseed-oil-meal at \$30 per ton, corn at 30 cents per bushel, grinding at 10 cents per hundred-weight, and wheat-middlings at \$18 per ton, the cost of pork made from the oil-meal rations average 11.3 per cent less than from the rations of cornmeal and wheat-middlings. The average cost per 100 pounds with the oil-meal rations was \$3.23, and with the middlings rations \$3.60, or a difference of 37 cents per 100 pounds of pork in favor of the oil-meal rations. In order to make pork from cornmeal and wheat-middlings as cheaply as from the above-mentioned ration of cornmeal and linseed-oil-meal, the middlings would have to be bought at prices ranging from \$14.70 to \$15 per ton in the various lots. Middlings are usually more expensive, and the linseed-oil-meal is usually less so than as here figured.

With corn at 25 cents per bushel, it would be an even thing, so far as cost of grain was concerned, whether one would feed it alone or with oil-meal at \$30 per ton as in lot 15; with corn at

29 cents per bushel, there would be no saving or loss from the feeding of middlings with corn as in lot 14, allowing in each case ten pounds of pork per bushel of corn fed alone.

2. The rations of cornmeal and wheat-middlings, half and half, required from 13 to 14 per cent more grain to produce a given weight of pork than the ration of cornmeal and oil-meal in proportions of 5 to 1, and made from 19 to 27 per cent less pork in a given time.

3. The rations of cornmeal and wheat-middlings in proportions of 2 to 1 required from 16 to 23 per cent more grain in the production of pork than corn and oil-meal, in the proportions of 5 to 1, and made from 22 to 32 per cent less pork in a given time.

4. Cornmeal and fermented cottonseed-meal fed in the proportion of 8 to 1 killed three out of fifteen hogs at the end of 51 days' feeding. The gains up to that time had been moderate in extent and cost. The hogs did not relish this feed. A change to the corn and oil-meal ration induced much greater consumption of grain, increased the gains in weight 39 per cent, and reduced the grain requirement per pound of increase to the extent of 13.1 per cent.

5. An attempt was made to cheapen the cornmeal and linseed-oil-meal ration by a substitution of gluten-meal, gluten-feed, and germ-oil-meal in three rations respectively for half of the linseed-oil-meal in the standard 5 to 1 ration. In each case the amount of food eaten and the rate of increase were lowered by the substitution, and the amount of grain requisite to the production of a pound of pork was increased. The ration containing a gluten-feed was eaten in greater quantity and was used with better effect than the rations containing gluten-meal or germ-oil-meal. The ration containing gluten-meal was eaten in the smallest quantity and returned the least pork for the feed consumed.

6. Cornmeal five parts and oil-cake (pea size) one part, fed dry and mixed, produced gains in weight with nine per cent less gain than did ear-corn and oil-cake fed separately, both dry. The gain in the cornmeal lot was 28.6 per cent greater than in the ear-corn lot. The hogs receiving ear-corn would not eat more than one-sixth as much oil-cake as corn (the cob figured out), when both were allowed ad libitum.

7. The pork produced in these experiments cost more than that made in the previous trials reported in Bulletin 65, because of the severe winter weather prevailing, and because the hogs used had been raised on grain-feed with very little use of pasture.

Unsoundness of Stallions.

DR. A. S. ALEXANDER, WISCONSIN AGRICULTURAL COLLEGE.

It is no secret that the average farmer apparently sees little if anything wrong in using unsound mares for breeding purposes, and indeed sets apart unsound mares for breeding when they can no longer do profitable work on account of disease or disability. To this erroneous practice it is usual to attribute much of the unsoundness of our horse stock, but the more we investigate, the firmer will become the conviction that the stallions standing for public service in many districts are quite as unsound as the mares, so that it is little wonder that their progeny turns out so poorly.

When it is remembered that an adult mates with up to one hundred mares in a breeding season and is expected to beget 60 per cent of foals, the seriousness of his unsoundness becomes apparent. He is a factor for harm in his district, and as his female progeny is kept for breeding purposes, his unsoundness necessarily is perpetuated year after year, whether he remains in the district or not. Where he mates with an unsound mare, the foal doubtless will be unsound for the double reason that both parents are unsound, and when he mates with a sound mare, his unsoundness is quite sufficient to overcome the soundness of the mare, and consequently produces unsoundness or the tendency thereto in the foal. It is much more hurtful, therefore, for the sire to be unsound than to find some unsound mares in the large number he serves, and it is to be hoped that before long effective laws will be enacted in every State, looking to the exclusion of hereditary unsound stallions from public service. When such laws are enforced, the effect in time will be to discourage the use of unsound mares for breeding purposes, and then, and not until then, will the majority of the horse product come

sound in wind, limb, and other respects.

The writer is examining public-service stallions as opportunity offers, and although comparatively few thus far have been scrutinized, the results are astounding and distressing. So unsound are some of the horses looked at that it puzzles one to understand why farmers use them, and how the owner can have the "nerve" to stand them for public service. As an example, it may be stated that one grade stallion of fairly good make-up was such a pronounced "roarer" that a tracheotomy tube had been inserted in his windpipe, yet was receiving steady patronage from owners of mares. Within a few miles of the standing place of this horse, we found a little 1,300-pound alleged Morgan grade stallion used for public service, although foundered in every foot, afflicted with chorea (St. Vitus' dance), and in addition having side-bones and thorough-pin. In the same district we came upon a trotting stallion so badly afflicted with chorea that he simply could not stand still, and danced a sort of jig when he walked. This horse was 19 years old, a lanky, ungainly, leggy, wasp-waisted weed, used for driving purposes and for public service when offered the opportunity.

It is needless to cite additional examples of unsoundness. We merely desire to draw attention to this important matter and to ask those interested in horse-breeding to examine the stallions in their immediate vicinity, and make a note of unsoundness, such as we have referred to. If owners of mares will thus interest themselves in closely examining public-service stallions for soundness, and, if necessary, call in expert assistance in deciding matters of dispute, the result will certainly be beneficial to the horse-breeding industry.

Ration for Quality of Pork.

Prof. Horace Atwood, West Virginia Agricultural Experiment Station, writes:

"In feeding hogs for the production of bacon, the food which they receive should be such that there is a maximum production of lean meat. Bacon which is too fat is not so desirable as that which contains a larger proportion of muscle."

"It is recognized that feeding-stuffs rich in protein have a tendency to produce muscle rather than fat."

"Quite a good many feeders are beginning to use the highly nitrogenous meat-meal, which can be obtained from the various packing-houses."

"When this is fed in limited quantities in connection with the ordinary grain-ration, it has a tendency to balance up the ration, supplying the deficiency in protein, and if you desire to produce high-class bacon, you had better procure some of this material."

"If you have plenty of skim-milk, this would assist in balancing up the ration properly, and it would not be necessary to procure the meat scrap."

National Editorial Association See the Stock Yards.

The delegates to the National Editorial Association were entertained in Chicago June 20, by the Press Club, of Chicago, and part of the entertainment arranged by the club was a visit to the Union Stock Yards. The following account, written by one of the members of the party, will doubtless be interesting to our readers:

"After breakfast at the Press Club, of Chicago, those of the party who cared to visit the stock yards were escorted to the La Salle Street Station, where a special train was in waiting. The stock yards are about six miles from the center of the city, and cover an area one-half mile wide and one mile long."

"It was one of the busy days at the yards (Wednesday) and our train was halted several times to await the clearing of the tracks by long trains of cattle, hogs, and sheep. We passed miles of pens containing animals that were being unloaded from the cars and were waiting their turn for the attention of the buyers and inspectors. There are railroad tracks in every direction. There are overhead runways from the pens to the slaughter-houses. In some places these runways are two and three high, crossing each other in every direction. To the visitor it looks like a maze or labyrinth, out of which it would be hard for a stranger to find his way, but the extent of pens necessary to handle the wonderful volume of business can perhaps be realized when the reader knows that on that day 22,000 cattle, 28,000 hogs, and 16,000 sheep were received."

"Our train was drawn up alongside

Horse Owners! Use

GOMBAULT'S

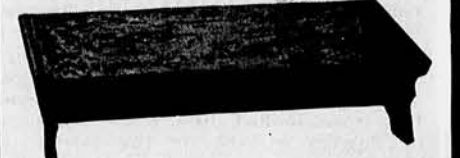


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The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUSTIC OR FRIING. Impossible to produce scar or blemish. Every bottle sold is warranted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

No More Blind Horses For Specific Ophthalmia, Moon Blindness and other Sore Eyes, BARRY CO., Iowa City, Ia., have a cure



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
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[The old reliable absolute cure for Lump Jaw is]

BARTLETT'S LUMP JAW CURE

It has stood the test and has cured thousands of cases. Don't fool with untried remedies. No matter how bad or how long standing Bartlett's Lump Jaw Cure will do the work. A positive and thorough cure easily accomplished. Latest scientific treatment. Unexpensive and harmless.

NO CURE NO PAY.

My method fully explained on receipt of a postal. Write to-day.

CHAS. E. BARTLETT, Chemist,
 COLUMBUS, KANS.

Ring-Bone

There is no case so old or bad that we will not guarantee

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Spavin and Ringbone Paste

To remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Spavin and Ringbone as on Spavin alone. Buy any kind of a remedy for any kind of a blemish, write for a free copy of

Fleming's Vest-Pocket

Veterinary Adviser

Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durable bound, indexed and illustrated. Make a right beginning by sending for this book.

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

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For All Farm Stock

Every farmer should dip his stock in DIP-OLENE—promotes health,

Prevents Disease

It kills sheep ticks, lice on hogs, horses and cattle, fleas on dogs. Cures scab, eczema, mange and all skin diseases on domestic animals; lice on chickens. DIP-OLENE DOES IT IN A MINUTE without injury. One gallon makes 100 gallons of dip ready for use. Write today for price and FREE booklet, "DIPPING FOR DOLLARS—learn how easy it is to dip."

MARSHALL OIL CO.,
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\$145.00 STEEL BALER

14x18 FULL CIRCLE

I. O. B. Quincy. The greatest value ever offered in a baling machine. Large feed opening, power head which gets baling pressure out of every pound of horses' pull, quick rebounding plunger, allowing two charges to each circle of the team, and brake device which relieves team of any jerk from the rebound, makes it easier for men and horses and capacity greatest. Our book sent free on request quotes records of even 18 and 20 tons a day after day with the same men and horses. Our press weighs 2,600 pounds. Some others weigh only 1,500 pounds. Is it any wonder such presses are continually breaking down and require constant repairs? Send in your order with draft, and we will ship at once and guarantee as represented or money refunded.

15 TONS A DAY

G. E. ETEL Co. QUINCY, ILL.

the hog department of Armour & Company's plant, and we alighted and climbed the stairs leading to the gallery, which winds over and through the hog-rooms, permitting every part of the work to be seen.

"The entering porker is deftly caught by one hind leg on a chain hung from one side of a big wheel which carries him up and hooks the chain onto a roller on an iron rail. One squeal, Mr. Pig is stuck, and the carcass moves on down the rail side by side with one which came up on the other side of the wheel. The operations of scalding, scraping, and dressing follow so rapidly that it is difficult to see just what part is performed by each of the long line of men between which the double row of hogs pass. We followed Mr. Pig until the clean, white carcasses hung in long rows in the cooler, and we shivered at the low temperature, down close to freezing, and were glad to pass into the open air and sunshine.

"The most interesting part of the packing-house visit was the beef department of Swift & Company. The animals are stunned by a blow on the head, then hoisted up on the overhead trolley head downward and the throat cut. After all the blood has run out, the carcass is lowered and the hide and head taken off. This skinning is one of the most particular jobs, as the value of the hide for leather may be spoiled by careless work, so the skinners are the highest paid labor in a slaughter-house.

"The Government inspector works on this floor. Every animal must pass under his eye, and any suspicious symptom leads him to tag the animal for closer examination. It is then held under lock and key by the Government representatives and not released unless officially declared O. K. Condemned carcasses go into rendering vats, live steam is turned on, and the carcass is melted down to soap grease and fertilizer under the eyes of Uncle Sam's representatives.

"After being skinned, the carcasses are hoisted to the trolleys again and carefully washed. They then pass a long line of butchers, each one of whom has his part to do in the dressing of the carcass for beef. These brawny men work under conditions of careful cleanliness, both as to their person and tools and to the animals upon which they are working. At every stage the animals are washed, and care is taken that the flesh is not contaminated by unclean hands or knives. On an adjacent floor, sheep and calves go through much the same routine, and we followed their progress step by step until the white carcasses were lined up in the white tile-lined cooling-rooms row on row. The average time from live animal to beef in the cooler is forty minutes.

"Then the party was shown the big wholesale market, from which a large part of the meat supply of Chicago goes out by wagon each day. Here in white tile and glass refrigerating-rooms are beef and mutton, and pork, Swift's Premium Hams and Bacon, Silver Leaf Lard and Jersey Butterine, all awaiting the selection of the local dealer who comes here to pick out the meats demanded by his particular trade.

"Next the party was ushered into the reception-room at Libby, McNeill & Libby's, where they have an exhibi-

tion of the 125 varieties of meats, pickles, and preserves which they put up. Here we had a taste of appetizing looking dried beef, boiled ham, etc., and as the walking we had done had made us all hungry, we were glad of a bite of lunch.

"Then we went through the different departments where the Libby Food Products are prepared—the smoke-house, the kitchens, the canning-rooms, all through which most of the work seemed to be done by automatic machinery. In the few places where the packing of meat into cans or jars was done by hand, it was done by the hands of clean, bright-looking girls dressed in white caps and aprons. In the labeling and packing rooms were piles and piles of the familiar packages in which our readers buy Libby's 'Good Things to Eat.'

"All through the plants was evidence of the care for the cleanliness of buildings, machinery, and employees. The floors were as white as the deck of a yacht. The walls were whitewashed. Tables and tools all bore the marks of frequent scrubbing.

"The handling of meat, too, was with the utmost care to keep it clean. The display of meats in the cooling-rooms looks so good that one quickly forgets the sights and sounds in the killing rooms and is anxious for a good dinner. So the party boarded the special train again and were back in the Press Club rooms for the reception and lunch at twelve o'clock."

The American Royal.

There is every indication that one of the biggest and best displays of breeding swine this year will be at the American Royal Live Stock Show to be held at Kansas City, October 6-13. It has been several years since the classification of the American Royal included breeding swine, and this year's swine department is the result of the insistent demands of the swine-breeders to be admitted to the show. The management of the swine department is in the hands of a committee of representative swine-breeders, consisting of N. H. Gentry, Sedalia, Mo., chairman; L. E. Frost, Moberly, Mo., secretary; E. E. Axline, Oak Grove, Mo.; L. L. Frost, Mirabile, Mo.; and Green McFarland, Sedalia, Mo. Classifications have been arranged for four breeds—Berkshires, Duroc-Jerseys, Poland-Chinas, and Ohio Improved Chester Whites. In the classification for each breed, thirty prizes are offered for individuals, ten for groups, and twelve for champions. The attractive prizes offered have been made possible through the liberality of the swine-breeders' associations and individual swine-breeders who have added materially to the funds provided by the show management for premiums in this department. The following are the superintendents of the different divisions to whom application for entry blanks should be made: Berkshires, Frank S. Springer, Springfield, Ill.; Durocs, Thos. L. Williams, Dawn, Mo.; Poland-Chinas, Arch T. Grimes, Greenwood, Mo.; O. I. C's, L. L. Frost, Mirabile, Mo. The swine sales will be under the management of L. E. Frost, Moberly, Mo.

McLaughlin's Horses Win.

James B. McLaughlin, of McLaughlin Bros., Kansas City, Columbus, and St. Paul, writes from France as follows:

"The Great Central Show of Paris for 1906 is a thing of the past. The prizes, honors, and distinctions were all ours. Every first-prize Percheron at the greatest show in France is certainly an honor to be proud of.

"When the President of France came to the show, I was called to his tribune and told that I had been named 'Chevalier of the Legion of Honor,' and that he would present me with the cross in two weeks. This is a distinction that has never before been given

Get All Your Wool Is Worth.

Wool Growers! Buyers in the country are trying to obtain your wool at a low price to make up for last year's losses. If you want the *highest market price* instead of the lowest

Ship Your Wool To Us

We will get full value for you at once, and do it for one cent a pound commission.

Reference any bank anywhere. Write us today.

Silberman Brothers, 122, 124, 126, 128 Michigan St., Chicago, Ill.

Make More Money Off Your Hogs

Price, \$10

Including Farm Right to make all kinds in any number. Freight prepaid on all orders for a limited time.



Hog and Sheep Feeder.
Mention Kansas Farmer.

That's what you want to do, and that's what you can do if you use Wright's Stock Feeder. Any man who has a sow and litter of pigs can't afford to be without one of these feeders. It saves feed, and always keeps it in good condition; makes big, strong, thrifty pigs; develops the whole bunch evenly, and will pay for itself in one season. Used for sows, shelled corn, oats, barley, ground feed, etc.

WRIGHT'S STOCK FEEDER is now being ordered by up-to-date hog raisers everywhere. Hundreds using them. They all say they would not think of raising hogs the old way.

My catalog tells all about the hog, sheep and poultry feeder. Send for it.

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1064 Jefferson St., Topeka, Kansas

Closing Out Sale of Registered Cattle and Duroc-Jersey Hogs

On Thursday, July 26, 1906, J. L. Lowe, 5 miles north of Erie, Kansas, will sell 50 head registered Angus cattle, 25 head registered Shorthorns, 35 head Duroc hogs; only 4 miles from Railroad station, Missouri, Kansas & Texas and Santa Fe. Address J. L. Lowe, Route 1, Erie, Kans.

New barns are now being built to accommodate the increased number of horses, and the track will be in the finest possible condition. Among the special attractions that will be provided will be the racing ostrich. This great bird is harnessed to a four-wheeled cart and goes against time and in races with horses. Write Secretary R. T. Kriepe, Topeka, for full information.

W. D. Calder, Bancroft, Kans., has a fine bunch of Poland-China pigs from as good a lot of boars as he ever used. Calder's Chief is a splendid hog; he has the size without being rough, and his pigs are showing him to be a splendid breeder. He is out of Garver's Choice 32607, he by Kansas Chief 28250. Then he is out of a sow out of a U. S. Jones 30953. He is a winner. Mr. Calder's pigs were by Square Deal last year, and he has never had a complaint. This is a good recommendation for him. He is one of a bunch out of Peacemaker 35338, he by Mischief Maker and the dam, Expansion 97894 by Expansion 26293, owned by Dawson, at Endicott, Neb. Visitors are always welcome at the Square Deal Stock Farm, Bancroft, Kans.

Daniel F. Bittler, of Olpe, Kans., was a visitor at Alysedale Farm last week, and while there he bought the splendid young Shorthorn bull, Knight of Alysedale 240394. This bull is grandson of that grand old breeding bull, Gallant Knight, who has brought both fame and fortune to T. K. Tomson & Son, of Dover, Kans. His sire was Proud Knight, one of the show bulls of the Tomson herd, and his dam traces to the great English bull, Tom Thornton. C. W. Merriam has reason to be proud of his Alysedale Shorthorns, and of the fact that men come so far to buy them. Recently a buyer visited Alysedale for the purpose of buying a large number of bulls to ship to a Western State, but they were practically all sold before his arrival.

\$10.50 to St. Paul and Minneapolis and Return

From Kansas City via Chicago Great Western Railway, account G. A. R. National Encampment at Minneapolis August 13 to 18. Tickets on sale August 11 to 13. Return limit August 31, with extension privilege. For further information apply to Geo. W. Lincoln, T. P. A., 7 West 9th St., Kansas City, Mo.

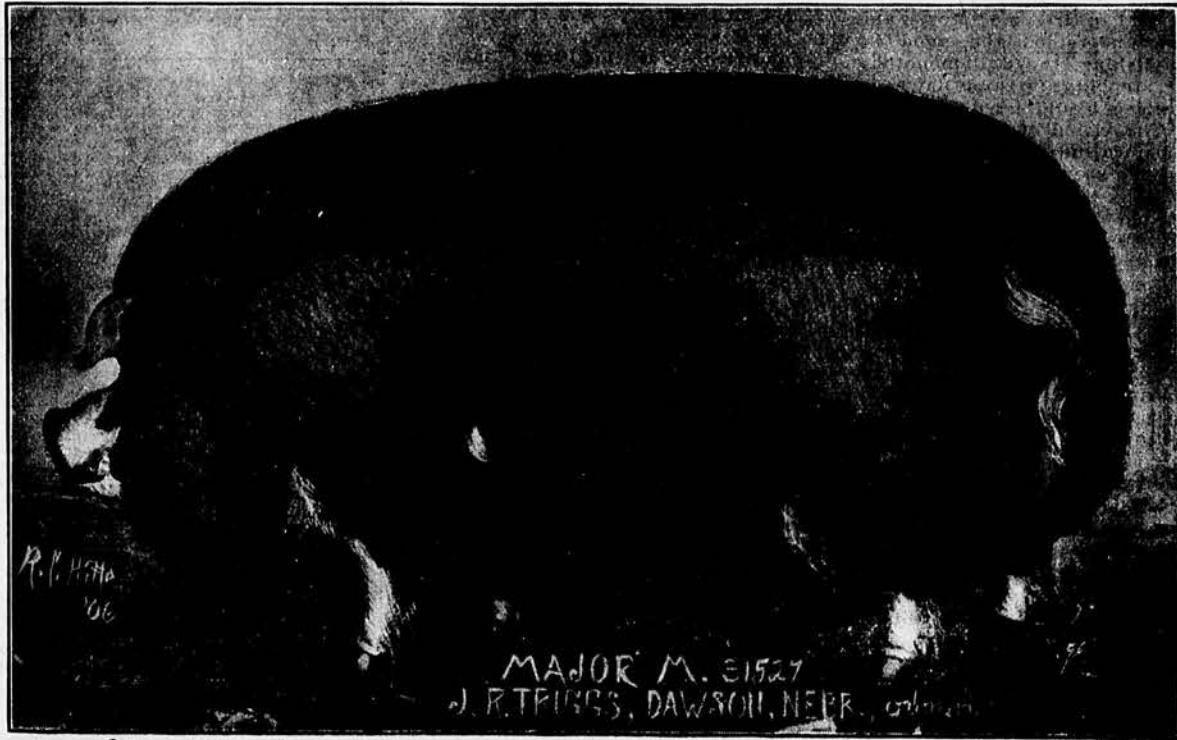
Denver, Colorado Springs, Pueblo and Return, \$17.50. Santa Fe.

Tickets on sale daily, good returning as late as October 31, liberal stop-over privileges allowed. Fast Colorado Flyer from Topeka 10.35 p. m. arrives Colorado early next morning. Rock bal- last track and Harvey eating houses. T. L. King, C. P. & T. A., Topeka, Kans.

Used Twenty Years—Best on the Market.

Gottwell, Ga., February 6, 1905. Dr. B. J. Kendall Co., Enosburg Falls, Vt. Dear Sirs:—I have been using your remedies over twenty years, and find they are the best on the market.

Yours truly,
A. A. JONES.



Major M. 81527, owned by J. R. Triggs, Dawson, Neb., one of the foremost Poland-China breeders of Nebraska.

Home Departments

CONDUCTED BY RUTH COWGILL.

An Old, Played-Out Song.

It's the curioiest thing in creation,
Whenever I hear the old song,
"Do They Miss Me at Home?" I'm so
bothered
My life seems as short as it's long,
For ev'rything 'pears like adzackly
It 'peared in the years past and gone,
When I started out sparkin' at twenty
And had my first neckercher on.

Though I'm wrinkelder, older, and
grayer
Right now than my parents were
then,
You strike up that song: "Do They
Miss Me?"
And I'm just like a youngster again,
I'm a-standin' back thare in the fur-
ries
A-wishin' fer evenin' to come,
And a-whisperin' over and over
Them words, "Do They Miss Me at
Home?"

You see Martha Ellen she sung it
The first time I heard it, and so
As she was my very first sweetheart
It reminds me of her, don't yer
know—
How her face used to look in the twi-
light,
As I tuck her to spellin' and she
Kept a-hummin' that song tel I ast her
Pint blank ef she ever missed me.

I can shet my eyes now, as you sing it,
An hear her low answerin' words,
And then the glad chirp of the crick-
ets
As clear as the twitter of birds,
And the dust in the road is like velvet,
And the ragweed and fennel and
grass
Are as sweet as the scent of the lilies
Of Eden of old, as we pass.

"Do They Miss Me at Home?" Sing it
lower,
And soft and sweet as the breeze
That powdered our path with the
snowy
White bloom of the old lones trees,
Let the whippoorwill's hellsyng to
sing it,
And the echoes way over the hill,
Tel the moon boogies out in a chorus,
Of stars and our voices is still.

But, oh, "There's a chord in the music
That's missed when her voice is
away."
Though I listen from midnight tel
mornin'
And dawn tel the dusk of day,
And I grope through the dark lookin'
up'ards
And on through the heavenly dome,
With my longin' soul singin' and sob-
bin'
The words, "Do They Miss Me at
Home?"

—James Whitcomb Riley.

Tired Women.

Wherever you look, you see women
who need not say in words, "I am tired
to death." Their every movement
shows it—the countenance, the droop of
the corners of the mouth, the wrinkled
brow are evidences of it. There is
some reason for this universal wear-
iness. The weariness that comes from
the healthful work within the limit of
strength; the weariness that is forgot-
ten in sleep to awake fresh as a child
in the morning is all right and health-
ful. But much of the weariness of
tired women is the weariness of mind
and nerves—the result of worry and
of keeping the work continually on the
mind. The woman whose work is nev-
er out of her mind is she who is al-
ways tired.

Many a woman does a whole week's
work in her imagination, upon her bed,
when she ought to be asleep recuper-
ating her powers for the next day's du-
ties. She "begins a journey in her
head"—and that journey goes round
and round over the same thing, till it
seems it will never come to an end,
and when morning comes she is only
at the beginning of her rest.

If we could only learn the truth of
the proverb of the Tennessee moun-
taineers, "To-morrow is a whole day not
teched, yet," and live only in the pres-
ent, doing what we have to do cheer-
fully, and without worry, we would
stand the strain much better. Women
must learn to keep within their limit
of strength. If it must be, use every
bit of your interest, but never en-
croach upon your principal of nerve
force, or in time you will be bankrupt
physically. Remember the proverb,
"You can not have your cake and eat
it too." When you use the reserve
force—that which goes to build up the
body and sustain life—you are cutting
short your existence. I wish women
could see the importance of resting,
and that every one would make it a
rule of her life, to lie down every day
and relax every muscle for one half-
hour. The half-hour will more than be
made up during the day by renewed
strength and vigor thus gained. I can
not refrain from repeating something I
read about an old German woman. She
had a large family and many cares,

and when asked how she kept so well
and happy all the time, she replied:

"Why that was easy. I will have
my nap. As soon as we have dinner,
I take the one that is the baby and we
have our nap."

"Well, but suppose he won't go to
sleep?"

"Oh, he'll always sleep."

"But how about the other children?"

"Don't things happen to them while you
are asleep?"

"There could nothing happen worse
to those children than that I not have
my nap."

"I've goin' to leave you nex' week,
Mistah Crimble; I can't run an eleva-
tohr no mo'."

"Why, Tom, that's not hard work."

"Too hard fo' an old man, Mistah
Crimble. De man tole me de odder
day dat elevator alone weighed tree
t'ousand pounds, an' dat's too much fo'
an old man like me to be liftin' all
day."

Just so it often is with us. We are
weary carrying imaginary loads—we
review the work of the coming week.
The washing, ironing, baking, sewing,
the cooking three times a day—per-
haps company and thrashers—no won-
der it looks like a burden too heavy,
and like old Tom, we are ready to
strike. But the weariness is not from
the labor done, but from the contem-
plation of it.

The load does not have to be lifted
all at once, but just one thing at a
time as one comes to it. It is true
and it is a pity, that too often it seems
that one must do more than one thing
at a time; but one will be surprised to
find how much easier it is to think
only of the thing in hand and do the
thing that comes next without bother-
ing the head about what can not be
done. There are many things that
seem to us essential, that might be left
out of the list of "things which must
be done." Have you not all at some
time in your life been compelled by
sickness or other interference to see
it proven? Have you not had to relax
your hold on the reins of the house-
hold care, and lie upon your bed and
see your cherished plans fall to the
ground? How many things that were
thought essential were not done, and
the family was just as well off as if
they had been done. Sometimes a
broken limb or a "spell of sickness"
is a blessing in disguise. It affords
time to reflect and opens the eyes to
see that peace of mind is worth more
than pies and cakes, and the absence
of worry is a continual rest.

Women are tired because they must
see continually the same things, and
go over the same round of work. Mon-
otony is one of the most tiresome of
things. When I was a child, I remem-
ber seeing an old horse in a machine
—a tread machine—which was the mo-
tor that sawed wood. My childish
sympathies were aroused for the poor
creature that was always going and
never getting anywhere. I thought
how discouraged he must be, and he
looked it. If he could have known
the result of his tiresome efforts and
could have understood the good he
was accomplishing, the dull monotony
of forever stepping up and down in
the same place would have been less
tiresome. The vision of that old horse
has come before me many times since
then, as I have seen humanity in their
daily toil. Many lives are like that, but
unlike the old horse, they may look
away from the tread-mill work to the
results. Their eyes may behold things
that the poor dumb animal is incapa-
ble of seeing. They can make the
mind master and see things interest-
ing elsewhere, and find something new
every day in books, in the outside
world, and in the thought that they
are doing something worth while and
for those they love.

The Farmers' Beef Club.

A number of farmers, usually con-
sisting of from eight to twelve mem-
bers conveniently located as to dis-
tance from one another, organize a
beef club by meeting, electing a sec-
retary, determining what sized animal
each person will kill in his turn, and
fixing the price at which they will set-
tle at the close of the season. The
aim is that each member will kill at
his own farm an animal as near the
agreed-upon weight as possible, but if
at the close of the season it develops

that "A" has killed a beef netting say
300 pounds, and that he has used but
275 pounds, he is to be paid for the
difference between the amount fur-
nished and the amount used—25
pounds—at the price agreed upon at
the outset; but if, upon the other
hand, he uses more than he has killed,
he pays into the club treasury the dif-
ference between the amounts used and
killed at the same agreed-upon price.

At the organization of the club, it
is also agreed upon as to what day of
the week the killing shall be done and
what member will be the first to kill.
Sometimes the members elect one of
their number to act as killer and cut-
ter, but more generally each member
does his own killing, and the member
present at the division of the meat
most expert at cutting the meat into
parts of equal weight does the cutting.
Each member detains the hide of his
own animal, and the liver may or may
not be divided around. Each agrees
to be present at the killing in person
or by some representative, so that
he may get his share away promptly
and not trouble the killer member tak-
ing care of his share. At the first kill-
ing, each member is allotted a certain
part and thereafter goes the rounds
of the whole beef, taking in his turn
the different pieces of the beef as his
turn comes, so that in the end each
member of the club has had all the
different pieces of the beef, and none
shall have been favored in the least
if the clerk or secretary has done his
duty in keeping the records.

The duties of the clerk are to attend
each place of killing, keep a list of
the names of the members, see that
each member gets his proper piece of
beef in rotation, as well as the weight
of the same at each killing, and also
the net weight of the beef killed by
each member, and at the close of the
season make a correct adjustment of
the differences at the settlement.

At the close of the rounds of the
first beef, that is, when all the mem-
bers have had all the different parts
of a beef, the members of the club
can determine whether they will start
on another "round."

The size of the beeves to be killed
is determined in accordance with the
facilities of the members for keeping
the meat, as well as the amount desired
to be used in a single week. The size
of the pieces to be allotted each mem-
ber can also be regulated by having
a greater or less number of mem-
bers in the club. Usually, however,
the number is fixed at eight or twelve,
as having too great a number makes
the distances between the members so
great that it is inconvenient to go so
far after the meat.

In organizing the club, care must be
taken to get congenial persons in the
club—otherwise wranglings may oc-
cur.

The advantage of the beef club is
that one can have the best of fresh
beef at first cost, and although he has
to take his turn as to what cut he
gets, it is nevertheless true that any
part of a good beef is good eating, if
properly cooked.

The disadvantage is that of having
to go sometimes quite a distance for
the beef, when one is very busy and
hardly has the time to do so, though
in most instances farmers have some
sort of a "kid" about to send for his
share, when it is not necessary for
him to go and assist his neighbor to
butcher.
Z. T. POSTLETHWAITE,
Neosho County.

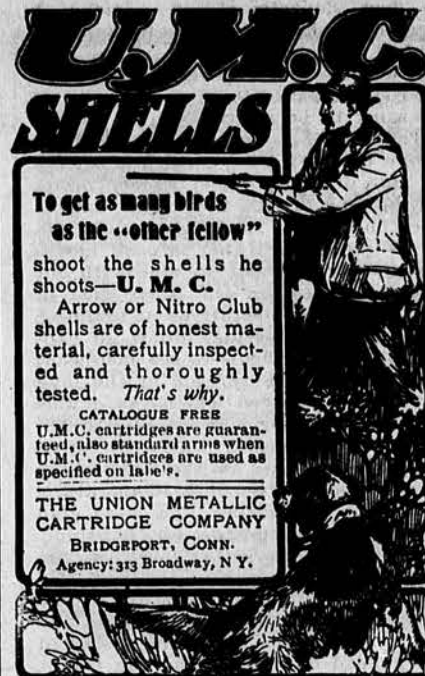
Sandwiches for the Picnic Basket.

Bread for sandwiches should be one
day old, and a brick-shaped loaf will
make the nicest appearing sandwiches.
Cut the crust from the end, then
spread the end of the loaf evenly with
softened butter, and with a sharp
knife cut the buttered slice from the
loaf. Place two of the spread slices
together and trim in any way liked.
Many people prefer them with crusts,
and if so, they may be left untrimmed.
If meat used for sandwiches is
chopped fine, they will be more con-
venient to eat.

Mustard Butter.—For mustard but-
ter take soft butter the size of an egg
and two tablespoons of good mustard.
Work them together until perfectly
mixed. Use the mustard butter alone
or in combination with meat fillings.

Lettuce Sandwiches.—Put crisp let-
tuce leaves between thin slices of but-
tered bread. Add a mayonnaise dress-
ing if liked. Serve as soon as possi-
ble after preparing. Celery, nastur-
tium, dandelion, pepperglass, or water-
cress sandwiches may be prepared in
the same way.

Salmon Sandwiches.—Drain all the
oil from canned salmon, remove all
skin and bone, reduce it to a paste,
season, spread some on one slice of



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nor a visible tear in the sod. No stooping nor bend-
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livers automatically the weeds pulled, and your
hands are not soiled, nor your back tired, no grunt-
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ceed 16 inches in length. Send one dollar and we
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buttered bread, squeeze lemon juice over it, and lay on the other buttered slice of bread.

Egg Sandwiches.—Put between buttered slices of bread moderately thin slices of hard-boiled egg, seasoning them with salt, pepper, and nutmeg; or chop the whites very fine, mash the yolks and mix with butter, mustard, salt, and pepper. Spread the paste on the buttered slices.

Sardine Sandwiches.—Chop the fish fine, add a few drops of lemon juice and cover the buttered bread with it.

Ham Sandwiches.—Boil the ham the day before, slice very thin and lay it between the thin buttered slices of bread. Spread on a little mustard if liked. Chopped ham sandwiches may be made by chopping the ham as fine as grated cheese, and making it to a paste with melted butter, mixed mustard, pepper, and a little finely chopped pickle.

Outdoors for Nervous Women.

It is a little surprising that the statistics of insane hospitals and asylums seem to show that a very large proportion of insane women are housekeepers. Yet housekeeping ought to be the most helpful of callings, exercising every muscle, giving freedom and variety and command of one's own time.

The trouble arises from the fact that many housekeepers, especially on farms and in rural neighborhoods, remain in the house almost all the time. They do not, like factory operatives and mill hands, even secure the benefit of a brisk walk morning, noon, and night in the outdoor air. No single remedial agency can be suggested for nervous troubles and a tendency to melancholia, better than a brisk walk outdoors once or twice a day, and there are few households, no matter how burdensome the cares, where, with proper planning, time may not be found for this thing. The jovial, good-natured, chatty woman who often runs out to see a neighbor, as a rule, accomplishes as much work and keeps her household in as cheerful and comfortable a frame of mind as a sour-visaged matron who is constantly toiling, but is obliged to nurse her numerous complaints.

Get out in the open air, summer or winter, rain or shine, every day. It is worth more than all the physical culture exercises, even for the ordinary individual.—The Healthy Home.

Quaint Japanese Proverbs.

Truly poetical in temperament, the Japanese language is full of clever phrases, proverbial in character, which they use upon all occasions, often stopping an argument by some appropriate saying that settles the question then and there, unless the opponent can cap the climax with a still more trite saying.

Here are a few of the proverbs heard frequently in the flowery kingdom.

They say, "Too many boatmen will run the boat on a mountain." Instead of our familiar "Too many cooks spoil the broth."

We say, "He has an ax to grind," and they have the same meaning in "He is drawing water to his own rice-field."

To correspond with "Accidents will happen in the best-regulated families," the Japs say, "Even a monkey sometimes falls from a tree."

"Famous swords are made from iron scrapings" equals our "Despise not the day of small things."

"A fountain can not rise higher than its source" becomes "The spawn of frogs becomes nothing but frogs."

For a person who is stupid and dull they say, "He has far-away ears."

Of a weak and vacillating character, the interpretation is most clever in, "You can not rivet a nail in a potato custard."

In Japan they do not say, "A fool and his money are soon parted," but "A wise man keeps his money."

Examining the idioms and proverbs of various countries is a most fascinating study, and one finds a strange similarity, showing how the hearts of men are revealed to be the same in all countries, both in the so-called Christian and heathen nations.

Many of the military proverbs are exceedingly trite, and show how the character of Japanese soldiers is stimulated and molded by a constant repetition of such sayings as "After victory tighten the strings on your helmet," "Snatch your luck where you find it," "Opportunity is hard to find, easy to lose."—Chicago Record-Herald.

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The Young Folks

Gratitude.

Do you give thanks for this, or that?
—No, God be thanked,
I am not grateful.

In that cold, calculating way, with blessings ranked
As one, two, three, and four—that would be hateful!

I only know that every day brings good above
My poor deserving;

I only feel that on the road of life true Love
Is leading me along and never swerving.

Whatever turn the path may take to left or right,
I think it follows

The tracing of a wiser hand, through dark and light,
Across the hills and in the shady hollows.

Whatever gift the hours bestow, or great or small,
I would not measure

As worth a certain price in praise, but take them all
And use them all, with simple, heartfelt pleasure.

For when we gladly eat our daily bread, we bless
The hand that feeds us;

And when we walk along life's way in cheerfulness,
Our very heart-beats praise the Love that leads us.

—Henry Van Dyke, in The Outlook.

Fleetfoot; the Autobiography of a Pony. MARION SEWELL.

CHAPTER XXIII.—A STAR PERFORMER.

Long before my burns healed or the scorched mane, which had once been my crowning glory, started a new growth, I found myself under the charge of Professor Blatlieu, a trainer and educator of domestic animals.

While I was still in a very helpless state, moving about in a manner that might have been called dreamy were it not for the wide-awake pains which constantly assailed me, Monsieur Blatlieu would walk around the small tent where I was quartered, and rubbing his hands together exclaim at intervals, "Fine! Magnificent!" As I felt neither one nor the other, only torment for which I could find no expression, I began to hate the sight of the pleasant face terminating in a pointed beard, and to dislike the sound of the musical voice that I chose to believe was always rejoicing because I had been nearly burned to death. But as I slowly recovered and commenced to eat the soft feed that was given me, I gradually learned to view matters in a different light.

I once heard Mr. Dearcot say, "If only the heart were right, then every living thing would be a mirror of life and a book of holy teaching." Bringing those words back to memory, I was greatly ashamed of the sullen way in which I had been receiving Professor Blatlieu's attentions, and now that I

was less miserable, I tried in every manner to show him my appreciation of his kindness.

My new friend was very eager to commence my education, seeming to be under the impression that I would be quick to learn, and in this supposition he was quite correct.

The first lesson consisted of my being taught to stand erect. Professor Blatlieu did this by taking hold of my bridle close to the bit and lifting me up so that I found myself sitting on my hind feet. This position was by no means comfortable, but as I was under obligations to Monsieur Blatlieu, I endured the strain until the hearty, "Fine, well done!" brought me on all fours again, feeling rather proud of my initial step, and pleased with the trainer's praise, without making any mention of the mellow apples which were better than any I had eaten since leaving home.

When I was an adept at standing erect, my next accomplishments were "Pirouetting" and waltzing, and as the music played during my performances was very beautiful, the drudgery of being a show pony ceased and real interest was awakened. This fact was most pleasing to Professor Blatlieu, who with never-ending patience and kindness continued to endow me with a knowledge of tricks which were to make me world famous.

In a remarkably short time I learned to eat at the table with the circus clowns, to fire off a pistol, to play a hand-organ, to kiss Professor Blatlieu on the bald crown, to pretend that I was lame, and to do scores of other things which one year before would have been entirely out of the question.

Perhaps you have seen highly colored posters headed by the picture of a beautiful pony, and beginning over one short ear an announcement which ran thus:

"Regis, the Greatest Performing Pony in the World! Bring the Children to See Regis!" Then followed a list of my brilliant possibilities, among which I was represented as jumping through a burning hoop, but this was a departure from the path of truth, for one thing I could not be induced to do was to face fire in any shape or form.

Professor Blatlieu, with customary patience, tried to prevail upon me to submit to the burning-hoop act, but had finally given up in sadness and despair. With this one exception I did my tricks willingly and well, and while I loved Monsieur Blatlieu for the mercy he had shown in all his dealings with me, there was in my heart a persistent longing for a sight of my old friends, and day and night I turned my eyes towards the audience with the hope of catching a glimpse of some familiar face. New cities were hailed with delight by me, for there was always hope ahead, but the years went by, a great many of them, and as the hope was still deferred, I began to think as Professor Blatlieu did when I refused to go through the burning

hoop. This is very grievous to me, but the fulfillment is one of the things which happen not."

After I had given up the thought of ever seeing any of my friends again, a strange and delightful occurrence took place.

It was a beautiful summer evening; here and there the walls of the tent parted and admitted cool, refreshing breezes; the performing rings were brilliantly lighted by hundreds of little lamps, and the music was simply glorious. We all seemed to have gathered inspiration from a good source that night, for every one did his part with great skill and cheerfulness. Even the little girl who drank gin to keep from growing, and who usually had to be forced with a club to her dangerous act of rope-climbing, at this time went blithely to her place. The audience was large and applauded frequently, and the show manager was almost beside himself with satisfaction. Such a successful entertainment could not be completed without the "Pedestal Act," a performance rarely given, but always appreciated. I mounted a stout platform with my two front feet poised gracefully on a drum. The platform was then lifted by twelve men wearing red velvet suits gleaming with gold trimmings. The band started a march. A number of clowns arranged themselves in decorous pairs and walked in front, but soon they commenced quarrelling among themselves, and some of them, falling down, were tramped over by the remainder of the parade. The audience went wild, sentiment being divided between two extremes, the grand and the ludicrous. At length quietness was again restored, and the participants in the "Pedestal Act" were about to quit the show-ring when a man's voice called out clearly the one word, "Fleetfoot." Pushing the drum away from me, my knees trembled and a warm flush of joy descended my spine. While I did not recognize the voice, I knew the name he spoke, and a presentiment had come to me that something pleasant was going to happen.

Again I was in my tent, tired indeed, but very happy. In the next room I heard low words from lips unknown, and Monsieur Blatlieu in a deadly struggle with the English language.

In another moment he came running through my tent, carrying in one hand a rickety stool and in the other a large lamp, which last-named article revealed the crimson color of his face and the excited state of his feelings. "My magnificent Regis," he panted, and diving past me, shortly reentered bearing a respectable rocking-chair. He was followed by two smiling young gentlemen, and the hot flash of joy came over me again as I instantly recognized Lyall, to whom I rushed at once and showed my pleasure so plainly that he laughed with great heartiness, even while he fondled my bushy mane that never would be beautiful any more. But what of the young man

who stood by and tried to look grieved and jealous, and whose brown eyes danced so merrily that they belied the assumption that he was either?

"Now this is tough," he remarked plaintively, while Lyall continued to play with me. "After all those years of waiting he doesn't know me from Adam. Here, Lyall, take this rocking-chair. I am going to stand up till Fleetfoot apologizes." Then all at once the years slipped away from me, and I had no difficulty in associating a certain little brown-eyed boy with the tall, smiling fellow before me. Breaking away from Lyall, I flew to Howard French and nearly smothered him with caresses.

In the midst of the reunion I heard Professor Blatieu tear his way out through the tent wall, muttering, "My magnificent Regis."

The Little Ones

Counting the Stars.

When the night draws her veiling of clouds o'er her face,
Then somehow I feel like a child in disgrace;
And I pull up the covers all over my head
And think of dear mother who tucks me in bed.

The great, big, black night that lives up in the skies,
Has hundreds and thousands and millions of eyes;
Each one of them twinkles a welcome to me
When the day goes to rest in the midst of the sea.

But when the night's black with her eyes shining bright,
Like beautiful diamonds that flash back the light,
I like to kneel down by the window and see
Just how many eyes there are winking at me.

I've counted and counted till, oh, very late,
But I never get further than seventy-eight;
For the next thing I see is the morning sun,
And the very next night I commence back at one.

—Selected.

Lucifer's Flight.

"Oh, Mr. Danzig, we have a new pet!" exclaimed the girl behind the counter in a large notion store. Then turning to a small boy she said, "Emerson, bring Lucifer here!"

In a few minutes her little brother came proudly forth from the work-room, which was back of the sales-room, carrying a small baby alligator.

Mr. Danzig, who was an agent for jeweled combs, looked astonished at this latest addition to the family pets and remarked, "Miss Lou, you certainly have an odd collection now. Where did you get him?"

Emerson beamed and replied, "Uncle brought him from Florida last week, and Andrea del Sarto doesn't like him at all. I think he is jealous of Lucifer."

"Who is Andrea del Sarto?" asked Mr. Danzig, with interest.

"He is Alice's cat," explained Miss Lou. "She named him after the famous artist, Andrea del Sarto, because he was so beautiful, and such a thief when he was a kitten. Now he has grown so large I don't think him a beauty any more. Our neighbors call him Jumbo, because he weighs nearly sixteen pounds; he is the largest cat in the neighborhood."

"Andrea del Sarto," mused Mr. Danzig. "Oh, yes, I remember—he stole the money the King of France gave him to buy pictures in Italy, and built a house for himself with it."

Emerson dimpled and said eagerly, "Oh, yes, Alice read about that. He called it 'the melancholy little house we built to be so gay.'"

"Does your sister read Browning to you children?" asked Mr. Danzig in amazement. "She is certainly making use of her education, even if she is running a notion store at present."

Just then the elder sister, Alice, appeared, graceful and beautiful, and behind her Ben Bolt, the "barefoot dog with cheek of tan" as Lou called him. After greeting Mr. Danzig, and placing a table for him to display his sample combs, Alice sat down and began to order the goods.

Lucifer, the baby alligator, was crawling around on the floor, when in came Andrea del Sarto to help his mistress in her selection of combs.

"Andrea is the dearest creature—a real angel in fur!" exclaimed Alice, looking fondly at her pet.

At that moment, Andrea spied the alligator, walked up to him, hissed at him, and cuffed him soundly. Then he

walked away as if he had done his duty.

"Andrea did not behave much like an angel in fur just now," said Emerson indignantly. "Just wait till my Lucifer grows up; he will eat Andrea del Sarto alive."

"I had no idea alligators were so tiny when they were young," remarked Mr. Danzig.

"Andrea cuffs poor, dear, little Lucifer every time he goes near him," said Miss Lou, shaking her brown head at the unsociable creature who had seated himself near the window, and was calmly washing his face.

It was a rainy Saturday, and very few customers came in. The children admired the agent's gold-mounted pins and empire combs, and gave their sister the benefit of their opinions about buying.

Finally, just as Mr. Danzig was packing his combs in their leather cases, it entered Andrea's cat mind that it was about time for him to cuff Lucifer again. But even a baby alligator may remember former insults, and this proved too much. His eyes flashed, and when Andrea turned to walk away, Lucifer scrambled after him, seized his tail, and clung to it desperately.

Andrea was a frightened cat. He started on a race around the store, over counters and sample cases, picture frames and perfumery bottles, with Lucifer clinging grimly to his tail. He chased over the bookkeeper's desk, and upset a bottle of ink in his flight, much to the disgust of the young woman who presided over the books.

At last Mr. Danzig released the frightened cat. Lucifer was none the worse for his exciting experience, but with wide open jaws breathed defiance to Andrea and all the rest of the world.

Andrea, a sadder and a wiser cat, viewed the baby alligator with respect. He had made up his mind that as long as they both should live he would never tamper with Lucifer again.—Anna E. Myrick, in Holiday Magazine.

Pot and Kettle.

Professor Blackie used to form a very picturesque feature in the Edinburgh streets, says Tid-Bits. He was a cheery old patriarch, with handsome features, and hair falling in ringlets about his shoulders. No one who had seen him could possibly forget him.

One day he was accosted by a very dirty little bootblack with his "shine your boots, sir?"

Blackie was impressed by the filthiness of the boy's face.

"I don't want a shine, my lad," said he. "But if you'll go and wash your face I'll give you sixpence."

"A' richt, sir," was the lad's reply. Then he went over to a neighboring fountain and made his ablutions. Returning, he held out his hands for the money.

"Well, my lad," said the professor "you have earned your sixpence. Here it is."

"I dinna want it, auld chap," returned the boy, with a lordly air. "Ye can keep it and get yer hair cut!"

Pig's Long Journey Home.

A farmer living down toward Harvard's had a most knowing pig which he sold to a Little Islander, who took his prize in a boat to his home at the island. Safely shut up in the spacious pig-pen was the new inmate of the family, and the farmer man went peacefully to rest, much content with his new purchase.

In the morning, the pen was empty and no little pig could be found on the island. Some time afterward he went again to town, and there saw the first owner of the lost one. "I've lost my pig," he gloomily announced. "I know it," chuckled his friend. "He's down to my house, came back the next morning."

What had that homesick little pig done, but swam across two rivers, the Little Island River and the Kennebec, walked across Big Little Island, trotted happily down the two miles of road on the Richmond shore, and finally presented himself to his old master, foot-sore and hungry, but mighty glad to be home once more—Kennebec Journal.

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Our Club Roll.

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Women's Club, Logan, Phillips County (1902).
Domestic Science Club, Oaage, Oaage County (1888).
Ladies' Crescent Club, Tully, Rawlins County, (1902).
Ladies' Social Society No. 1, Minneapolis, Ottawa County (1898).
Challieo Club, Highland Park, Shawnee County (1902).
Culins Club, Phillipsburg, Phillips County (1902).
Litterateur Club, Ford, Ford County (1902).
Saban Club, Mission Center, Shawnee County Route 2 (1900).
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).
Frend's Reading Club, Cawker City, Mitchell County (1902).
Cosmos Club, Russell, Kans.
The Sunflower Club, Perry, Jefferson County (1902).
Chaldean Club, Sterling, Rice County (1904).
Jewell Reading Club, Oaage County.
The Mutual Helpers, Madison, Kans. (1902).
West Side Study Club, Delphos (1902).
Domestic Science Club, Berryton, Shawnee County (1902).
Mutual Improvement Club, Vermillion, Marshall County (1902).
(All communications for the Club Department should be directed to Miss Ruth Cowgill, Editor Club Department.)

I have before me the year-book of the Mutual Improvement Club, of Vermillion. It is a neat affair in white and gold, and the covers enclose a program rich in splendid subjects, from which I copy a few, thinking they will assist some who are preparing for next year's work. The officers are Ella C. Acker, president; Anna D. DeWalt, vice president; Tressie Hybskmann, secretary; and Viva E. Williams, treasurer. At each meeting they study one article in Robert's Rules of Order, and each program closes with a quotation. I have only one fault to find with the programs. They are too lengthy. There is enough in one for two. Program for October:

Roll-call: Quotations from Washington Irving.

Sketch of Irving.

Study—The Americas:
North America,
South America,
Central America.

Boundaries, Possessions, Inhabitants, Products, Climate, and Government.
Review of "Legend of Sleepy Hollow."

Sketch of Paul Jones.

Music.

Reading, followed by discussion.

Art. 1., Robert's Rules of Order.

"Let every action tend to some point, and be perfect in its kind."

Excelsior Club.

Our club was organized about four years ago with, I think, about twelve members. Some have dropped out and some new ones have been added, so we have nine active members. The town ladies do not take very much interest in club work, so most of our members are country ladies, and, of course, they are very busy and we can not always depend upon them.

Next Tuesday we have planned a picnic, to which our husbands are invited, at the country home of one of our members. We anticipate a very pleasant time.

I have belonged to this club a little over a year. I was an active member in the W. M. B. Club, of Eldorado, and am now an honorary member. We are studying the Bay View Course. We have finished the "History and the Awakening of a Nation," and are now giving our attention to American literature, which we enjoy very much. We decided at our last meeting to adjourn until the middle of September. I am very much interested in club work and would be very glad to hear from you at any time, and if you can suggest anything that would be of benefit to our club, we would be very grateful. Potwin, Kans. Mrs. A. B. EWING.

I am glad to give this week the report from the Excelsior Club, of Potwin, Kans., the last one added to the club roll. Let us hear from more, and get acquainted with one another.

THE INTERNATIONAL SUNDAY-SCHOOL LESSON.

(Copyright, Davis W. Clark.)
Third Quarter. Lesson IV. Luke xi, 1-13. July 22, 1906.

Jesus Teaching How to Pray.

"Lord, what a change within us one short hour
Spent in Thy presence will prevail to
to make!"

—Trench.

The apostles observed Jesus in the act and attitude of prayer. In some oratory of nature, perhaps, they saw Him kneeling with upturned face. His glowing lineaments showed the bliss of communion with God, or repose after wrestling, and the conscious obtaining of the thing desired. A goodly sight! No wonder it provoked the question how they could learn to pray after such a fashion.

The universal Teacher taught through these suppliants all who would afterward learn of Him concerning this supreme act of the soul. He gave first the model of prayer—the ideas, the words. The Paternoster is an epitome. Here are the needs alike of the race and the individual in miniature. It is the alphabet, the numerical system out of which prayer of every description can be spelled and figured. Analytically, in its separate parts, it illustrates the components of a true, rounded, acceptable prayer. Synthetically, there is in it a tenor, a spirit—a cumulative power unmatched in written language. It is the chief ornament of every ritual. Its perpetual repetition wears no one. It is suited alike to child and adult.

The Lord's Prayer is a fine example of the avoidance of many words, which Jesus on another occasion insisted upon. The equilibrium between comprehensiveness and condensation is maintained. The exordium is a reverential address to the Deity, in which His existence, unity, and paternal character are adoringly recognized. The "kingdom of heaven" will be found to be the solvent of the prayer. The coming of the kingdom will insure the hallowing of the Divine name, and the doing of the Divine will, as in heaven, so on earth. The coming of the kingdom insures absolution, reduces temptations, and consequently delivers from evil. Criticism has fairly established that the ascriptions of kingdom, power, and glory were not a part of the prayer as originally given. But the lofty doxology chords so perfectly that it will probably continue in use forever. The prayer can be divided into two parts: The first relates to the Father, and contains three petitions, i. e., concerning His name, His kingdom, and His will. The second concerns ourselves, and is comprehended in the words bread, forgiveness, and deliverance. Rudolph Stier says in his "Words of Jesus," "All the tones of the human breast which go from earth to heaven sound here in their keynotes."

From this matchless formulary, Jesus passes to the spirit which should characterize the suppliant. To set this forth, He uses a homely domestic incident. We must transfer ourselves to the Orient to appreciate it. There was no mail or time-table to apprise the host of the hour of the guest's arrival. It would like as not be late at night, as travel was ordinarily continued then, to escape the heat of the day. The guest would be downright hungry, as there were no facilities of the modern restaurateur. The host's larder would like as not be empty, the climate making the preservation of edibles difficult, and leading them to live from hand to mouth. Borrowing would be the next thing in order. What a touch of nature in the churlishness of the half-awakened neighbor! To him the getting up from his warm bed, and the stumbling over his children as they lie hit and miss upon their tiny mats about the floor; the taking down of the heavy bar across the door; all seems to his drowsy powers a superhuman exertion. Yet there comes at length a point where it is easier far for the sleepy niggard to get up and have done with the matter than to be periodically roused by the persistent knocking and calling.

The force of the parable is in its contrasts. God's eye is never closed in slumber. God's self is love. His treasures are inexhaustible. He delights to give. There is no indifference or disinclination on the part of God which must be first overcome by man's importunity. The delay in answer, if there is any, is for the recipient's own highest advantage; that he may study anew his supposed needs, may analyze his motives, may review the promises, so that when at length the answer comes, he may be in a state of mind and heart to avail himself of the bless-



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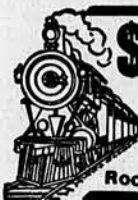
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ing to the uttermost. Postponement is for the advantage of the receiver, not the giver.

The Paternoster is still in Jesus' mind. Earthly fathers have judgment to discriminate between good and evil gifts for their children. They have natural affection enough to incline them to bestow only the good. If that be so—and who denies it?—how will not the Heavenly Father, infinite in wisdom, power, and love, bestow that all-inclusive gift, the life and light of the soul, the Holy Spirit, to those who, out of the vocabulary of the Paternoster, and in the spirit of the parable, ask Him?

Analysis and Key.

1. Request for form of prayer natural. John Baptist's precedent. Jesus Himself observed in prayer.
2. Jesus' divine answer. Universal teacher gives universal form.
3. Analysis—First part relates to the Father—His Name, Kingdom, Will. Second part relates to man—Bread, Forgiveness, Deliverance.
4. From form to spirit of prayer. Illustrated by parable. Its contrasts, the force of it.

HOW TO BUILD A MAUSOLEUM.

(Continued from page 745.)

feet thick and laid up with cement mortar. The floor should be four inches thick and of concrete. The roof should be a stone arch cemented over the top in such a way as to make it impossible for water to penetrate the masonry. There should be a small cloister window which can be left partly open near the top at the rear. The door should be of iron and should contain a cloister window. A stay-rod should be passed across near the middle under the arch to prevent spreading.

Two caskets may be placed near the floor, one on either side of the entrance. These may rest on supports three inches high built of concrete when the floor is laid. The other caskets may be supported on iron brackets, built into the walls above these supports on the floor. The size of the casing for the standard adult casket is 24 inches high, 28 inches wide, and 32 inches long. The vertical spaces between the supports should be 30 inches.

Undertakers say that it is impossible to preserve a body for a great length of time in such a mausoleum, because of the dampness. This may be remedied somewhat by making the building large enough and placing a four-inch brick wall inside, leaving a two-inch air space between the brick and the stone.

"Hints on Farm Drainage" is the title of a most interesting and instructive lecture by Anton Vogt, which is reprinted by the Pella Drain-Tile Company, Pella, Iowa. It is well worth while to ask for and receive a free copy of this lecture. It considers the practical and scientific aspects of drainage, especially tile-drainage, in a plain and common-sense way.

Alfalfa is reported to be making a heavy third crop. The first crop for

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the season was excellent; the second was dwarfed somewhat by the dry weather succeeding the first cutting, but the rains seem to have been fully appropriated to making the third crop. There is ample opportunity for the making of the fourth crop, and a fifth need cause no surprise. Great is alfalfa.

Kansas people ought to get together and provide one big State fair to which all should contribute, and in which all should have a just pride. Such fair should be so free from uncleanness of every kind that the most fastidious mothers would feel free to visit everything on the grounds, taking all of their children with them. Aside from the important consideration of right, THE KANSAS FARMER has long contended and firmly believes that the patronage would make such a fair more profitable than any other. Missouri has such a State Fair. Kansas deserves as good as Missouri gets.

A farmer who prefers to be nameless reports that last year he obtained through THE KANSAS FARMER a copy of Prof. F. H. King's "Physics of Agriculture," the price of which is \$1.50. To the suggestion that it had been worth ten times its cost, he replied that he would not name a price for it if he could not replace it. This office has supplied this book to a goodly number of Kansas farmers. If there is one of these who has not been benefited to the amount of ten times the cost, it is because he has not read the book. Progressive farmers are necessarily becoming more scientific. Kansas farmers are progressive.

THE KANSAS FARMER has received from A. L. Sponsler, secretary, a copy of the 1906 premium list of the Kansas State Fair, to be held at Hutchinson September 17-22. It will be remembered that Kansas has for several years had two "State" fairs, one at Topeka and one at Hutchinson. This year Hutchinson has been first to reach the public with its announcement. As to the Topeka event, there has been a suggestion that it will be chiefly a "race meet." The Hutchinson premium list provides for ample racing attractions as well as excellent exhibits of all kinds of stock and farm, orchard, garden, and kitchen products, fine arts, etc.

Reports from the wheat-fields of Kansas are of cheerful tenor. The crop will not break the record for quantity, but the quality is favorably spoken of. Wheat-farmers are competing with land-speculators for every tract that is offered for sale. The profits on wheat-farming are attractive. Wheat-farmers are building homes with all modern conveniences. Fully equipped warming furnaces, bathrooms, water-systems, and sewer-systems are coming into vogue. The individual gas-plant and the electric light are competing for favor. Rural free delivery and the telephone are doing their part. Daily papers and THE KANSAS FARMER arrive punctually, and are contributing to the prosperity and enjoyment of the wheat-farmer and his family.

Many thousands of Kansans will be interested to know that Prof. Henry M. Cottrell, a graduate of the Kansas State Agricultural College and for several years professor of agriculture in his alma mater, but who has more recently been engaged with the rough and tumble affairs of the business world, has just been called to the chair of animal husbandry in the Colorado Agricultural College. Before taking up his Colorado work, Professor Cottrell goes to Florida to inspect a farm of 55,000 acres, on which the proprietors are trying to grow alfalfa and Hereford cattle, and are asking some advice from the Kansas man. From Florida he goes to Jimenez, Mexico, to spend two weeks on a ranch of 362,000 acres, where his assistance is desired in getting a start with the Campbell method

of dry farming. Professor Cottrell will take to the Colorado college a rich experience and an enthusiasm of the kind that is especially contagious among earnest young men at college. Colorado is to be congratulated on securing his services.

GERMANY MUST HAVE AMERICAN BREAD.

There are statesmen in Germany who realize the importance of foreign supplies of food to the continued progress of that country. It was a German naval officer who said recently:

"It isn't the instinct of aggression, but stern necessity which is forcing Germany to become a sea power. More than a quarter of our people already are being fed on imported cereals, and nearly one-third of our raw foodstuffs comes from abroad. About 75 per cent of our foreign trade is sea-borne. If our coast were blockaded, we should be forced into submission, however powerful our army, because millions of our people would be driven to starvation."

"It isn't too much to admit that in case of the stoppage of the Atlantic export trade in raw products from the United States, German industry would fall to the ground like a house built of cards. It is our recognition of the utter dependence of German industry and even the vitality of the body politic upon the volume of our imports, which has revolutionized the German policy and forced upon us the construction of a great navy."

Miscellany

First Year's Work on Garden City Reserve in Kansas.

FROM A BULLETIN OF THE U. S. FORESTRY SERVICE.

Reclaiming the barren sand-hills of the Middle West with forest cover, to supply timber when there is a dearth of it, is one of the more striking of the important forest-planting projects of the Forest Service. Four of the National forests have been established in the non-agricultural region with the express purpose of getting a firm grip on methods which will overcome natural difficulties and set up object lessons for the benefit of the people. These are the Niobrara, the Dismal River, and the North Platte reserves in Nebraska, and the Garden City reserve in Kansas. The Nebraska reserves have responded so well to careful treatment, that hundreds of thousands of seedlings have been planted out and millions more are being raised in nurseries for use in other reserves. Thus, for the first planting on the Garden City reserve, just completed, most of the trees were taken from the nurseries in the Dismal River reserve.

The Kansas reserve lies in a region of scattered, barren sand-hills, interlaced with prairie on which grass thrives well enough to support live stock. The origin of these hills, in itself interesting, reminds one in a way of that of the sand-dunes which encroached from the sea upon the fertile fields of Western France and laid them waste. In both cases, the wind has been the enemy of the soil, for in France wind drove the sand of the seashore inland, and in the Middle Western region of our own country, wind drove eastward the sand which the Arkansas River had carried down in floods and afterwards exposed to dry. The sand-hills were formed long ago, and the action of the wind is now largely checked by the spread of the carpet of grass, which binds the sand wherever there is enough moisture to encourage it.

The semi-arid conditions of the region necessarily restrict the selection of trees. Right choice of species, the crux of forest planting generally, is here especially decisive. By its aid, together with right planting methods and right care of the plantation, a treeless region, one, therefore, in which wood is a scarce and a highly valuable commodity, can be made to produce useful woods, and at a cost so slight as to satisfy good business judgment. Thus on a light, sandy surface, whose only cover is wild grass and weeds, a merchantable forest-crop is to be grown. In addition to the general demand for wood, there will be a special demand in connection with the Garden City irrigation project, which is within a few miles of the Garden City reserve.

Honey locust, Osage orange, Russian mulberry, red cedar, and Western yellow pine are the trees used in the new project, of which 51,000 came from the Government nursery, near Halsey, Neb.

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The planting this season progressed under highly favorable conditions as regards weather and the physical condition of the soil, and at the expiration of six and one-half days thirteen men had completed the task at a total cost, exclusive of the trees, of \$3.88 per acre.

A fence was built about the three-fourths of a section in which the planting was done, though part of this area remains to be planted next season. This was to exclude stock. To exclude prairie fires, a fire-guard was plowed about the plantation.

"Cloves and How to Grow Them," by Thomas Shaw, author of "Forage Crops Other Than Grasses," "Soiling Crops," and "The Silo," "Study of Breeds," "Animal Breeding," etc. Illustrated. 5 by 7 inches. 337 pages, cloth. Price, \$1 net. Orange Judd Co., New York.

This is the first book published which treats on the growth, cultivation, and treatment of clovers as applicable to all parts of the United States and Canada, and which takes up the entire subject in a systematic way. The importance of the various kinds of clover in the economy of the farm is so great that an exhaustive work on this subject will, no doubt, be welcomed by students in agriculture, as well as by all who are interested in the tilling of the soil. After thoroughly explaining the principles and practice of successful clover cultivation in general, the most important species and varieties of clovers are discussed in detail. Special chapters are devoted to: Medium red clover, alfalfa, alsike, mammoth, crimson, small white, Japan, Burr, sweet sainfoin, Egyptian, yellow, sand lucerne, and others of minor importance. With each are given its varieties, pasturing, harvesting for hay, saving seed, renewing value as fertilizer. Thus each chapter is complete in itself, forming a separate monograph. The whole work is written from the standpoint of the practical farmer, and can not fail to exert a potent influence in the promotion of progressive agriculture. The volume is liberally and handsomely illustrated, and substantially bound in the same style as the author's previous books.

Any of the Orange Judd Co.'s books will be furnished by THE KANSAS FARMER prepaid to any address on receipt of the publisher's price.

The Kind of Education for Boys on the Farm.

Years ago the idea prevailed that the boy on the farm did not require or need much education. Our forefathers were of the opinion that the education their sons needed most was a knowledge of how to farm.

To-day, the farmer who has business ability finds that much of his success is attributed to being able to make the most of his environment. He finds that his knowledge of business ways and methods are a big help in this respect. The fact that most of the successful men of this country from the President to the heads of the large mercantile establishments were boys from the farm ought to be an incentive to the young farmer boy of today to look ahead with bright prospects.

Nowadays, a business education can be acquired so much quicker, so much easier, and so much cheaper that there is little reason for the boy on the farm not being equipped with a business education.

In another column we wish to call attention to one of the most successful business colleges of to-day, the celebrated "Gem City Business College," of Quincy, Ill. Here the student can find the right kind of training, because they teach by actual, practical methods. You learn to do business by actually doing it and not by memorizing text books. Being located in a modern but medium-sized city makes it possible to obtain home boarding at a very reasonable cost. It will pay you to refer to their advertisement in this paper, and write to them for their 64-page illustrated catalogue, which will be mailed free to all who address, President Musselman, 246 Musselman Building, Quincy, Ill.

Thank God every morning when you get up that you are forced to do something and to do your very best, for that will breed in you self-control, diligence, content, strength of will and a hundred virtues.—Charles Kingsley.

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The Grange

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

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When that noble band of patriotic men met in common council more than a third of a century ago, to lay the foundation for the splendid order of the Patrons of Husbandry, we can imagine one of the difficult problems they had to solve in the creation of such an order was the arrangement of the proper officers in such a way as to make a correct division of the various duties belonging to the organization. As a matter of fact, it must have a head, as all organized bodies must have, to execute its laws and direct and supervise its work. Then a second presiding officer must be provided to take the chief executive's place, when any emergency arose that caused that person's absence. These two offices, along with the secretary and treasurer, are common to all organized bodies of men or women, and are guided by the same general rules in whatever phase of human activity they may be found, and the duties are of such common or general kind that people are easily found in every community who are conversant with them and are apt in their performance.

TEACHING GRANGE WORK.

But in the institution of the Grange, there were new duties to perform. The fundamental doctrines of the order must be promulgated and presented to the public in such a way as to win the confidence and arouse interest in the work. The people must be shown not only the objects sought by the creation of the order, but they must be shown the necessity for its existence at the same time. Not only that, but those who identify themselves with the organization and enter its beautiful gates must be educated in the work and taught the mysteries of the order.

If the purpose of the order was to uplift and educate the "American farmer," there must be some one chosen to properly represent it, and perform the difficult task of teaching its members the fundamental doctrines upon which it is based and upon the acceptance of which by the public its perpetuity and future success would depend. And as a result of careful deliberation the office of

WORTHY LECTURER

was created, and in consideration of the important duties attached to this office, it was given the third place in rank in the entire list of officers in the organization. To this important office was assigned the educational work of the Grange. And to this end the incumbent of that office was directed to be prepared at all meetings of the order to furnish such literary exercises as might be deemed proper, consisting of essays, recitations, music, discussions, etc., to be responded to by the members of the order.

The worthy lecturers of the Grange are especially urged to encourage the members to become readers, speakers, and writers upon such topics as may be of interest to them, so that all latent ability that may be possessed by the members may be developed and made to be of greater usefulness.

No other office within the gift of the order offers such a broad field in which to work. It requires skill, judgment, and foresight to properly select the topics for the programs. These should appertain to the home and household, as well as the farm and live stock.

A farm may be ever so fertile and finely managed, yet without a well-ordered home the possessor can never be truly happy. The home is really what

determines the real success of the farm. At least it is one of the essentials of successful farm life. How to increase the comforts and conveniences of the rural homes of our country affords abundant opportunity for thoughtful study at all times.

ADDING DIGNITY TO LABOR.

Constant study strengthens the mind, as physical labor strengthens the muscles. The more you do in line of duty, the easier it will be for you. New subjects will suggest themselves to you, thus enlarging your power to furnish material for thought among your members. Ever keep in mind that to "add dignity to labor" is one of the missions of the Grange. Therefore, dignify your work and office by strict adherence to the principles of truth, honor, and virtue. Remember, also, that no stream ever rises higher than its fountain head; neither will your members be likely to go higher in enthusiasm, energy, and industry than your example leads them.

So much for the duties and responsibilities of the subordinate lecturer. Now, what about the State lecturer—the man or woman who has probably graduated from the lower office and been clothed with increased power and given enlarged responsibilities? Is the State lecturer's office one of glory only? Have they no responsibilities to assume? Are they placed in this exalted position merely to fill a place upon the official roster of the State organization? To all of these we say emphatically no. The advancement of any one to a State Grange office means more to the order than we sometimes realize. And one of the first requisites to successful leadership in this important position is that of character.

The mission of the Grange is to lead mankind to live better, nobler, and purer lives, to cultivate the better qualities of their nature, and the worthy lecturer should be able to teach by example, as well as by precept.

Then the State lecturer must have enthusiasm. Their utterances must come from the heart as well as the head. It is said that a person to convince others of a truth must believe it himself first. When advocating the adoption of any principle, we must show our own faith by our own belief and practice.

The worthy lecturer should study well the various features of home life, and be thus prepared to lead out in the discussions of these domestic subjects. He should also be familiar with the various phases of

FIELD AND FARM WORK.

This is a broad and fertile field, and affords unlimited opportunities for skillful labor on the part of the worthy lecturer. At each season of the year new subjects present themselves for consideration, and it is the duty of the lecturer to anticipate the necessities of the hour and make ample provision therefor.

The lecturer of the subordinate grange has as much real work to perform for the good of the order as any other officer within the order. The duties are more urgent and their performance more necessary.

So important is this office and so essential to the success of the order is a careful and prompt performance of the duties belonging to this office, that no grange can continue to grow in influence and power when the lecturer proves inefficient, either through carelessness or inability.

All the lecturers in the State should prepare themselves and fulfill their duties as though everything depended upon them for the success of the Grange. What a change this would bring about in the order. What increased activity would follow such action.

Worthy lecturer, is it not your duty to put forth your best endeavor for success? You certainly owe it to your members, as well as yourself. Your members expect as much of you. That is why you were elected. Prove yourself worthy of the confidence. Put forth your best efforts and take on renewed courage. Work with increased vigor. Renew your zeal and give time and thought to your work. Your reward will come in their own increased usefulness, as well as in the renewed activity among your members and the increased power and growth of your grange.

HOW TO SUCCEED.

A person may not be gifted with unusual magnetism, he may not possess the eloquent expressions of a Demosthenes, or the wisdom of Solomon, but if he be honest in expression and fearless in the advocacy of what is right, he seldom fails to impress his hearers. A Grange lecturer should cultivate all



A Message to Corn Growers

How Some Have Doubled Their Profit

There are thousands of farmers today who have succeeded in practically doubling the value of their corn crop. Formerly they merely gathered the ears; that is to say they would husk or snap the corn in the field and leave the stalks standing.

When they did that, they secured only about 60% of their crop and left about 40% to go to waste—because the ears represent only about 60% of the feeding value, while the remaining 40% is in the stalks, leaves and husks.

When our Government Experiment Stations and our practical corn experts made this fact generally known, many progressive farmers realized what it meant, and began to look around for the best means of harvesting the corn crop.

They didn't like the idea of working a whole season to raise a crop, and then harvest only about 60% of the total yield.

Then the corn machines—the binder, shocker, and husker and shredder—were perfected, and the problem of saving the corn crop was solved.

Now the corn is cut just when the ears begin to glaze, for it is well known that both the fodder and ears have the most feeding value at that time.

The corn binder or shocker enables the farmer to cut all his corn before

the stalks have had time to lose their succulent, nutritious juices.

The binder or shocker leaves the stalks in convenient form for running them through the husker and shredder.

In this way the corn grower nearly doubles the value of his corn crop, because every acre yields about two tons of stover, which in feeding value is nearly equal to timothy hay; and if you can't market your corn stover, you can market your hay, and feed the stover.

Hay will be hay this season, as there is a shortage in the crop that will be serious unless supplemented by corn stover.

This is the only way you can handle your corn crop if you wish to secure its full value. You are then operating on the same principle as the dairyman, to whom a corn binder or shocker is practically a necessity, because he makes ensilage—but you have the advantage over the dairyman—you can market the ears.

Suppose you have 50 acres in corn. There is \$800.00 in stover alone. Are you going to let that go to ruin in the field or will you get a corn binder and shredder and put that \$800.00 in your pocket?

Why not purchase the corn machines and double the value of the corn crop?

This is a proposition that is worth your careful consideration.

YOU MAY HAVE A CHOICE OF

Osborne, McCormick, Deering, Champion and Milwaukee
Corn Binders; Plano, Deering and McCormick
Huskers and Shredders

In each of these machines you have all the advantages made possible by the unequalled manufacturing facilities of the International Harvester Company. The International Harvester Company owns its own timber lands and saw mills, its own iron and coal mines, its own coke plants and rolling mills, from which it produces a large percentage of all raw materials used, selecting in every instance only the best material and working it out in the best way in the above great manufacturing plants. These are advantages which no buyer can afford to overlook.

The International lines are represented by different dealers in your town. Call on them for catalogues and investigate their machines.

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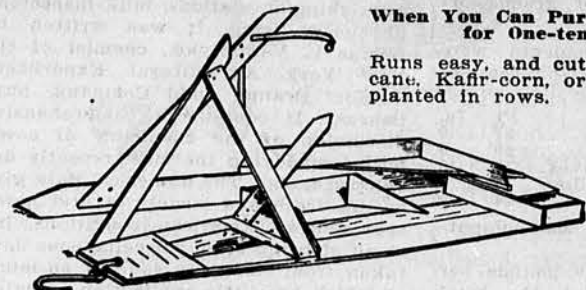
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of those virtues and graces which adorn character and create confidence. Never was there a time in the history of the order when there was greater need for strong, patriotic, loyal men and women to go before the public as the proper exponents of the Grange. New ideas, new thoughts, and advanced places must be presented to the thinking men and women in our country homes. Some self-sacrifice of time or pleasure, or even ambition, may be required upon the part of a lecturer in order to meet the requirements of the occasion. But let us,

worthy brother and sister lecturers, not hesitate to make this sacrifice for the good of the order. Let us practice diligence in the performance of our official duties, always seeking the good of others rather than the good of ourselves. Then we can justly hope for success. In the language of the poet, Pass on the word, be thine the voice of cheer; Clear let it ring aloft, from slope to slope, Till all the vales and mountain tops shall hear The rallying call, "To strive, to help, to hope."

—American Grange Bulletin.

Dairy Interests

Stack-Ensilage.

H. W. POTTS, HAWKSBURY COLLEGE, NEW ZEALAND.

To conserve fodder and render it capable of remaining edible for a number of years, and to make us independent of weather conditions, should demand more than passing attention. In continuation of the records of a crop of sorghum grown at the College Farm, the present article is written, for the purpose of giving the details of its conservation, and the results obtained from stacking it as ensilage.

The first consideration, after having determined to select the stack as a means of conserving the crop, is to secure a site in close proximity to the milking or feeding sheds. An elevated spot is best, with natural drainage and a firm, dry surface layer of soil to start on, and, if possible, sheltered from prevailing winds. It is essential to surround the stack with a fence sufficiently substantial to prevent stock of any kind reaching the fodder. Without this, calves, pigs, horses, and cattle are always attracted; they draw out stalks all round to get at the edible portion, and by this means admit air to the stack, check the fermentative changes, and spoil it for fodder.

Our previous experience in stack building was acted upon, and we again determined to abandon the somewhat cumbersome and expensive methods usually adopted of weighting, or the application of mechanical pressure. With this in view, it necessarily involved throughout the need for careful stacking, and a dexterous manipulation of the sheaves in laying and cross laying them alternately, and in such a way as to secure the closest system of packing. Apart from the object of excluding and getting rid of entangled air, the danger to obviate was the opening up of the stack through uneven settlement and shrinkage during the fermentative processes later on. It is of the utmost importance to build each layer evenly and upwards, maintaining a regular and unbroken contour, to ensure an equal distribution of weight, so that the stack will shrink evenly and maintain its shape. The main principle to observe in all cases is to keep out the air, and to obstruct its ingress during the curing stage.

The crop was cut and brought in, quickly, and stacked by hand. The stage at which it was cut was when the panicle was full of well-colored and completely formed seed. The plant at this stage contains the largest amount of nourishment, and the minimum quantity of water. On completing the stack, the aim was to shape the roof so as to exclude rain and be kept intact, and resist wind. No thatching was designed or special material utilized. The sheaves of sorghum were laid transversely, and when the ridge was reached, the whole was kept firmly in position by passing fencing wire across every four feet, and secured on each side by two fencing posts hanging loose. In this way, as the stack fell, and shrinkage set in, the fencing posts hugged the stack closely, and kept the wires tight and in close position until the whole mass condensed, becoming solid and stationary and shrinkage had ceased. From this out apprehension as to its condition ended. It was approximately estimated that 150 tons of green sorghum were dealt with.

The following measurements were recorded six weeks after the completion of the stack:

	Ft.	In.
Average length of stack.....	27	6
Average width of stack.....	20	0
Height from ground to eaves... 11	0	
Height from ground to ridge... 18	0	
Length of ridge.....	24	0

From these the volume was computed to be 7,894 cubic feet.

A rough estimate of 40 pounds per cubic foot being accepted, the total weight of the stack would be 141 tons. At the end of January, 1906, this stack

was remeasured when curing was complete:

	Ft.	In.
Average length.....	26	9
Average width.....	19	6
Height from ground to eaves... 8	6	
Height from ground to ridge... 11	6	
Length of ridge.....	24	0

From these the total volume was computed to be 5,189 cubic feet.

The stack was opened shortly afterwards, and as the center was approached on February 5, measurements were again taken to ascertain approximately the waste. It was decided to allow for the waste:

18 inches all around the stack or the sides.
12 inches all over the top or roof.
6 inches for the floor or bottom.

This reduced the measurements of available fodder, or good ensilage, to:

	Feet.
Length.....	23.75
Width.....	18.5
Height from ground to eaves.... 7.0	
Height from ground to ridge.... 10.0	
Length of ridge.....	21.0

From these the total volume was computed to be 3,308 cubic feet.

The exact weight per cubic foot was next determined, by carefully cutting out a cube, measuring and weighing it; i. e., the cavity from which the cube was removed was measured, and the cube weighed. This gave:

Contents of cube, cubic feet.....	6.925
Weight of cube, pounds.....	328
Weight of 1 cubic foot, pounds... 47.37	

Using this weight per cubic foot, the total weight of the cured ensilage was 5,189 cubic feet \times 47.37 lbs. = 245,803 lbs. = 109½ tons nearly.

Deduct the waste on the top, sides, and bottom, and we have—3,308 cubic feet \times 47.37 lbs. = 156,700 lbs. = 70 tons nearly.

An examination of the waste on the bottom six inches showed that while the fodder was not equal in standard value to the other for milk cows, yet it is readily eaten by dry stock, and hence 2½ tons may be added to the total edible silage, bringing the total to 72½ tons. The actual loss in food material from waste is thus noted from 109½ tons to 72½ tons, or a waste of 37 tons. The loss of moisture in curing stage being the difference between 141 tons and 109½ tons, or 31½ tons. There is no difficulty experienced in cutting the silage with the ordinary hay knife. We have fed it to cows in full milk, in combination with lucerne, hay, and bran, the ration being 40 pounds ensilage, 15 pounds lucerne hay, or 40 pounds ensilage, 12 pounds lucerne hay, 2 pounds bran.

The cows eat this, freely and relish it. The milk-flow is fully maintained. It may be mentioned that in utilizing stack-ensilage, in comparison with chaffed ensilage, conserved in a tub silo, the advantages are much in favor of the latter; but it often happens that convenience, time, and opportunity demand that stack-ensilage shall be the means of conserving a crop. It may also be pointed out that the larger the stack the less the waste, and hence it is more economical. A saving may also be effected in carriage. A stack silo can be made in close proximity to a crop, and, when needed, the stock can be fed direct from it. A stack may be made of any size, and so can be built to suit the amount or weight of the crop.

Modern Methods of Testing Milk and Milk Products.

This is a handbook prepared for the use of dairy students, butter-makers, cheese-makers, producers of milk, operators of condenseries, managers of milk-shipping stations, milk-inspectors, physicians, etc. It was written by Lucius L. Van Slyke, chemist of the New York Agricultural Experiment Station, Orange Judd Company, publishers. It contains a comprehensive discussion of the chemistry of cow's milk, embodying the most recently developed facts. The numerical data given are fresh and largely at first hand, representing American conditions, instead of being stale, miscellaneous data taken from European sources, so much of which has little application or value for American dairymen. Some errors that have been long incorporated in

dairy literature on the composition of milk are here corrected. The publishers are aware that the author's long-continued study of the chemistry of milk has made him a recognized authority in this field, and has peculiarly fitted him to treat this subject in a satisfactory manner.

The various methods of testing milk and its products are brought up to date; they are presented in the most concise manner that is consistent with completeness, clearness, and accuracy; irrelevant matter is omitted. The aim has been to include all necessary material and omit all that is unnecessary.

After the description of the details of each method, there follows a brief summary in short, sharp statements that stick in the mind and enable the reader to grasp almost at a glance the essential steps to be followed, and the important precautions to be observed.

Considerable new matter is presented. The portion on "Methods of Testing and Scoring Butter, Cheese, Milk, etc.," is a feature that will commend itself to dairy teachers, students, and inspectors. Several valuable tests, easy of execution, are given for the detection of renovated butter, of oleomargarine, and other adulterants of dairy products. Methods are given for the determination of fat in the milk powders which are recently coming into the market, and which are destined to be of great commercial importance to dairymen.

The chapter on the "Arithmetic of Milk and Milk Products" is another desirable feature of the book which will prove exceedingly helpful to every dairy teacher, student, and worker. We believe that the general arrangement of the material in this book is one that will meet the approval of those who have occasion to use it most. It is fully illustrated and substantially bound in cloth. Price, 75 cents. It may be ordered through THE KANSAS FARMER.

A Prize for Good Cream.

It is a peculiar fact that the cream received at the creameries in summer time is of much better quality than that received at any other season. This is because the farmer realizes the necessity for taking special care of his cream and his dairy utensils during the hot weather. If the same care were taken at all seasons the result would be a uniform product. It was to accomplish this result and to secure the improvement of dairy methods and the consequent good cream, that the creameries adopted the graded-cream system which pays a premium of 4 cents per pound for good cream delivered promptly over second grade delivered less frequently.

Keeping Cream Without Ice.

"For two years," says a practical dairymen, "I have kept the cream from ten cows in first-class condition without ice. In the corner of my

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

house cellar, near the drain outlet, I built a platform about 3 feet high and 3 feet square. I nailed to the sides burlap sacks so as to hang to the ground. On the platform I placed a half barrel with both heads in. In the top head I bored a hole to take in a hose pipe, which I ran to a pail in the sink where we pump water from the well, and fill the half barrel with water. I place the cream cans under the platform, and by several small gimlet holes let the water over the top of the cans. This forms a cold storage chamber, and I think it is equal to the tank of water with ice in it to keep the cream. The cream-gatherers say my cream has been in as good order as the best."

Don't oppose your creamery if it is endeavoring to discriminate against inferior cream. The butter market has recently been flooded with inferior products that could not be disposed of at any price. The leading creameries have all decided that they must no longer pay as much for poor cream as for good cream. This is what they have been doing in the past, and to the detriment of both themselves and the dairymen, but particularly to the detriment of the dairymen. It is to your own interest to deliver No. 1 cream. Get busy.

The Apiary

The Honey Season.

A. H. DUFF, PAWNEE COUNTY.

Because comb foundation comes a trifle high, it is best not to be stingy with it when filling the section-boxes. Put in a good-sized starter, if you have a good quality of light foundation, and this you surely ought to have. Foundation that is too heavy, or that is of a poor quality, will produce a core in the center of the comb, which is considered an objection. The natural base of the honeycomb is as thin as the thinnest of tissue paper, and many honey-producers use but a very small starter of foundation in the section on this account. But, I think the gain in using large starters in pounds of honey overcomes the objections on the other side, if we are careful to use first-class, light foundation, and let the bees have it at the proper time.

I have used starters of all sizes, from a mere starter to full sections, and prefer the sections at least half filled. Success largely depends on knowing just when to put a crate of sections on the hive. It is a mistake to put on sections before the bees are ready for them. We should be governed by two conditions: (1) the colony must be strong enough; (2) honey must be coming in in sufficient quantity to enable the bees to begin work at once. The brood-frames, of course, should be full of brood and honey, the honey being capped over with new cappings. A colony thus will not disappoint you, and a fine lot of comb-honey will be the result if the honey flow continues.

Do not allow the thought to enter your mind that placing a crate of sections on a colony, as described above, is all that is needed for that particular colony for some time to come, for this is the most fatal mistake. If the bees go to work at once in these sections, and they should, of course, they will have them half filled in three or four days, when you should promptly add another crate of sections, and thus have them working in both crates at the same time, and use not less than two crates continuously throughout the honey season.

If bees do not occupy the sections at once, or inside of twenty-four hours, you must use means to induce them. Driving them up in the crate with smoke, by gently smoking them below, will often start them, but perhaps the best thing to do is to use bait sections in the crate; that is, put in a few sections containing honey. This will never fail, if the conditions are right otherwise. When both crates are nearly filled, take them off and take out all completed sections; fill in all sections not finished into one of the crates, fill out with empty sections, and place back on the hive, always keeping the full crate on top.

Take off all honey promptly when it is well finished and capped over, for to allow it to remain on the hive will give it a tainted appearance, and it will not look so clean, white, and crisp as it is at first. All comb-honey becomes bee stained more or less as it remains long in the hive. Keep all comb-honey in a dry place, but never put it in a cellar; the garret is far

better. It should be in a high, dry place, with plenty of light; never in the dark. Heat will not injure it if not extremely exposed.

Contract your surplus capacity near the close of the honey season, and if you are not an expert in guessing when the close will likely be, you will soon learn by noting closely year after year the season your principal crop of blossoms open and close, the conditions of the weather, the effect it will have, etc. Condense everything down to single crates, and get as nearly all sections completed as possible. If you are not careful about this, you will end up with a large number of half-filled sections. It is not a loss by any means to have some partly filled sections on hand, providing you carry them safely over until the next season, for you can use them for bait sections in getting an early start the next season.

Use shipping crates to store your section honey in, whether you intend to ship it or not, for this is the best way to preserve it.

Foundation-comb is the beekeeper's money-maker. Do not spare it in the brood-chamber, but fill every frame full of it. Be very careful how you fix it in the frames. Let the comb swing clear of the bottom of frame one-half inch, and at the ends one-fourth of an inch. It will stretch more or less, as the bees work it, and if the frame is full at the start, the comb will be buckled and out of shape. It is always best to wire it in the frames, but will answer if fastened firmly at the top, and not exposed to extreme heat when a swarm is hived upon it. A heavy swarm on a very warm day will pull the comb all down on the bottom board in an ugly mess, if exposed to the hot sun. It is proper to shade all hives after hiving swarms in them, and give a large entrance for ventilation. When bees swarm, they fill themselves with honey to the utmost limit, and thus can not endure extremely close confinement. Put little blocks under the corners of the hives for the time being, and thus give them plenty of air.

Every one should be acquainted with the honey flow in his locality, and know just when to strike while the iron is hot. Localities differ greatly as to the flora. White clover, sweet clover, and basswood rule in most localities, although there are numerous other honey-bearing plants that furnish the bulk of the surplus where the above do not abound. We catch the most of it from the middle of May until the last of June, but almost any of the principal flowers may be continued a week or two on account of favorable weather. There is no better honey-plant than sweet clover, and this often lasts until the last of July or even later.

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From June 1 to September 30 Rock Island lines will sell summer tourist tickets at rate of \$17.50 from Topeka to Denver, Colorado Springs, or Pueblo and return. Return limit October 31. July 10 to 15 inclusive, the special round-trip rate of \$15 from Topeka is effective.

This latter rate is authorized on account of the Elks' Annual Meetings at Denver July 16 to 21. Tickets limited for return to August 20.

Very low rates will also be in effect to Glenwood Springs, Colo., Salt Lake City, and Ogden, Utah, Yellowstone National Park, and to the Pacific Coast, with cheap rates for side trips to nearby points of interest en route.

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Full details of rates, routes, service and any information desired will be gladly furnished by Rock Island ticket agents. A. M. FULLER, C. P. A., Topeka, Kans.

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In Your Alfalfa Fields by Using

Saunders' Gopher Exterminator

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

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...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 Banded Plymouth Rocks, 36 Collies, 44 head of cows, 8 head of horses, the best farm house in the State. Also one small farm house, 2 large barns, 2 large cattle-sheds, one 300-foot hen house, one 250-foot broiler house, 20 brooder houses, capacity of plant, 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, \$20,000 cash.

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HOMES FOR THOUSANDS

One and a quarter million acres to be opened to settlement on the

SHOSHONE RESERVATION

Dates of registration July 16th to 31st.

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Round trip from Kansas City, over the only all rail route to Shoshoni, Wyo., the reservation border.

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Please send to my address pamphlets, maps and information concerning the opening of the Shoshone or Wind River reservation to settlement.

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NW22

PLYMOUTH ROCKS

BARRED PLYMOUTH ROCK EGGS—From free range stock, no other fowls kept on the farm. Price \$1 for 15; \$6 for 100. Mrs. C. F. Brown, Box 61, Manchester, Oklahoma.

BLUE BIRDS—Barré to the skin. Hawkins Bantam strain. Eggs, \$1 per 15, \$6 per 100. Minnie K. Clark, Lyndon, Kansas.

EGGS FROM MAMMOTH BARRED PLYMOUTH ROCK CHICKENS \$1.50 per 15. A. D. Wyncoop, Bendena, Kansas.

B. P. ROCKS AND BUFF ORPINGTONS—Eight grand matings. Send for price list on eggs and Cello pups. W. B. Williams, Stella, Neb.

White Plymouth Rocks

EXCLUSIVELY.

Good for Eggs, Good to Eat and Good to look at. W. P. Rocks hold the record for egg-laying over every other variety of fowls: eight pullets averaging 250 eggs each in one year. I have bred them exclusively for twenty years and have them scoring 94 to 95% and as good as can be found anywhere. Eggs \$1.50 per 15; \$6 per 45, and I prepay expressage to only \$2 per 15 in the United States. Yards at any express office in the United States. Address: residence, adjoining Washburn College. Address: THOMAS OWEN, Sta. B, Topeka, Kans.

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ROSE COMB BROWN LEGHORN EGGS, 15 for \$1, 50 for \$2.50, 100 for \$4. Mrs. John Holzhay, Bendena, Kans.

BUFF LEGHORNS AND BUFF ORPINGTONS. Catalogue free. W. H. Maxwell, 1240 Quincy St., Topeka, Kans.

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

SINGLE-COMB WHITE LEGHORN cockerels, \$1 each; two or more, 80 cents each. Fine white, pure, thoroughbred birds. Also a few Bred Plymouth Rocks, barred to the skin—fine, pure and vigorous; Bantam cockerels 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, Coulterville, Illinois.

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Pure Single Comb Brown Leghorn Eggs—30 for \$1; 100 for \$3. F. F. Flower, Wakefield, Kans.

Buff Leghorns

S. C. Eggs, 30 for \$1.25, 100 for \$3. John A. Reed, Route 3, Wakefield, Kans.

Johnnie Chase, Glasco, Kas.

Breeds Black Minorcas, S. C. Brown Leghorns and Bantam Rocks. Second to none in the state. Eggs, \$2 per sitting.

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WHITE WYANDOTTE COCKERELS, (Stay White), \$1 to \$5 each. Eggs, \$1.50 per 15. S. W. Arts, Larned, Kansas.

WHITE WYANDOTTES—the lay all winter kind. Bred to high score, large egg record cockerels. Dusty strain. Eggs 5 cents each. \$4 per 100. J. L. Moore, Eureka, Kans.

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

SILVER LACED AND WHITE WYANDOTTES \$1 per sitting of 15. Eggs guaranteed. Circular free. R. C. Macaulay, Route 1, Frederick, Kans.

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BUFF LANGSHANS



Imported and native high-scoring blood in our yards. Mention Kansas Farmer when writing. America's Central Poultry Plant, J. A. Lovette, Mullinville, Kans.

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A Bargain in S. C. Buff Orpington Hens In order to make room I will sell 200 hens at \$10, \$12 and \$15 per dozen.

Mrs. J. R. Cotton, Stark, Kansas
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NEOSHO POULTRY YARDS—Rose Comb R. I. Reds. We can sell nice smooth, 1-year-old stock at this time of the year cheaper than any other time. Young stock for sale when matured. J. W. Swartz, Americus, Kans.

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M. B. turkeys, \$3 per 10. Golden Wyandottes, \$2, \$1.50 and \$1.25 per 15. Satisfaction guaranteed. Mrs. A. B. Grant, Emporia, Kansas.

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Light Brahma Chickens

Choice pure bred cockerels for sale. Write or call on Chas. Foster & Son, Eldorado, Kan. Route 4

The Poultry Yard

Conducted by Thomas Owen.

Bowel Diseases in Summer.

During the summer poultrymen become discouraged by the prevalence of diarrhea in the flock. As there are so many forms of bowel disease, it is very difficult to distinguish one from another, especially on the part of those who have not considered it necessary to seek causes and effects; hence, remedies are sought by the inexperienced, who are just as likely to request a panacea for cholera as for diarrhea, the true diarrhea being, it is claimed, caused by microscopic organisms which are developed in the intestines. Investigators affirm that the organisms pass through several stages, multiplying even in the blood, and are then ejected from the bowels, other fowls being effected by picking food or other articles from the contaminated ground. Where a disease must "run its course," there is no remedy that can be relied upon, owing to the difficulty of giving medicine to a large number of fowls, especially if the administrations thereof must be frequent. The disease may require about ten days before recovery occurs, while with cholera the result is usually death within forty-eight hours or rapid recovery. In this progressive age, it may be also claimed that all diseases are due to rapid multiplication of germs, and science is making known much in relation thereto, which was formerly not thoroughly understood.

The form of bowel disease that causes the greatest annoyance to farmers and poultrymen is that which is common with a large number of flocks, the evacuations being large and frequent, the fowls otherwise appearing healthy, having red combs, and not refusing food until the disease reaches a stage at which it begins to weaken them. Investigation shows that this form of diarrhea occurs mostly in flocks which are fed largely with grain, and which are fed three times a day. It is due to indigestion and lack of variety of food, but does not seem to appear until the birds have accumulated an excess of fat; that is, if the fowls are examined after death, they will be found to have accumulated fat to such an extent as to affect the heart (hoarse breathing), the liver will be soft and crumbly, and the reproductive organs clogged with fat to such degree as to interfere with laying; and if a hen so afflicted produces eggs, they may be of abnormal shapes, some being very large, others containing two yolks, a proportion having soft shells, while occasionally there will appear a large egg containing a smaller one. The fat may so oppress the fowl as to cause undue pressure against the heart. This may be noticed by causing the bird to move quickly, or when it is on the roost after eating a full allowance of food, the bird then showing its distress by shortness of breath, and it is liable to sudden death. This accounts for some hens being found dead under the roosts, they otherwise seeming to be healthy, with red combs and bright plumage. It may be added that it is annoying to discover the prettiest and best hen in the flock dead under the roost, and to test the matter all hens found dead should be dissected. The main cause of this excess of fat is feeding the flock three times a day. The noon meal should be omitted.

Lice will also cause bowel disease, although it may appear that no lice are in the quarters, but the large lice that prey upon the bodies, especially on the heads and under the wings, can nearly always be found. The small red mites are busy mostly at night. The fowl becomes exhausted from loss of rest, is soon emaciated, and refuses food.

Bowel diseases may result when the food is lacking in some essential substance, such as protein or mineral matter. Sameness of diet is a potent factor in promoting bowel difficulties of every form, whether of too little green food or too much, under certain circumstances. One of the best substances to keep in the poultry-yard is ground bone, as it is phosphate of lime, and supplies mineral matter in the most acceptable form. Animal-meal (ground meat) also contains bone, and supplies both protein and mineral matter. If a flock of fowls is given animal-meal once a day, or at least three times a week, with some kind of green food, even if in limited proportions, there will be fewer cases of bowel disease. Feeding grain food

almost exclusively will bring on the difficulty if such course of feeding is persisted upon.

As to remedies, the first duty is to remove the cause, which is to greatly reduce the proportion of grain. Have a place for the sick fowls, and have clean yards. Give no food for forty-eight hours (not thirty-six hours, or a reduction of the fast), allowing no food, but a plentiful supply of fresh water should be convenient for their use, adding one teaspoonful of tincture of nux vomica to every quart of water, omitting the nux vomica at the expiration of the forty-eight hours. For the next two days allow one ounce of lean meat from the butcher to each fowl, no other food being given except a tablespoonful of millet-seed, scattered in litter, to induce the hens to scratch and thus work. On the fifth day the meat may be given in the morning and a gill of wheat at night, the fowls to be fed on a variety thereafter, morning and night, but if they have the run of the farm they will require little or no food from their owner.

There are bowel diseases which seem to be contagious with both fowls and chicks, and they may be due to rump, irregular methods of feeding, or to the existence of certain germs in the soil. If the disease is persistent, and appears to be contagious, the best remedy is to destroy the entire flock, thoroughly disinfect the premises, and procure stock from elsewhere.

The cheapest and best method of disinfecting is to dissolve one pound of copperas (sulfate of iron) and an ounce of bluestone (sulfate of copper), in two gallons of hot water, adding a gill of sulfuric acid. When cold, add four gallons of water, and apply to every portion of the house and grounds, and if several applications are made, so much the better.—P. H. Jacobs, in Farm and Fireside.

Meat as Chick Food.

In a recent report of experiments in feeding chicks, the Rhode Island Experiment Station says:

The use of the proper proportion of animal food will pay a handsome profit through decreased mortality and increased weight of the chicks. In feeding bear in mind that chicks in the state of nature spend practically all of their working hours in search of food; and that they do not fill their crops in ten minutes every two hours. Feeding should be, as far as the time of the attendant renders profitable, a continuous process, but by no means a continuous gorge.

The experiment which led up to this conclusion was with an incubator hatch of 219 chicks. These were separated into lots of about fifty each, and placed in similar brooders. For thirty days all conditions were kept alike except rations. Pen A was fed a balanced ration of grains, meats, and green food. The chicks grew and thrived, and not one chick showed symptoms of digestive disorder. The deaths amounted to 3.9 per cent. In pen B all animal food was withheld; the deaths were 9.5 per cent, of which 75 per cent had bowel trouble. Pen C was fed on grain alone, all animal food and green food being omitted from the ration; the deaths were 32.7 per cent, of which 96.5 per cent showed digestive trouble. In pen D all grain food was omitted; the deaths of chicks were 63.7 per cent, of which 85.8 per cent showed bowel trouble. All the living chicks were weighed at the close of the test, and pen A showed the greatest average weight for all breeds.

This experiment shows conclusively that outside of the brooding and conditions during incubation chicks may be killed by improper feeding. Where one does not wish to buy prepared beef scraps, the bones and scraps from the table will go far towards feeding the baby chicks at first if put in shape so they can eat them.—Farmers' Tribune.

"I shall pass through the world but once, therefore, any good thing that I may do, or any kindness I may show, let me do it now; let me not neglect it, as I shall not pass this way again."

There is nothing in the world so much admired as a man who knows how to bear unhappiness with courage.—Seneca.

Denver, Colorado 6-ings, Pueblo and Return, \$17.50 Santa Fe.

Tickets on sale daily, good returning as late as October 31; liberal stop-over privileges allowed. East Colorado Flyer from Topeka 10:35 p. m., arrives Colorado early next morning. Ballast track and a harvest, eating house, T. L. King, C. P. & C. A., Topeka, Kans.

GEESSE

BROWN CHINA GEESSE, Indian Runner Ducks, also Bantam cockerels. Prize winners at State Poultry Show.

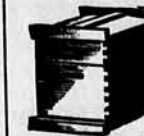
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OLD TRUSTY

More than your money's worth in incubators during the summer. We have them all beat; 50, 60 or 90 days to prove it. 5 year Guarantee. Now is the time to write to M. M. JOHNSON, The Incubator Man, Clay Center, Neb.

BEE SUPPLIES



We can furnish you bees and all kinds of beekeepers' supplies cheaper than you can get elsewhere, and save you freight. Send for our catalogue with discount sheet for early orders. Topeka Supply House, 7th and Quincy, Topeka, Kansas

SAVE YOUR CHICKS.

Use the Itumar Mite and Lice Killer, a mite and lice destroyer. Guaranteed to kill mites and lice if properly used. If not satisfied return bottle and label and money will be refunded.

CHAS. E. MOHR, Glendale Park, Hutchinson, Kans.



Subscription, 25 Cents a Year.

"OUT THERE IN KANSAS"

All about the chicken industry in Kansas, the bees and pigeons. Full of information illustrated and made plain for the people. Practical, by and for practical people. The paper that reaches the chicken folks. If you are interested in poultry, bees, or pigeons, THE HEN will interest you. Address THE HELPFUL HEN, Topeka, Kansas.

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FERTILE SECTIONS OF THE SOUTHWEST, WHERE LAND SELLS FOR \$15 AND RENTS FOR \$5 PER ACRE

One of the remarkable things about Eastern Arkansas and Northern Louisiana is the fact that cleared land rents for \$5 per acre cash, and can be bought for \$7.50 to \$15 per acre. It costs from \$6 to \$10 an acre to clear it. Other improvements necessary are slight and inexpensive.

The soil is rich alluvial, or made. It produces a bale of cotton per acre, worth \$45 to \$60. This accounts for its high rental value. Other crops, such as corn, small grains, grasses, vegetables and fruits thrive as well. Alfalfa yields 4 to 6 cuttings, a ton to a cutting, and brings \$10 to \$16 per ton.

In other sections of these States, and in Texas as well, the rolling or hilly land is especially adapted to stock-raising and fruit-growing. Land is very cheap, \$5 to \$10 per acre; improved farms \$10, \$15, to \$25 per acre.

The new White River country offers many opportunities for settlers. High, rolling, fine water—it is naturally adapted to stock- and fruit-raising. Can be bought as low as \$3 per acre.

See this great country for yourself and pick out a location. Descriptive literature, with maps, free on request.

The Missouri Pacific-Iron Mountain System Lines sell reduced rate round-trip tickets on first and third Tuesdays of each month to points in the West and Southwest, good returning 21 days, with stop-overs. For descriptive literature, maps, time tables, etc., write to

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Owing to the frequent demands for fine job work in the line of stock printing, we are now prepared to fill such orders and as a starter offer to breeders of pure-bred stock a line of stationery, neatly packed in a special case and delivered to any express office prepaid. The work will be high-class printing, first class stock. We furnish stock cuts representative of the breed. Our stationery specialty consists of

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Shipment free to your express office.
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BEFORE YOU BUY A MANURE SPREADER

SEE that its frame and sills are made of oak; that it has a ball and socket joint on front axle to prevent racking and twisting and steel braces and steel truss rods to guard against warping and sagging. See that the apron does not run backward and forward on a hilly ground but insist on a positive and continuous apron drive.

"A boy can run it"



See that it is practically automatic and so simple that any boy who can drive a team can run it as well as any man and control its every operation without leaving the seat. The

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has all these improved features and many others equally important. Write to-day for free catalogue of special prices and terms.

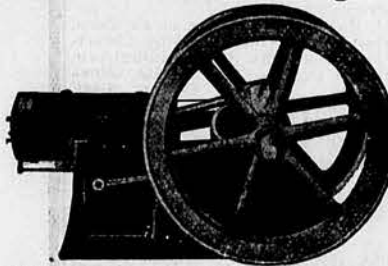
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19 Fargo Street, Batavia, Ill., U. S. A.

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A popular engine at the right price.

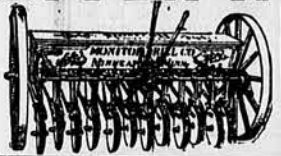
Also Power and Sweep Feed Grinders

Write for illustrated catalogue.



WATERLOO GASOLINE ENGINE CO.
1014 Cedar Street., Waterloo, Iowa.

GIVEN AWAY



FOUNTAIN PEN FREE.

We do this so that we can explain to these farmers how they can buy a seeding machine that cannot be clogged in mud, gumbo, adobe, cornstalk or trashy ground; that is 1-3 higher draught than any other; that takes 1-5 less seed; that increases the yield of wheat from 5 to 7 bu. per acre over others. Ask for 1006 catalogue S and mention this paper.

MONITOR DRILL CO., Minneapolis, Minn.

THE 20TH CENTURY GRADER

Best Light Grading Machine made. Grades Roads, Cemeteries, Lawns, Parks, Race Tracks, Levels Land for Irrigation, Cuts Ditches, Clears Feed Lots, Barn Yards, Etc. Easily operated by one man. Light, practical and low priced. For general use about the farm or for grading town streets or country roads this grader is unequalled. Descriptive Catalogue FREE.

THE WHITE CITY GRADER CO.
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YOU BALE FROM THE WINDOW GET FRESH-ER, CLEANER, BETTER CURED HAY. SCATTER NO HAY IN HANDLING, RAINING OR STACKING. RISK OF BAD WEATHER DAMAGE CUT DOWN 75 PER CENT. HARVEST WITH ONE-HALF FORCE AND ONE-HALF TIME REQUIRED IN CIRCLE BALE WORK. YOU BALE DIRECT FROM WINDOW, STACK OR IN BARN AS DESIRED. CATALOGUE FREE.

LITTLE GIANT HAY PRESS CO.
DALLAS, TEXAS.



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, Kans., or to Dr. C. L. Barnes, Veterinary Department, Kansas State Agricultural College, Manhattan, Kans.

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

Worms in Colt, Wind Galls, Scatches.

—What will cure worms in colts? Also what is good for wind galls around the horses' feet, and a remedy for scratches? I am an interested reader of your paper.

Answer.—For the colts that are troubled with worms, would advise giving them three ounces of oil of turpentine in half a pint of raw linseed-oil, in three doses six hours apart, while the colt is fasting. Twenty-four hours after giving the first dose, give one pint of raw linseed-oil to carry the worms out.

The most successful way of treating wind galls is to rub them continually until they are removed. Rub the wind puffs after each drive daily, as this is the most satisfactory way of treating them.

For scratches, would advise using equal parts of iodiform, tannic acid, and boracic acid as a powder; say an ounce of each of these drugs. As the discharge dries on the wound, wash off with a good disinfectant, dry, and apply more powder.

Stone Bruise.—What will I do for my horse that has swelling between the foot and fetlock? There seems to be considerable fever around the foot.

A SUBSCRIBER.

Answer.—The symptoms you give are those of a horse that has been driven over a rough road and bruised the foot. The inflammation, not being able to swell in the foot, has extended up the leg, causing the swelling above the hoof. Would advise poulticing the foot with linseed-meal or bran, changing the poultice as often as every six hours, until the pus begins to form and escape through the back of the foot; then inject hydrogen peroxide through the openings, that form of themselves, in the back of the foot; use hydrogen peroxide in the strength of one teaspoonful in three tablespoonfuls of water. Continue this treatment until the pus is all removed from the foot.

Diseased Teeth.—I have a horse 6 years old that has a disagreeable odor coming from his nostrils; the discharge is rather thick and has been running for the last year. The animal is not doing very well, and doesn't seem to digest its food very well.

Answer.—Your horse has diseased teeth. They have probably become decayed; the material from the teeth has formed pus and the pus has accumulated in the cavities in the front part of the head and face. These cavities communicate with the nose, which explains the occurrence of the fluid in the nose. The odor you describe is characteristic of diseased bone or teeth and can not be mistaken for anything else. If you will examine your horse's mouth according to the method described in this paper two weeks ago in the article on "The Care of Horses on the Farm," you will find that there is at least one tooth, and possibly more, that is diseased, showing by their being shorter than the rest of the teeth, and the material that will adhere to the hand in examination will have the same odor that comes from the nose; you should employ a skilled veterinarian to remove the diseased teeth, which will probably need to be punched out, as a pair of forceps will not draw a tooth in that condition. There will need to be a hole bored through the bone on the side of the face and then a gunch put on the roots of the teeth and the roots driven down into the mouth, in which place they can readily be removed. There is, of course, some discharge into the mouth, and that being swallowed with the food, has caused some inflammation of the stomach known as gastritis, which prevents the proper digestion of the food you have been giving the horse. While you are having your horse's teeth examined by a competent veterinarian, you had better also have the teeth floated, and in this way make sure of perfect mastication of the food.

Fistulous Withers and Poll Evil.—During the past year probably more calls for treating poll evil and fistu-

lous withers have come to the veterinary department of the Kansas State Agricultural College than any other one affection. The causes of the disease are many, but they may be itemized as coming from ill-fitting collars or saddles, a bruise from low ceilings or doors, a bruise from the animal rolling, and also from being struck over the head by a club. All are familiar with the symptoms; at first a swelling appears; this swelling continues to get larger for a week or ten days or more, then remains tender to the touch, causing the animal with poll evil to carry the head stiffly and causing it to show considerable pain when trying to drink from a stream or eat from the ground. In the course of three or four weeks and oftentimes sooner, these swellings break and discharge pus. They do not get well of their own accord, but continue running; in some cases, where they have not been treated, they have been known to run for two or three years and even longer. It is found advisable, to treat these cases successfully, first of all to have the enlargement opened by a competent veterinarian the bleeding properly checked, and then cause healing to take place from the bottom and heal up to the surface. This is accomplished by the use of disinfectants and caustics. The tendency of these wounds is to granulate or form proud flesh, which bulges out from the lips of the wound and prevents the skin from healing over. Caustics, such as butter on antimony, hydrate of potassium, or sodium hydrate, are most excellent to use to burn out the pus and start a healthy healing surface. Then twice daily use some good disinfectant in a weak solution to wash the pus out. Dry with absorbent cotton and cover the wound with tincture of iodine; for at least ten days use the tincture of iodine. It is then found advisable to use about a 3-per-cent solution of some of the coal-tar products, and keep the wound clean. Should healing progress too rapidly on the outside, use a hot iron and burn the proud flesh so that the wound will have the opportunity to heal from the bottom. When there is simply the surface wound to heal, use an astringent powder of equal parts of iodoform, tannic acid, and boracic acid, in proportion of two ounces each, well mixed. If large lump appears after the wound is entirely healed, use a fly blister on the enlargement every three weeks until the swelling has completely disappeared.

Poll evil is very much more difficult to treat, as so often both sides of the neck are affected and keep up a constant formation of pus. It is much more difficult to heal ligaments than true muscular tissue. The ligament referred to may be readily detected by forcing the hand into the opening that has been made by the surgeon, and feeling a very large, strong band about the width of three fingers and an inch or more thick, just back of what is known as the poll, or the upper part of the horse's head. We have then to deal with the disease caused by several microbes, mainly the pus germs. The disease is not contagious, but the cause of the disease in several animals belonging to the same owner may be the same, such as a low building, the animals throwing the head up and bruising the back of the head; the dead material breaks down into pus, and the fistula begins.

Blackleg.—Blackleg, also known as symptomatic anthrax, or quarter evil, is a germ disease. The organism causing the disease probably enters the system of the susceptible animal through a wound, the digestive tract, or possibly the respiratory tract, and then finds its way to the favorable part of the body, usually the surface just beneath the skin, where the tissues are loose and it can readily develop. Blackleg is very common in Kansas and its neighbor States as well as throughout the entire West, and cattle-owners are making it their business to vaccinate their cattle to prevent this disease, the same as feeding them. Cattle under 6 months old are, as a rule, not susceptible. They seem to possess a natural immunity until the age of 6 months, but this is not always the case, as many stock-owners report getting the largest number of deaths among their cattle before animals are 6 months old. The Government, as well as the State of Kansas, has been collecting data on the prevalence of this disease, and finds that animals over 2 years old are generally not affected. There are two seasons of the year when more animals have the disease than at any other time; particularly the spring and fall are to be noted as the blackleg seasons.

No doubt, nearly every one is familiar with the symptoms of blackleg; the

What is a Backache?

IT IS NATURE'S WARNING TO WOMEN

Diseases of Woman's Organism Cured and Consequent Pain Stopped by Lydia E. Pinkham's Vegetable Compound.

"It seems as though my back would break." Women utter these words over and over again, but continue to drag along and suffer with aches in the small of the back, pain low down in the side, "bearing-down" pains, nervousness and no ambition for any task.



Miss Maude Morris

They do not realize that the back is the mainspring of woman's organism, and quickly indicates by aching a diseased condition of the female organs or kidneys, and that the aches and pains will continue until the cause is removed.

Lydia E. Pinkham's Vegetable Compound has been for many years the one and only effective remedy in such cases. It speedily cures female and kidney disorders and restores the female organs to a healthy condition.

"I have suffered with female troubles for over two years, suffering intense pain each month, my back ached until it seemed as though it would break, and I felt so weak all over that I did not find strength to attend to my work but had to stay in bed a large part of the first two or three days every month. I would have sleepless nights, bad dreams and severe headaches. All this undermined my health.

"We consulted an old family physician, who advised that I try Lydia E. Pinkham's Vegetable Compound. I began taking it regularly and soon found that I could sleep and at better than I had done for months. Within two months I became regular and I no longer suffer from backache or pain."—Miss Maude Morris, Sec. Ladies' Aid and Mission Society, 85 E. Hunter St., Atlanta, Ga.

How Is Your Heart?

Is your pulse weak, too slow, too fast, or does it skip a beat?

Do you have shortness of breath, weak or hungry spells, fainting, smothering or choking spells, palpitation, fluttering, pains around the heart, in side and shoulder; or hurt when lying on left side?

If you have any of these symptoms your heart is weak or diseased, and cannot get better without assistance.

Dr. Miles' Heart Cure strengthens weak hearts, and rarely ever fails to cure heart disease. Try it, and see how quickly you will find relief.

"About January 1st, 1902, I took down with weakness and drowsy, and gradually grew worse. I was told by my family physician that my case was hopeless. My neighbors and family had given me up to die. My limbs and body were swollen to one-third larger than normal size, and water had collected around my heart. For at least three months I had to sit propped up in bed to keep from smothering. I sent for five bottles of Dr. Miles' Heart Cure, and by the time I had taken them all I was entirely cured. I feel better than I have for twenty years, and I am able to do any kind of work on my farm. My attending physician told me that if it hadn't been for Dr. Miles' Heart Cure I would now be in my grave."

L. T. CURD, Wilmore, Ky.

Dr. Miles' Heart Cure is sold by your druggist, who will guarantee that the first bottle will benefit. If it fails he will refund your money.

Miles Medical Co., Elkhart, Ind.



Weatherproof CONGO ROOFING

Congo is a ready roofing that outwears any other. When once on, it is there to stay and requires no repairs, no paint or any other attention for years. Anyone can lay it by simply following instructions.

Write for name of nearest agent and free sample.

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animal affected stands apart from the rest, a little sluggish and stiff in one or more of the quarters. It generally takes three days from the time the animal is first affected until it dies. Upon approaching the lame animal it will generally not try to run very lively, but will remain more or less quiet until the affected part is handled. Wild cattle generally fight and make considerable fuss about the pain caused by touching the lame leg. If the swelling is manipulated, it will be found to crackle like the crinkling of a newspaper, this crackling sound coming from the gas that is formed by the blackleg germ passing through the inflammation liquid and loose tissue just beneath the skin. After death, if the affected part be examined, it will be found that just beneath the skin the muscles that are normally pink to red are now black, and there is a glairy-appearing liquid which readily oozes from the muscles. When the muscles are cut into, they appear spongy and black from the accumulation of blood. It is this affected meat that is used in preparing the blackleg vaccine. From the fact that medicinal treatment has no curative effect on a blackleg animal, it is advisable to use preventive measures. So vaccination has come to be very practical and saves a great many valuable animals that otherwise would have contracted the disease.

There are two kinds of vaccine, known as single and double vaccine. Single vaccine consists of some of the muscles that have been dried from a blackleg patient and weakened to such an extent that the animals vaccinated will not die from the use of the vaccine. In using single vaccine, the cattle are vaccinated but once. Double vaccine consists of two strengths of vaccine; one in which the germs have been so weakened in the material that they would not kill anything, and also would not protect cattle very long from the disease; the object of the first vaccine is to simply prepare the system for the second vaccine which is used ten days after the first. The second vaccine is very strong, much stronger than the single vaccine. In passing, I might state that the germs are weakened by being baked in an oven at temperatures which will not kill the germs but will simply prevent them from being able to produce the disease.

The greatest care should be exercised in vaccinating cattle. After the material has been baked, and has been sent to the parties owning the cattle to be vaccinated, the individual to do the vaccinating should see that the instruments have been thoroughly boiled, excepting the syringe which is sterilized by a good disinfectant, and the fluid used in the vaccinating should be thoroughly filtered so as not to have too many germs pass through the filter paper. In other words, the liquid should be of a very light straw color.

The reasons that the best cattle are the ones most often affected are that in cattle that are gaining rapidly and are in extra good condition, and pure bloods have developed in the muscles an acid called sarco-lactic acid; this acid causes the germs of blackleg to multiply very rapidly, with the result that the animal readily dies. The scrub animal is not as susceptible as a pure blood, even though it may be fat. Cattle in rather poor condition, as a rule, do not contract the disease very readily, if at all, even during the blackleg season. Under no circumstances should pure-bred stock and those gaining rapidly and in extra good condition be vaccinated with single vaccine, as the single vaccine is altogether too strong for them. The double vaccine is much safer. A large dose of the first vaccine should be put

into each animal to be vaccinated, and then very carefully graduate the dose of the second vaccine ten days later. Full-grown animals usually take a cubic centimeter of the liquid; in large, full-grown animals I have found it practicable to give them two cubic centimeters of the first vaccine, and then give about two-thirds of a cubic centimeter of the second vaccine, especially if the animals are pure-bred and in extremely good condition and on full feed.

Two Inquiries.—Will you please tell me what ails or will help a cow that holds her cleanings after calving for a week or more?

Will the eating of poultry keep hogs from fattening? Some claim it does. I would be much obliged for an answer.

Answer.—For the cow that has not cleaned, would advise using a 3-percent solution of some of the coal-tar products, as an injection once daily, continuing for a week or more.

I think there is nothing in the saying that hogs that eat poultry will not fatten.

C. L. BARNES.

Grain in Kansas City.

Wheat.—No. 1 hard, 1 car 72½c, 3 cars yellow mixed 72½c, 4 cars 72c, No. 2 hard, 5 cars 73c, 7 cars 72½c, 10 cars Turkey 72½c, 17 cars 72½c, 65 cars 72c, 7 cars 71½c, 1 car old bulkhead 71c, No. 3 hard, 5 cars Turkey, 72½c, 2 cars Turkey 72c, 9 cars 71½c, 2 cars 71½c, 4 cars 71c, No. 4 hard, 1 car 71c, 5 cars 70½c, 5 cars 70c, 3 cars old 70c, 2 cars old 69c; rejected hard, 1 car live weevil bulkhead 70c, 1 car 68½c, 3 cars 68c; no grade hard, 1 car screenings 63c; No. 2 red, 4 cars 73½c, 20 cars 73c, 5 cars 72½c; No. 3 red, 2 cars 72½c, 3 cars 72½c, 3 cars 72c, 4 cars 71½c; No. 4 red, nominally 70½c, 1 car 71½c, 3 cars 71c; no grade soft, 1 car 70½c; mixed wheat, No. 2, 2 cars 72½c, 6 cars 72c; No. 3 mixed, 1 car 71½c.

Oats.—No. 2 mixed, nominally 36½c, 37½c for old, 3 cars 36c, 1 car new red 35c; No. 3 mixed, nominally 34½c, 35c on new, 36½c on old; No. 4 mixed, nominally 34½c, 34½c for new; No. 2 white, nominally 40½c; 1 car 40½c, 1 car color 37½c; No. 3 white, 1 car 39½c, 2 cars 39c, 1 car color 39c, 1 car 38½c, 1 car 38½c, 2 cars color 38c; No. 4 white, nominally 38½c, 38½c.

Corn.—No. 2 mixed, 4 cars 51½c, 7 cars 51½c, 1 car 51c; No. 3 mixed, 3 cars 51c, 1 car 50½c, 1 car 50½c, 1 car 50½c; No. 2 yellow, 2 cars 52c; No. 3 yellow, 1 car 51½c, 2 cars 51c; No. 2 white, 5 cars 52½c, 2 cars 52½c, 4 cars 52c; No. 3 white, 1 car 51½c, 1 car 51½c, 1 car 51c.

Hay.—Timothy, choice, \$10.50@11; No. 1, \$10@10.50; No. 2, \$9.50. Clover mixed, choice, \$10.50@11; No. 1, \$10@10.50; No. 2, \$9.50. Clover, choice, \$10.50@11; No. 1, \$10@10.50; No. 2, \$9.50. Prairie, old, choice, \$10.50@11; No. 1, \$9@10; No. 2, 7.50@8.50; No. 3, \$5.50@7. New prairie, choice, \$9.25@9.50; No. 1, \$8.25@9; No. 2, \$7.50@8. Alfalfa, choice, \$11@11.50; No. 2, \$10@11; No. 2, \$9@10. Straw, wheat straw, \$5.50@5.75; oat straw, \$5.50@5.75. Packing hay, \$3.50@4.

Barley.—No. 3, nominally 46@47c. Flour.—Demand fair at old prices. Hard winter patents, \$3.75@4; straight, \$3.35@3.75; clears, \$3.10@3.35; soft winter patents, \$4.25@4.55; straights, \$3.80@3.90; clears, \$3.10@3.25.

Cornmeal.—Slow sale and lower. Country, \$1.14 per cwt., sacked. Corn-Chop.—Dull and weak. Country, 99c per cwt., sacked.

Bran.—Lower, but demand fair. Mixed feed, 87@88c; straight bran, 65@66c; shorts, 80@85c per cwt.

Flax-Seed.—Receipts, none; same time last year, none. Unchanged at 99c per bu., upon the basis of pure. Cottonseed-meal.—At all points in Kansas and Missouri, taking Kansas City rates, \$28.75 per ton in carlots. Castor Beans.—In carlots, \$1.35 per bushel.

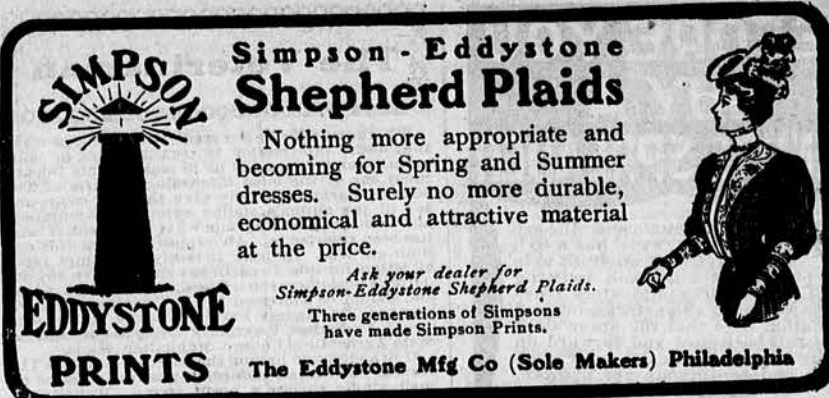
Ground Oil-Cake.—Carlots, \$29; 2,000-pound lots, \$30; 1,000-pound lots, \$16; 100-pound lots, \$1.70.

Seed.—Timothy, \$2.25@2.50 per cwt.; red clover, \$8@11 per cwt.; alfalfa, \$10@13 per cwt.; cane, 95c@1 per cwt.; Kafir-corn, \$1.05@1.15 per cwt.; millet, German, 95c@1 per cwt.; common, 85@95c per cwt.; buckwheat, \$1.25@1.40 per cwt.

Broomcorn.—Quotations: Choice green, self-working, \$85; good green, self-working, \$80; slightly tipped, self-working, \$75; red tipped, self-working, \$85.

Kansas City Live-Stock Market.

Kansas City, Mo., July 16, 1906. More dry-lot cattle came in last week than were expected, but the market on them averaged steady for the week, top \$6 on three different days. Yearling steers at \$5.50, yearlings and heifers mixed at \$5.50 on two days. The total supply last week was heaviest this summer, at 46,000 head, including 19,000 quarantines, yet it was 3,000 less than same week last year, the shortage all in the quarantine division, where the run is slackening a little. The supply to-day is only 11,000 total, a big reduction from last Monday, market steady to strong, although a large supply at Chicago, and lower prices there, is a bad influence. Grass cattle generally lost 10@20c last week except stockers and feeders, which were 10@15c higher, being very scarce, and the inquiry for them getting stronger each week. A larger run was expected for to-day than came in, as few grass cattle, comparatively, have been received as yet, although the season is well advanced; in fact, grass cattle from native territory are two or three weeks late this season. Kansas grass steers sold to-day at \$3.75@4.75, those fed corn on the grass upwards to \$5.25, top to-day \$5.55 on heavy steers, yearlings at \$5.60. Best heifers sell at \$4.50@5.35, choice heavy cows steady, up to \$4.60, bulk of cows \$2.75



Simpson - Eddystone Shepherd Plaids

Nothing more appropriate and becoming for Spring and Summer dresses. Surely no more durable, economical and attractive material at the price.

Ask your dealer for Simpson-Eddystone Shepherd Plaids.

Three generations of Simpsens have made Simpson Prints.

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From Factory to Farm NO AGENTS NO MIDDLEMEN

See what it means.

14 in. Steel Beam Plow, Double Side \$8.40

12 in. \$7.40, 15 in. \$8.95, 16 in. \$9.75, 18 in. \$10.75, 20 in. \$11.75, 22 in. \$12.75, 24 in. \$13.75, 26 in. \$14.75, 28 in. \$15.75, 30 in. \$16.75, 32 in. \$17.75, 34 in. \$18.75, 36 in. \$19.75, 38 in. \$20.75, 40 in. \$21.75, 42 in. \$22.75, 44 in. \$23.75, 46 in. \$24.75, 48 in. \$25.75, 50 in. \$26.75, 52 in. \$27.75, 54 in. \$28.75, 56 in. \$29.75, 58 in. \$30.75, 60 in. \$31.75, 62 in. \$32.75, 64 in. \$33.75, 66 in. \$34.75, 68 in. \$35.75, 70 in. \$36.75, 72 in. \$37.75, 74 in. \$38.75, 76 in. \$39.75, 78 in. \$40.75, 80 in. \$41.75, 82 in. \$42.75, 84 in. \$43.75, 86 in. \$44.75, 88 in. \$45.75, 90 in. \$46.75, 92 in. \$47.75, 94 in. \$48.75, 96 in. \$49.75, 98 in. \$50.75, 100 in. \$51.75, 102 in. \$52.75, 104 in. \$53.75, 106 in. \$54.75, 108 in. \$55.75, 110 in. \$56.75, 112 in. \$57.75, 114 in. \$58.75, 116 in. \$59.75, 118 in. \$60.75, 120 in. \$61.75, 122 in. \$62.75, 124 in. \$63.75, 126 in. \$64.75, 128 in. \$65.75, 130 in. \$66.75, 132 in. \$67.75, 134 in. 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Let Me Prove to You, at My Expense That a CHATHAM Fanning Mill Makes Your Grain Crop Worth More Money

To prove that the Chatham Fanning Mill will get you full value for every sound kernel of grain you raise, we will allow you to use one a month FREE.

Send at once for our little book "How to Make Dollars Out of Wind." We will forward it by return mail, postpaid, and quote you a special price on a Chatham Fanning Mill.

Then—when you are through wondering how we can sell so good a machine for so little money—send us an order for a FREE test.

We will ship you a Mill, all charges prepaid, and you can use it a month on your own farm to see what it will do.

And, if you are not thoroughly convinced that it is exactly as represented, you can send it back at our expense, and the test won't cost you anything.

We have had 25 years experience making Fanning Mills and own two of the largest factories in America.

Our offer is made in good faith and any Commercial Agency or any Bank in Detroit will tell you of our responsibility.

Send at once for our liberal proposition and get a Chatham Fanning Mill to saving for you as quickly as possible.

It will grade all your grain so you can get "first price" for it.

It will take all the chaff, weed-seed and

The Manson Campbell Co., Ltd.

319 Wesson Avenue

withered kernels out of your grain. It will take cockle out of wheat, separate oats from wheat or any one kind of grain from all others.

If you own a Chatham Fanning Mill, you can sell seed-grain to other people instead of buying it yourself.

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Send for our book at once and get the whole story with our FREE trial offer.

Let us tell you the many different ways a Chatham Fanning Mill puts dollars into your pocket. We ship from one

Weather Bulletin.

Following is the weekly weather bulletin for the Kansas Weather Service for the week ending July 17, 1906, prepared by T. B. Jennings, station director:

CLIMATOLOGICAL DATA FOR THE WEEK.

Temperature. Precipitation.

Maximum. Minimum. Mean. Departure from normal. Total. Departure from normal.

WESTERN DIVISION.

Colby. 96 54 73 ... 0.29 ...

Coolidge. 90 55 68 ... 2.42 ...

Dodge City. 89 51 72 ... 2.39 ...

Dresden. 87 52 71 ... T ...

Englewood. 89 57 74 ... 1.31 ...

Hoxie. 90 51 77 ... T ...

Norton. 90 50 70 ... T ...

Scott. 88 54 71 ... 0.48 ...

Wakeeney. 89 53 74 ... 0.74 ...

Division. 96 50 72 ... 0.85 ...

MIDDLE DIVISION.

Anthony. 92 54 75 ... 1.11 ...

Clay Center. 92 54 75 ... 0.73 ...

Concordia. 88 57 74 ... 0.02 ...

Cunningham. 90 57 74 ... 1.90 ...

Eldorado. 89 58 74 ... 0.67 ...

Ellinwood. 88 58 73 ... 0.69 ...

Ellsworth. 91 53 74 ... 0.57 ...

Hanover. 94 55 74 ... 0.50 ...

Harrison. 90 46 72 ... 0.08 ...

Hays. 90 45 70 ... 0.24 ...

Hutchinson. 87 54 73 ... 0.40 ...

Jewell. 85 59 73 ... 0.01 ...

Larned. 86 49 70 ... 0.53 ...

Macksville. 89 52 73 ... 0.51 ...

McPherson. 90 58 74 ... 0.51 ...

Minneapolis. 90 57 74 ... T ...

Norwich. 91 59 75 ... 1.63 ...

Pratt. 92 62 76 ... 0.72 ...

Republic. 92 54 73 ... T ...

Russell. 89 53 74 ... 0.70 ...

Salina. 92 53 74 ... 0.33 ...

Wichita. 91 60 74 ... 1.66 ...

Division. 94 45 73 ... 0.61 ...

EASTERN DIVISION.

Agri. College. 92 57 76 ... 0.82 ...

Atchison. 89 59 76 ... 0.51 ...

Baker. 90 57 74 ... 0.51 ...

Burlington. 93 58 75 ... 0.97 ...

Columbus. 90 60 76 ... 1.07 ...

Emporia. 89 59 74 ... 0.57 ...

Eureka. 87 59 74 ... 0.81 ...

Fall River. 87 59 74 ... 0.25 ...

Fort Scott. 91 60 76 ... 0.11 ...

Frankfort. 93 53 74 ... 0.32 ...

Fredonia. 90 57 76 ... 2.63 ...

Garnett. 91 59 75 ... 0.28 ...

Horton. 92 59 76 ... 0.18 ...

Independence. 92 65 78 ... 1.27 ...

Iola. 90 61 75 ... 1.05 ...

Kansas City. 87 66 77 ... 0.04 ...

Manhattan. 90 55 74 ... 0.59 ...

Olathe. 87 61 74 ... 0.09 ...

Osage City. 87 57 73 ... 0.41 ...

Oswego. 88 60 75 ... 1.03 ...

Ottawa. 90 56 74 ... 0.11 ...

Pleasanton. 84 60 74 ... 0.29 ...

Sedan. 85 62 74 ... 2.04 ...

Topeka. 91 62 76 ... 2.06 ...

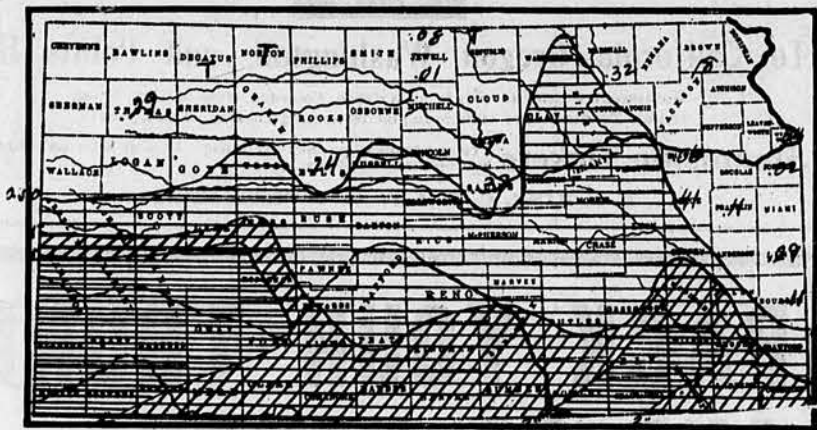
Toronto. 89 57 74 ... 1.55 ...

Wamego. 92 63 75 ... 0.75 ...

Division. 92 53 75 ... 0.72 ...

State. 96 45 74 ... 0.72 ...

RAINFALL FOR WEEK ENDING JULY 14, 1906.



SCALE IN INCHES:

Less than .50. .50 to 1. 1 to 2. 2 to 3. Over 3. T, trace.

GENERAL CONDITIONS.

Though the weather, the past week, was warmer than during the preceding week the temperature was still below the seasonal normal. The maximum temperature reached 96° at Colby and the minimum 45° at Hays and 46° at Harrison; with these exceptions the temperature was moderate. Over the southern half of the State the precipitation was ample, while in the extreme southwestern and southeastern counties it was much above normal. In the northern portion of the State the showers were light, amounting to only a trace in several instances, while some stations reported no rain. In the northern part of the State the precipitation generally occurred on one day, the 12th, but in the southern part it generally occurred on three days. The weather for the week was quite favorable.

CONDITION BY COUNTIES.

EASTERN DIVISION.

Allen.—The temperature this week was moderate excepting on the 13th and 14th, which were warm and sultry. Rainfall amounted to 1.05 inches and practically all fell on the 9th and 12th. Thunderstorms occurred on the 9th, 10th, and 12th.

Anderson.—The week was uniformly warm with rain on only one day, the 9th, when 0.28 of an inch fell.

Atchison.—While no rain fell the past week there were several heavy dews. The week was comparatively cool, the temperature not reaching 90° while the minimum was in the sixties for the whole week.

Brown.—The week was warm and rather dry as only 0.13 of an inch of rain fell. Maxima were generally in the nineties and minima in the sixties.

Chautauqua.—Temperatures have been seasonal this week. Rain fell on two days, and on two days there were fogs. The total rainfall was 2.04 inches.

Cherokee.—Heavy local showers occurred nearly every day of the week and were very beneficial. Temperatures were seasonal

though there was much cloudiness. The rainfall was 1.07 inches at Columbus.

Coffey.—This was a pleasant week with the temperature in the eighties every day till Friday when the weather was warmer. The rainfall amounted to 0.97 of an inch.

Franklin.—Temperatures were uniformly mild and the weather was partly cloudy most of the time. Showers amounting to 0.11 of an inch fell on four days.

Greenwood.—There were numerous local showers this week. The rainfall at Eureka was 0.81 of an inch and at Fall River 2.25 inches. The weather was generally partly cloudy with fog on the 10th and 11th.

Johnson.—This was an ideal July week. There were three days clear, three cloudy, and one partly cloudy. Rain is needed as only one light shower has fallen.

Oswego.—Maximum temperatures ranged in the eighties and minimum temperatures in the sixties every day of the week. Showers on three days amounted to 1.03 inches.

Linn.—Mild and partly cloudy weather prevailed this week with light showers on the 9th and 13th.

Lyon.—Temperatures were about the same each day, the maxima ranging in the eighties and the minima in the sixties. A very beneficial rain amounting to 0.57 of an inch fell on the 12th.

Marshall.—Local rains on the 12th were very heavy in some localities but amounted to only 0.32 of an inch at Frankfort.

Montgomery.—The week was warmer than the one preceding. It came in with the highest temperature, 92°, on the 8th, followed by a thunderstorm on the 9th, with 0.70 of an inch of rain. Light showers followed on the 10th and 11th, and on the 12th 0.43 of an inch of rain fell. A very humid atmosphere prevailed all week.

Osage.—The highest temperature was 88°, the lowest 57°, and the rainfall 0.41 of an inch.

Pottawatomie.—The week was mild with 0.75 of an inch of rain on the 12th.

Riley.—Uniform temperatures prevailed. A light shower on the 10th and a good rain on the 13th aggregated 0.59 of an inch. The highest temperature was 92° on the 11th and the lowest 55° on the 8th.

Shawnee.—Although temperatures were generally below normal the weather was oppressive, owing to a high relative humidity. A thunderstorm on the 12th gave 0.06 of an inch of rain, and the week closed with a promise of more. No high winds occurred. A dense fog was observed on the morning of the 11th.

Wilson.—The temperature has been seasonal. Heavy rains fell on the 9th and 11th and a light shower on the 12th. The total rainfall was 1.88 inches.

Wyandotte.—Although there was lack of rain, the week throughout furnished beautiful summer weather, with balmy days and refreshing nights. A thunderstorm passed over on the afternoon of Saturday, the 14th, but no rainfall resulted.

MIDDLE DIVISION.

Barton.—Showers fell on the 9th and 12th and fog occurred on four days. The maximum temperature was 88°, the minimum 58°, and the rainfall 0.69 of an inch.

Butler.—A week of cool and pleasant weather has just passed. Good showers on the 9th and 12th amounted to 0.67 of an inch of precipitation.

Clay.—Fine growing weather prevailed this week with a beneficial shower of 0.73 of an inch on the 12th.

Cloud.—Temperatures ranged from normal on the 10th to 7° below normal on the 13th. There was not a great amount of sunshine and only light showers fell. A dense fog occurred on the early morning of the 13th.

Ellis.—Warm, hazy days with light showers were the rule. The nights were cool and the wind light all week. There was a heavy fog

on the morning of the 10th.

Ellsworth.—A good shower on the 12th gave 0.57 of an inch of rain. The days were warm and the nights cool.

Harper.—A heavy rain on the 9th and a lighter one on the 12th amounting altogether to 1.11 inches, interfered with out-door work but were very beneficial.

Jewell.—Local showers on the 12th were generally light except in the northwest part of the county. There was much sunshine. The highest temperature was 90°, and the lowest 49°.

Kingman.—The week was cool and rather damp. Fog was observed on the 10th, 11th, and 12th, and the rainfall amounted to 1.63 inches at Norwich and 1.90 inches at Cunningham.

McPherson.—There was a moderate temperature with no high winds. Rains on the 10th, 12th, and 13th made a weekly rainfall of 0.51 of an inch.

Ottawa.—The week was cool and partly cloudy with high relative humidity. There was only a trace of rain at Minneapolis but a heavy rain was reported from the northeastern part of the county.

Pawnee.—Most of the week consisted of warm days, cool nights, and foggy mornings. Five days were clear and two partly cloudy. The highest temperature was 86°, the lowest 50°, and the rainfall 0.53 of an inch.

Pratt.—Generally fair and moderately warm weather prevailed through the week. Nice rains fell on the 9th and 12th. The extremes of temperature were 92° and 62°.

Reno.—There was comfortable weather all week with but little wind. Foggy mornings occurred on the 11th, 12th, and 13th. The extremes of temperature were 87° and 57°.

Republic.—Local showers fell in some parts of the county but only traces of rain at Republic. Five of the days were clear and two partly cloudy.

Saline.—The weather was favorable during the past week. No high winds or damaging rains occurred. The highest temperature was 92° on the 14th, the lowest 54° on the 8th, and the rainfall 0.38 of an inch on the 12th.

KANSAS FARMER.

Established in 1868.

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.

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Display advertising, 30 cents per line, agate (fourteen lines to the inch). Continuous orders, run for the paper, \$1.82 per inch per week.

Special reading notices, 30 cents per line.

Special rates for breeders of pure-bred stock.

Special Want Column advertisements, 10 cents per line of seven words per week. Cash with the order.

Electros must have metal base.

Objectable 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.

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FOR SALE—Some good young Shorthorn bulls just a year old by the 2300 pound Marshall Abbotts-burn 3rd 185305. Cheap, breeding and individual merit considered. D. Ballantyne & Son, Herington, Kans.

FOR SALE—Registered Holstein-Friesian bull and nine females; also 40 head of choice cows and heifers, a few of them fresh now and the balance will come fresh in the fall. M. S. Babcock, Nortonville, Kans.

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

FOR SALE—Registered Jersey cattle. Two yearling bulls. Sires—A son of Beebe Lewis, 32 lbs. butter 7 days, and "Financial Count" (imported); granddam held Island butter record 3 years. Sire's dam holds public milk record of 58 pounds daily, and his dam and Island winner in class for two years. Her four dams 22 to 25 quart cows, and all winners. Sayda Polo Jersey Farm, Parsons, Kansas.

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

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

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

A BUTTER-BRED Holstein bull calf—The best purchase for grade dairy herd. See report Santa Fe Dairy Educational Special. Start right in your breeding. Sixty-five head to choose from. Geo. C. Mosher, Hillcrest Farm, Greenwood, Neb.

FOR SALE—80 head of registered Hereford cattle, \$75 per head. Have quit farming. Would trade for Percheron horses or land. Hooper Monroe, Route 5, Lyons, Kans.

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

Sedwick.—Showers and thunderstorms occurred on the 9th and 10th, and sprinkles during the afternoons of the 11th and 12th. The temperature continued somewhat below normal during the week.

Stafford.—Rain fell on four days, the 9th, 10th, 12th, and 13th, making a total of 0.51 of an inch for the week. Temperatures were uniformly mild.

Washington.—Good local rains occurred on the 12th. Temperatures ranged from 94° on the 11th to 55° on the 8th.

WESTERN DIVISION.

Clark.—Good showers on the 8th, 9th, 10th, and 12th aggregated 1.31 inches of rain. The weather was generally clear and the temperature mild.

Decatur.—The week was marked by fine weather for out-door work. The highest temperature was 87° on the 13th, the lowest 52° on the 10th and the rainfall a trace. More rain is needed.

Ford.—The temperature was 10° below normal on the 8th but rose as the week progressed till it was normal on the 14th. A heavy downpour of 2.39 inches occurred on the 14th. Four days were clear, two partly cloudy, and one cloudy.

Hamilton.—Unseasonably cool weather prevailed on the 9th and 10th but the latter part of the week was more favorable. Heavy rains on the 8th, 11th, and 14th made a weekly total of 2.42 inches.

Norton.—The week was dry and clear with not much wind. There was no moisture. The highest temperature was 90° on the 13th, and the lowest 50° on the 8th.

Scott.—Warm days and cool nights were the rule this week. About a half an inch of rain was received in showers on the 8th, 11th, and 12th. The highest temperature was 87° on the 12th, and the lowest 54° on the 9th. There were 4 clear days, 1 partly cloudy day, and 2 cloudy days.

Sheridan.—The middle of the week was cool and cloudy but the latter part was hot and clear. No rain was received but it is beginning to be needed.

Thomas.—The minimum temperature, 54°, was reached on the 8th, and the highest, 96°, on the 14th. There was but little humidity in the air, making it appear cooler than it was. The rainfall was 0.23 of an inch.

Trego.—Maximum temperatures ranged in the eighties and minimum temperatures in the sixties most of the week. Showers on 5 days amounted to 0.74 of an inch.

REAL ESTATE.

FOR SALE—60 acre farm, 7 miles south of Omaha, 3 miles southeast of Bellevue, Nebraska. All good river bottom land suitable for gardening, fair improvements. Will sell or trade for Kansas land. L. F. Baumgart, North Cedar, Kans.

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, Rich Hill, Mo. Farm must be clear of encumbrance.

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Western Kansas Land

Twenty years a resident at Modoc. Write your wants. Reference, First State Bank, Scott City, Kansas. Correspondence Solicited.

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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 2,000 pounds. Mr. & Mrs. Henry Schrader, Wameka, Kans.

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

AGENTS WANTED.

Wanted—Gentleman or lady with good reference, to travel by rail or with a rig, for a firm of \$250,000 capital. Salary \$1,072 per year and expenses; salary paid weekly and expenses advanced. Address with stamp, Jos. A. Alexander, Topeka, Kans.

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

MISCELLANEOUS.

HONEY—New crop. Write A. S. Parson, 408 S. 7th St., Rocky Ford, Colo.

ORDER A FERRET and get rid of your rats. Cope Bros, Topeka, Kans.

6,000 FERRETS—Some yearlings, especially trained for rats. Book and circular free. Levi Farnsworth, New London, Ohio.

7,500 SHARES of Uncle Sam Oil Stock for sale at a bargain. Address R. F., care of Kansas Farmer, Topeka, Kans.

WANTED—Non-union molders. Call or write Topeka Foundry, 315 Jackson, Topeka, Kans.

DOGS AND BIRDS—For sale dogs, hogs, pigeons, ferrets, Belgium-hares, all kinds; 8c 40-page illustrated catalogue. C. G. Lloyd, Sayre, Pa.

WANTED—A good second-hand grain separator. Dr. Barker, Chanute, Kansas.

WANTED—At once sound young men for firemen and brakemen on railways; high wages; promotion; experience unnecessary; instructions by mail at your home; hundreds of good positions now open. Write National Railway Training Association, 620 Paxton Block, Omaha, Neb.

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Kansas Fairs in 1906.

Following is a list of fairs to be held in Kansas in 1906, their dates, locations, and secretaries, as reported to the State Board of Agriculture and compiled by Secretary F. D. Coburn:

Allen County Agricultural Society—Frank E. Smith, secretary, Iola; September 25-28.
Barton County Fair Association—W. P. Feder, secretary, Great Bend; August 28-31.
Brown County—The Hiawatha Fair Association—Elliott Irvin, secretary; Hiawatha.
Butler County Fair Association—W. F. Benson, secretary, Eldorado; October 1-6.
Chautauqua County—Hewins Park and Fair Association—W. M. Jones, secretary, Cedar Vale; September 11-13.
Clay County Fair Association—Walter Puckey, secretary, Clay Center; September 4-7.
Clay County—Wakefield Agricultural Society—Eugene Elkins, secretary, Wakefield; first week in October.
Cloud County Fair Association—F. W. Daugherty, secretary, Concordia; September 25-28.
Coffey County Agricultural Association—S. D. Weaver, secretary, Burlingame; September 18-1.
Cowley County—Eastern Cowley County Fair—J. M. Henderson, secretary, Burden; September 26-28.
Cowley County Agricultural and Live-Stock Association—W. J. Wilson, secretary, Winfield; October 9-12.
Elk County Agricultural Fair Association—E. M. Place, secretary, Grenola; September 19-21.
Finney County Agricultural Society—A. H. Warner, secretary, Garden City.
Franklin County Agricultural Society—Carey M. Porter, secretary, Ottawa; September 4-8.
Greenwood County Fair Association—C. H. Welser, secretary, Eureka; August 14-17.
Harper County—Anthony Fair Association—L. G. Jennings, secretary, Anthony; August 7-10.
Harvey County Agricultural Society—J. T. Axtell, secretary, Newton; September 25-29.
Jefferson County Fair Association—G. A. Patterson, secretary, Oskaloosa; September 4-8.
Jewell County Agricultural Fair Association—Henry R. Honey, secretary, Mankato; September 18-21.
Linn County Fair Association—O. E. Haley, secretary, Mound City; September 11-14.
Marshall County Fair Association—R. W. Hemphill, secretary, Marysville; September 11-14.
McPherson County Agricultural Fair Association—E. S. Guymon, secretary, McPherson; September 4-9.
Miami County Agricultural and Mechanical Fair Association—W. H. Bradbury, secretary, Paola; August 28-31.
Mitchell County Agricultural Association—J. E. Tice, secretary, Beloit; last week in September.
Montgomery County—Coffeyville Fair and Park Association—R. Y. Kennedy, secretary, Coffeyville; August 7-10.
Nemaha County Fair Association—V. B. Fisher, secretary, Seneca; August 29-31.
Neosho County—Chanute Fair and Improvement Association—A. E. Timpane, secretary, Chanute; August 28-31.
Ness County Agricultural Association—R. D. McKinley, secretary, Ness City; September 5-7.
Ness County—Utica Fair and Agricultural Association—R. C. Webster, Jr., secretary, Utica; August 30-September 1.
Norton County Agricultural Association—M. F. Garrity, secretary, Norton; August 28-31.
Osage County Fair Association—M. Carnaveaux, secretary, Burlingame; September 18-21.
Reno County—Central Kansas Fair Association—A. L. Sponsler, secretary, Hutchinson; September 17-23.
Republic County Agricultural Association—W. R. Wells, secretary, Belleville; September 11-14.
Rice County Agricultural and Live-Stock Association—F. L. Goodson, secretary, Sterling; August 1-3.
Riley County Agricultural Society—W. B. Craig, secretary, Riley; August 28-31.
Rooks County Fair Association—E. L. Williams, secretary, Stockton; September 18-21.
Shawnee County—Kansas Exposition Company—R. T. Kreipe, secretary, Topeka; September 10-15.
Smith County Fair Association—M. A. Dimond, secretary, Smith Center; August 21-24.
Stafford County Fair Association—P. O. Gray, secretary, St. John; August 22-24.
Sumner County—Mulvane Agricultural Association—Robt. P. Seyfer, secretary, Mulvane.
Wilson County—Fredonia Agricultural Association—V. L. Polson, secretary, Fredonia; August 21-24.

Leading Western Fairs and Live-Stock Shows for 1906.

August 24-31, Iowa State Fair, Des Moines.
August 30-September 7, Michigan State Fair, Detroit.
August 31-September 7, Nebraska State Fair, Lincoln.
September 3-8, Minnesota State Fair, Hamline.
September 10-14, Colorado State Fair, Pueblo.
September 10-14, West Michigan Fair, Grand Rapids.
September 10-14, Wisconsin State Fair, Milwaukee.
September 10-15, Interstate Fair, Sioux City, Iowa.
September 10-16, Kansas State Exposition, Topeka.
September 17-21, Kansas State Fair, Hutchinson.
September 24-29, Interstate Live Stock and Horse Show, St. Joseph, Mo.
September 28-October 5, Illinois State Fair, Springfield.
September 29-October 5, Missouri State Fair, Sedalia.
October 6-13, American Royal Live-Stock Show, Kansas City.
December 1-8, International Live-Stock Exposition, Chicago.

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After receiving and using 5 gal., if not satisfactory, return the balance, with bill of lading, and I will refund full price paid for said oil.

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