

KANSAS FARMER



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Established 1863. \$1 a Year



From a painting by Henri Lerolle

Our illustration is from a very famous painting. It finely illustrates the humble birth of the Great Teacher whose example and precepts have powerfully affected the world for good and are now exerting their transforming power more than at any other time in the nearly two thousand years since the event so graphically shown in the picture.

TELEPHONE QUESTIONS.

EDITOR KANSAS FARMER:—In your issue of September 6, 1906, in answer to a corporation question relative to a mutual telephone company, you referred to Chapter 23, section 34, General Statutes of Kansas, stating that "they required the directors to open books for receiving subscriptions, and to keep these books open until all of the stock is subscribed."

I wrote to the Secretary of State asking him if he had a pamphlet containing the foregoing, and he said not. He referred me to section 1275 of the General Statutes of 1901, but did not give the words. Will you kindly print the reading of this section?

Our local telephone company is a cooperative one with a capital stock of \$10,000, divided into 200 shares of \$50 each. One hundred twenty-three shares have been sold, no member owning more than one share. It seems

that the remainder of the shares can not be sold unless they are sold to members, thus giving some members more than one share. The majority of the stockholders are opposed to members owning more than one share, although the Kansas law says that "a member of a cooperative corporation can have but one vote, regardless of the number of shares he may own." They seem to think that this law is not a sufficient safeguard, and that it would enable the members who owned more than one share, to combine and change the cooperative feature into a joint stock corporation where every share would vote.

The company owes about \$2,000 on its plant, which should be paid with money raised from the sale of stock, and not from assessments, as the rentals are sufficient to meet all the operating expenses. Some extensions are needed, but some are opposed to making them, because the company is in

debt. Hence, the company is handicapped in giving the public the service it needs.

What course would you advise us to pursue? Geo. J. SOWERS.

Johnson County.

The writer can not understand why the Secretary of State should have referred this correspondent to section 1275 of the "Revised Statutes." This section treats of conveyances and not of corporations. The section from Chapter 23 of the "General Statutes," to which reference was made in THE KANSAS FARMER of September 6, is section 1350 of the "General Statutes." The requirement of this section is correctly stated by our correspondent.

The law authorizing the incorporation of "cooperative societies" is contained in sections 1519, 1520, and 1521 of the General Statutes, and provides as follows:

"Sec. 1519. That twenty or more persons in this State may organize and in-

corporate a cooperative society or company, in the manner and form provided by law in other cases [the law from which our correspondent quotes] for the purpose and to the end of more successfully promoting and conducting any industrial pursuit.

"Sec. 1520. Every such society or company when so organized shall enjoy all the rights, privileges, and powers conferred by law on other chartered or incorporated companies in this State.

"Sec. 1521. The shareholders in any such society or company shall each have but one vote in all matters pertaining to the business of such society or company, without any regard to the number of shares owned."

The two particulars in which the cooperative corporation differs from any others are, first, that it must have at least twenty members, whereas other corporations may have as few as five stockholders or members; second, in

the cooperative corporation no stockholder may cast more than one vote, whereas in other corporations a stockholder casts as many votes as he has shares or proxies, or both shares and proxies. In the cooperative corporation it is impossible for any stockholder to gain control of the company in the usual way. But the fears of those who dread oppression from a large stockholder are not without cause. Shares in the cooperative company are subject to sale and purchase. The owner of a majority of the stock can sell one share to each of several persons who will do his bidding and thus control the elections and policies. He may sell such shares on time, or in any way that suits him, and may buy them back after they have been voted.

But under section 1350 of the General Statutes the directors must open subscription books to the public in case the stock has not all been subscribed.

There are at least two ways open for those who desire to preserve the cooperative feature of the company. The first is to secure subscribers for the remaining stock. The second is to decrease the capital stock to the amount already subscribed. Provision for decreasing capital stock of corporations is contained in section 1346 of the General Statutes. This section reads as follows:

"Section 1346. Any corporation created under the laws of the State of Kansas and not now having authority under said laws of said State to decrease its capital stock shall have power and is hereby authorized to decrease the amount of its capital stock as provided in this act. The president of the corporation shall, upon request of the holders of one-fourth of the outstanding stock of the corporation, and the board of directors may, without such request, if they deem it advisable, call a meeting of the stockholders for the purpose of determining whether the amount of the capital stock shall be decreased. Notice of such meeting shall be given to the stockholders in the manner and time provided in the by-laws, and in the absence of such provision ten days' notice thereof shall be given to the stockholders personally or by mail. If at such meeting not less than two-thirds of the outstanding stock, or, if the stock be of different classes, then two-thirds of the stock of each class, be voted in favor of such decrease, a certificate of such decrease, under the corporation seal, signed by the president and secretary of the corporation and acknowledged by the president before an officer authorized to take acknowledgement of deeds, shall be filed in the office of the Secretary of State, and upon the filing of the same the charter of said corporation shall be deemed to be amended accordingly; and a copy of such certificate, showing the date of filing thereof, duly certified by the Secretary of State, shall be taken and accepted in all courts and places as evidence of such decrease: Provided, no banking corporation shall decrease its capital stock below the minimum provided by law."

This course, while it would probably result in retaining control of the company in the hands of present stockholders, would neither provide for the payment of the debts nor for extensions. It is customary in all large corporations to carry considerable indebtedness in the form of funded loans. If the company is well managed and earning fair returns on the money invested, the mortgage note of the corporation ought to make a fairly attractive investment for some one having money to loan. Extensions of railroads and other large enterprises, including telephones, are frequently financed by loans secured by mortgage. The editor does not advise the adoption of this plan. If he were a member of the company he would, basing his preference on his present information, favor selling unsubscribed stock to raise money to pay the debts and make extensions.

THE SALTON SEA.

A newly formed body of water exists in Southern California near the Arizona line, and extends somewhat into Mexico. The history of the formation of this inland sea is interesting. The fact of its existence is by some thought to be important. To some its future enlargement bodes calamity.

The Gulf of California doubtless once extended far up into what is now the United States. The silt carried into the Gulf by the Colorado River was deposited and gradually raised a ridge which in the course of ages became higher than ocean level. The river kept open a channel through the top of this elevation. The delta formed,

where the waters of the river met those of the Gulf, widened until a dam which shut the waters from the Gulf out from the northern portion of its bed was formed. Evaporation finally dried up the inland sea that the delta had cut off. The river continued to pour its waters along the channel in the back of the ridge and into the remaining portion of the Gulf. Doubtless there were many overflows from the river into the inland sea, or salt lake, but successive deposits of silt and the drifting of sand and soil by the winds finally compelled the river to keep on its way to the Gulf below.

The dried-up sea was called a "sink" by the early explorers. Being far below sea level and well south it was intolerably hot at bottom. But around the margins the soil is fertile, and it was only necessary to apply water to make it productive.

There was the great Colorado River flowing in immense volume along land higher than the lands of its valley. To tap the river was easy. To convey its waters to the lands was a mere matter of canals. A company was formed; the river was tapped; ditches were made; irrigation was successful; the lands proved productive, and a great future was in view of the "Imperial Valley."

Then came a flood of the Colorado River. It enlarged the irrigators' opening in the bank of the river until the whole stream poured into the Imperial Valley. The break was on the Mexican side of the line, but the water rushed through canals and made for itself channels towards the north nor stopped until it had reached the lowest levels of the ancient sea. For months the water ran. The Southern Pacific Railroad had to be moved to higher ground. The railroad company undertook to close the opening and direct the river again to its former channel. At the expense of several months' labor, costing some millions of money, the railway company finally succeeded and the flood was stayed before the rapidly forming sea had reached the lands of the farmers.

But another flood of the Colorado has again opened the passage and the problem is again demanding solution. The Director of the U. S. Geological Survey estimates that if the river be allowed to have its way \$70,000,000 worth of land and other property will be sacrificed. The cost of again closing the opening and forcing the river to resume its old channel is estimated at \$2,500,000.

But the formation of the new body of water is not considered by everybody to be an unmixed evil. The following from Ranch and Range presents a cheerful view of the effects of the new conditions:

Major George J. Inman, who is well known throughout the Southwest, is one of those who believe that the Salton Sea is the cause of the phenomenal meteorological change which has come over the whole Southwest, including all of Western Kansas, Texas, and Oklahoma, during the past two years. Its beneficent influence extends far down into Mexico, it is contended. Major Inman is interested in a large American colony enterprise in the northwestern part of the state of Chihuahua. He says that the change which has taken place in the section where his colony is located during the last two years is marvelous. When the colonists settled there it was supposed that nothing could be raised on the land without irrigation. Since the Salton Sea made its appearance the rainfall has been abundant and big crops are raised without irrigation. The same thing is true throughout the Southwest.

Major Inman says that he will take up the Salton Sea matter with President Roosevelt and President Diaz with the view of obtaining the cooperation of the United States and Mexican governments in preserving the new body of water. It is claimed that if the sea is permitted to remain the United States Government will be saved millions of dollars that would otherwise be expended in reclaiming arid lands by irrigation projects.

Major Inman, in discussing the subject, said:

"The meteorological changes covering all the Southwest and a portion of Northwestern Mexico, which have occurred as a direct result of this new inland sea, have been marvelous during the last two years. In a few more years, if the Salton Sea is left undisturbed, all the vast arid West will undergo a complete change and will be made to 'blossom like the rose.' More changes will come about than can now

be dreamed of. On account of the increased rainfall that has begun to fall in the Southwest, the Rio Grande and other rivers will have their present channels overtaxed to carry the water off. Perhaps whole towns situated in the valleys of these streams will be forced to move to higher ground.

"It is not at all ridiculous to attribute this wide range of power to the effects of the Salton Sea. Covering thousands of square miles area in what was once a desert several hundred feet below the level of the ocean, it will not only keep the air saturated with moisture, but by altering the temperature it will change the direction of winds and operate in a number of ways to revolutionize the climatic conditions of the Southwest."

It is the theory of those who believe that the apparent change of climatic conditions in the Southwest is due to the Salton Sea, that before the advent of that body of water clouds from the Pacific Ocean, which were laden with moisture, were unable to get across the great expanse of desert. The terrific heat from the parched and blistering sand rose into the air and dissipated the moisture. This made the region to the east of the desert arid and unfit for agricultural development. Occasionally in the winter season clouds would get across the desert and rains would ensue in the arid region. Since the thousands of square miles of desert is now covered to a depth of 10 to 120 feet with water, the moisture-laden clouds are able to pass across into the formerly arid region of Arizona, New Mexico, and Western Texas and abundant rains are the result.

The flow of water into the Salton Sea has recently been stopped by railroad companies which built vast dams. In a year or two the water in the vast sea will be evaporated and it will be desert again.

It requires a pretty vivid imagination to see any considerable amount of moisture carried from this little inland lake over mountains and high plains for a distance of some 400 miles to the nearest point of Texas. Still greater imaginative athletics are necessary to conceive of rain clouds forming from moisture carried over more mountains and highlands of the nearly 800 miles, as the bird flies, to Kansas. It may be well for the immediately surrounding country to allow the salt- and soda-impregnated sands of the sink to be covered with water, but the Colorado River should be brought under such control as to protect the farms under the rim of the basin. In any event, Kansans will scarcely expect their State to permanently revise its rain record on account of the Salton Sea.

REPLANTING AN OLD APPLE-ORCHARD.

EDITOR KANSAS FARMER:—Having been a reader of THE KANSAS FARMER for some time and observing the advice given through its columns (treating on many subjects) to be, as a rule, very instructive, I thought possibly you would give a little advice in regard to planting young apple-trees.

We have an old orchard that was planted many years ago, and part of the trees have died. The ground is heavily sodded with blue-grass. Would it be advisable to break up the sod and plant young apple-trees between the former rows of old trees, they having been cleared away?

I would like to replant part of the orchard if it would be prudent to follow such a course.

H. N. RICHARDSON.

Republic County.

The experience of orchardists is against resetting. The place where an apple-tree has lived and died is a hard place for a successor. General J. B. McAfee planted an orchard near Topeka many years ago. Being fastidious about the appearance of his place as well as anxious to maintain a good stand as more profitable than a broken stand, he spared no labor to make a new tree grow in every place where one died. He dug enormous holes and filled them with soil from another field and added abundance of manure. For all this labor his resetting did no good.

A few years ago the writer was looking through a fine young orchard near Tonganoxie, in Leavenworth County, the property of Judge Fred Wellhouse, the "apple king." We were admiring a block of Jonathan apple-trees. Every orchardist knows that the Jonathan is a good tree. There was a fine stand of clover in this orchard. A more attractive sight could scarcely be imagined. Suddenly a square was reached in which there were no living trees

save a few indifferent ones around the edges of the square. "What's the matter here?" was the natural inquiry. "Here is where we raised our trees for setting the orchard," was the reply. The clover grew as rank among the dead and dying trees as elsewhere in the orchard, but the apple-trees would not grow where apple-trees had grown before.

The view of the editor is that this correspondent will find it more profitable to plant a new orchard on other land than to try to grow young apple-trees in the old orchard. Peach-trees may do well in the old apple orchard and be made to occupy the vacant places while the other old apple-trees last.

THE KANSAS FARMER will be pleased to hear the experience of any who have ever had or observed success in replanting an old apple-orchard.

BUTTER REGULATIONS UNDER PURE-FOOD LAW.

It would indeed be surprising if the new and far-reaching pure-food law, which is to go into effect with the beginning of the year, should be found perfect. Manufacturers, whose products are to be affected by it, are studying its provisions with the greatest care. Some are finding in the law and the regulations what seem to them impossible standards. So far as these affect only trust-made goods, the public will not become very anxious, for the public believes the trusts to be able to protect their own interests.

Butter is about the only Kansas product that is made and sold by farmers, and that is likely to be affected by the food-law standards. Some statements made with reference to butter and the law may well be considered now. For the following we are indebted to W. F. Jensen, vice-president and general manager of the Continental Creamery Company:

The legal requirements of England, Denmark, and other European countries, and of Australia and New Zealand are that butter shall contain not more than 16 per cent of water. Such butter contains on the average the following constituents:

	Per cent.
Butter-fat	80.0
Casein	1.5
Salt	2.5
Water	16.0
Total	100.0

Markets differ greatly in the salt required to give the desired flavor. The English market is satisfied with 2 to 2½ per cent of salt. The Pacific Coast requires 2½ per cent; the South, 3 to 4 per cent; while the New England market requires 4 to 5 per cent of salt.

The Continental Creamery finds it quite practicable to produce butter averaging only 14 per cent of water. Butter for export to England, the chief foreign market, can thus be made of average composition as follows:

	Per cent.
Butter-fat	82.5
Casein	1.5
Salt	2.0
Water	14.0
Total	100.0

The new requirements provide that butter shall contain not less than 82.5 per cent butter-fat.

"Such butter," says Mr. Jensen, "barely meets the minimum legal requirements. But," he adds, "in putting up butter from the same churning and working, there are almost certain to be variations of as much as 2 per cent in the percentage of butter-fat in the several packages." Two per cent from the average in this export butter would leave only 80.5 per cent butter-fat. But the legal standard requires not less than 82½ per cent butter-fat, so that the variations that are certain would condemn much of such butter as "adulterated." To avoid such contingency it will be necessary to make butter containing an average of 84½ per cent of butter-fat. Mr. Jensen claims that if this be done, the butter will have a hard and undesirable consistency, that it will not spread well, and that its flavor will be seriously depreciated.

Under the new law it will be necessary for New Englanders to reform their taste and cultivate a liking for less salt in their butter, or to buy the product of the butter-makers of their own States, or to resalt the good butter they have been in the habit of buying from the West.

The Continental Creamery Company buys vast amounts of country butter which it makes over, "renovates." As this butter comes in, the chemist tests it for butter-fat. During August, September, and October country butter is found to contain 77 to 78 per cent of

butter-fat. During May and June it is found to contain 80 to 81 per cent of butter-fat.

Of course such butter could not be sold across State lines under a law requiring 82.5 per cent as a minimum of butter-fat. Should a similar law be enacted in Kansas, this country butter could not be sold at all.

STATE FARMERS' INSTITUTE.

The State Farmers' Institute, which has been pretty thoroughly advertised throughout the State, will open Thursday, December 27, at the Agricultural College, Manhattan. This institute offers a very fine opportunity for enterprising farmers, young and old, to more thoroughly equip themselves for modern farming. Kansas is a live-stock State, a corn State, and a wheat State. One of the great needs in the live-stock business is a wider knowledge of the art of judging stock. Therefore, the State Institute will offer nine days' drill in judging hogs, sheep, horses, and cattle, with lectures on breeding and feeding. It is hoped, therefore, that several hundred farmers and stockmen will come to Manhattan and take this full nine days of work in stock-judging.

"Corn is king" in Kansas, and it is, of course, appropriate that the State Agricultural College should offer this very fine opportunity of getting a thorough and careful drill in all phases of corn-growing. Professor TenEyck, of the Agricultural College, is admitted to be the best authority in the West on this subject, and will offer to the farmers who attend the institute nine days of careful work, both in the lecture room and in the judging room.

This State Institute is offered free to all who will attend. These men willingly devote their entire vacation time to this extra work and no fees of any kind are charged. Therefore, when such a remarkable opportunity is offered, the attendance of the farmers and stockmen should be very large, and certainly ought not to be less than 1,000. This work will begin promptly at 8 o'clock on Thursday morning, December 27, and all who wish to enter for the regular nine-day institute should plan to reach Manhattan, Wednesday, December 26. All are requested to register at the office of the superintendent Farmers' Institute in the agricultural hall. All who wish to attend should write to Mr. W. W. McLain, secretary of the Y. M. C. A., for boarding accommodations. The railroads will give one fare plus 50 cents for the round trip.

BLOCKS OF TWO.

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

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

President Roosevelt reports in a special message to Congress that the great work of making a canal across the Isthmus of Panama is progressing satisfactorily. Sanitation is good. He saw only one mosquito and that was not of a dangerous kind. The construction of the canal is a stupendous work. Its importance would quickly become apparent on the occurrence of a war in the Pacific in which this country might be involved. It is also important in an economic way on account of the changes in routes of transportation and in commercial relations as affecting the great central regions of the country. The railroads are getting ready for the change by securing direct connections with the Gulf of Mexico. Every great system is likely to have such connection. Kansas can well afford to take her share of the ultimate consequences.

It is reported that a great fuel-famine threatened disaster to many people in Minnesota and the Dakotas. The Interstate Commerce Commission instituted an inquiry which resulted in rushing forward train-loads of coal.

The newest book, one that every farmer in Kansas ought to have, is "The Book of Alfalfa," by F. D. Coburn. It is a volume of 336 pages, and is published by the Orange Judd Company. There are 26 chapters in the

book. The illustrations number 289. Some excerpts giving an idea of the scope and thoroughness of the treatment Mr. Coburn gives to the subject will appear in THE KANSAS FARMER in the near future.

It is now stated that the much-talked-of car-shortage is not a car-shortage at all but an engine-shortage. The machinists' union claims that in the case of at least one road this engine-shortage results from the inability of the Union and the management to agree upon some point which the public has forgotten if it ever knew. All quibbles ought to disappear before the suffering of humanity for lack of transportation facilities.

Miscellany

Farmers for Regents.

The Governor will soon appoint three new members of the board of regents of the Kansas Agricultural College and Experiment Station. Hon. J. W. Berry, Hon. J. O. Tulloss, and Hon. E. T. Fairchild are the members of the board whose terms expire in January, 1907. Hon. E. T. Fairchild, who was elected State Superintendent of Public Instruction, can not be reappointed. All friends of the Agricultural College will regret to have Mr. Berry and Mr. Tulloss retired from the board, but if their places are to be filled by others, it does not seem out of place to suggest that the farmers be given a representation on this board, which controls an institution that is so closely connected with the welfare of agriculture in this State.

At present the farmers are not directly represented by any member of the board of regents. Several of the members own farms and doubtless all are indirectly interested in farming, as all Kansas people must be interested in the industry which produces nearly all the wealth and business of the State.

Only praise can be given the present board for the excellent progress made and the work done by the faculty of the college and experiment station staff during the last few years, under the wise management of Pres. E. R. Nichols. But as a matter of justice the agricultural industries of the State should be represented on the board of regents by "real" farmers; men who are actually engaged in growing corn and wheat and raising live stock. It would seem also that such men ought to be well qualified to direct the work of such an institution and they should certainly be better qualified to understand the work of the experiment station and provide for the development of the distinctly agricultural departments of the institution than men who are only indirectly interested in farming and who may be actually engaged in some other business or profession.

It is really an insult to the intelligence and ability of our agriculturists (perhaps not intentional) that some of their number can not be found who are worthy and willing to participate in the management of the institution,

which of all others exists for the welfare of the farmers and their children.

Every farmer who reads this article, who takes pride in his profession, and who believes that we have men among us directly engaged in the business of agriculture, well qualified to fill a position of honor and trust on the board of regents of the Kansas State Agricultural College, should write to Gov. E. W. Hoch, calling his attention to this fact.

Do not fail to name several available men so that the Governor will see that he has good material from which to choose.—Kansas Agricultural Review.

THE INTERNATIONAL SUNDAY-SCHOOL LESSON.

(Copyright, Davis W. Clark.)

Fourth Quarter. Lesson XII. Luke xxiv, 36-53. December 23, 1906.

Jesus Ascends Into Heaven.

Only by matching Scripture to Scripture will we have a complete delineation of this transcendent scene. Take, for example, the closing verses of the gospels of Mark and Luke, the opening paragraph of the Book of Acts, and Psalm lxxviii, 17-18.

On a certain day, conspicuous and memorable, last of the forty mystic days since His resurrection, Jesus led His disciples to well-remembered Olivet. Together they went down into the deep chasm and across the Brook Kedron, past Gethsemane, place of agony and betrayal, along the oft-trodden road, the very way by which, strewn with garments and palm branches, He had approached the city in triumph, and so on toward Bethany.

The text in Acts reads, "And being assembled together with them," the margin reads, "Eating together with them." This was the real "last supper." Under some grateful shade, beside some brimming fountain, they sat.

The ten recorded appearances, and the many not recorded had helped to wear away in good part the preternatural character of the risen Savior's associations with His disciples, so that this last instance of personal contact was preeminently natural, social, and solacing.

Under these favorable conditions, Jesus' last commands, which are of inexpressible importance, are now communicated. Personal safety would have suggested to the disciples immediate flight from Jerusalem. Two days would have taken them to happy Galilee, with its comparative security—far from the melancholy scenes of the Savior's betrayal, humiliation, and death. But Jesus offsets the dictates of heart and flesh with His direct command that they should not depart from Jerusalem. He promises the effusion of the Spirit. Here inveterate racial prejudices intrude the question whether this is the time when the kingdom will be restored to Israel. Jesus' patience is unflinching. He shows how an exclusive pride of race can have no place in the world-wide dimensions of His coming kingdom.

Frederick W. Robertson has spoken discriminating words upon progress by "oblivion of the Past." But there is also a helpful oblivion of the Future—there is a blessedness in not knowing

"times and seasons" with absolute precision. The disciples are encouraged by the affirmation that the kingdom is near. They are not told how near in order that they may be alert.

It is surprising to notice that the commentators magnify the resurrection of the Lord at the expense of His ascension. Among all the lives of Jesus, scarcely one devotes more than a single paragraph to the latter scene. This is philosophically wrong. The whole life of Jesus was an ascending scale. It was progressive and cumulative. The last scene on Olive's brow was a splendid golden climax and triumph of the inspiration of which the church ought not to be robbed.

The last attitude in which Jesus appeared on earth was that of hands outstretched in benediction. "And He lifted up His hands and blessed them; and while He blessed them—" Could anything be more significant? The whole tenor and purpose of His life was to bless. What mute significance in this last act and attitude.

While in this very act He was parted from them—literally, "He stood aside from them"—as the minister stands apart from his congregation in plainest view of all. Every disciple had an equally favorable opportunity to witness the spectacle. Every eye beheld Him. While His hands were still extended in benediction He was "taken up"—possibly by a convoy of angels. "The chariots of God are twenty thousand, even thousands of thousands."

Again, a cloud received Him out of their sight. No ordinary cloud, this! A royal chariot of fire awaited Him who makes the clouds His chariot. This was the shekina, the effulgent flame of the Divine Presence. The glory of God the Father covered the retreating form of God the Son. This was a spectacle, the majesty of which shall only be equalled by the "second appearing of the great God and our Savior."

No wonder that as the apostles gazed upon the ineffable scene they worshiped they burst forth into adoration and praise. Thus they stood long after the radiant spectacle had vanished. They were riveted to the spot. They gazed wistfully into the heavens as if they longed to follow their ascending Lord or to see Him return.

Jesus, even in the midst of His triumph, was tenderly mindful of His disciples. He detached two of the angels from His train and dispatched them to break the spell which held the disciples as if in chains. How tenderly these ministering spirits, in their bright festive garments, accomplished their task! There is just the gentlest possible rebuke of this continued and wistful gazing, and there is joined to it the delightful and inspiring promise of Jesus' sure return in equal glory.

And now, the spell broken, the disciples take their Sabbath day journey from Bethany into Jerusalem, "with great joy, praising and blessing God."

TO CURE A COLD IN ONE DAY.

Take LAXATIVE BROMO Quinine Tablets. Druggists refund money if it fails to cure. E. W. GROVE'S signature is on each box. 25c.

What instrument of war does the earth resemble? A revolver.

It is the great souls that alone are not alone.

Stock Interests

PURE-BRED STOCK SALES.

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

January 4, 1907—Poland-Chinas, B. M. Bell, Beatle, Kansas.

January 9, 1907—Shawnee Breeders Association, sale of Shorthorns, at Topeka State Fair grounds, I. D. Graham, secretary.

January 9-10-11, 1907—Percheron, French Draft, Shire and Clydesdale stallions, mares and fillies at Bloomington, Ill. D. Augustin, Carlock, Ill., and C. W. Hurt, Arrowsmith, Ill.

January 10, 1907—R. B. Marshall, Willard, Kans., Duroc-Jerseys.

January 11, 1907—Grade Draft, Coach, Trotting bred, All Purpose and Saddle horses, mares and geldings, at Bloomington, Ill. D. Augustin, Carlock, Ill., C. W. Hurt, Arrowsmith, Ill.

January 12, 1907—W. R. Peacock, Sedgwick, Kans., Poland-China bred sow sale.

Jan. 17, 18 and 19, 1907—Shorthorns, Aberdeen-Angus and Herefords, South Omaha, Neb., W. C. McGavock, Mgr., Springfield, Ill.

January 29, 1907—Grant Chapin, Greene, Clay County, Duroc-Jerseys.

February 2, 1907—Shorthorn cattle, W. J. Snodgrass, Douglass, Kans.

February 5, 1907—C. A. Cook, Salem, Nebr., Duroc-Jerseys.

February 6, 1907—E. M. Jenkins & Son, Byron, Nebr., Poland-Chinas.

February 6, 1907—Wm. Brandon, Humboldt, Neb., Duroc-Jerseys.

February 7, 1907—R. F. Miner, Tecumseh, Nebr., Duroc-Jerseys.

Feb. 7, 1907—Ward Bros., Republic, Kans., Duroc-Jerseys.

February 8, 1907—T. J. Charles, Republic, Kans., Poland-Chinas.

February 8, 1907—A. J. Russell, Crab Orchard, Nebr., Duroc-Jerseys.

February 9, 1907—Poland-Chinas, C. O. Parsons, Clearwater, Kans.

February 12, 1907—John Morrison & Son, College View, Neb., Poland-Chinas.

February 12, 1907—Duroc-Jerseys, T. P. Teagarden, Wayne, Kans.

February 13, 1907—Poland-Chinas, H. B. Walters, Wayne, Kans., at Concordia, Kans.

February 13, 1907—J. B. Davis & Son, Fairview, Kans., Duroc-Jerseys.

February 13, 1907—W. A. Kirkpatrick, Lincoln, Neb., Duroc-Jerseys.

February 13 and 14, 1907—W. H. Cottingham & Son, McPherson, Kans., horses, Shorthorn cattle and Poland-China hogs.

February 14, 1907—Gliber Van Patten, Sutton, Neb., Duroc-Jerseys.

February 14, 1907—Poland-China bred sow sale at Abilene, Kans. L. D. Arnold, Route 1, Enterprise, Kans.

February 15, 1907—Frank Dawley, Osborne, Kas., Poland-Chinas.

February 15, 1907—Geo. Briggs & Son, Clay Center, Neb., Duroc-Jerseys.

February 15, 1907—Duroc-Jerseys, F. W. Wettrick, Falls City, Neb.

February 16, 1907—Roberts & Harter, Hebron, Nebr., Duroc-Jerseys.

Feb. 18, 1907—C. W. Taylor, Pearl, Kans., Durocs.

February 19, 1907—Jno. W. Jones & Son, Concordia, Duroc-Jerseys.

February 19, 1907—Sixth annual sale of Whitewater Falls Percheron stallions and mares at Wichita, Kans. J. W. & J. C. Robison, Towanda, Kans.

December 19, 20, 1906—Webber, Apperson & Co., Tecumseh, Neb., Berkshire, Shorthorns, Polled Durhams and Jersey cattle.

February 22, 1907—Poland-Chinas, Lemon Ford, Minneapolis, Kans.

Feb. 20, 1907—J. E. Jolnes, Clyde, Kansas, Duroc-Jerseys.

Feb. 21, 1907—Leon Carter & Co., Asherville, Kans Duroc-Jerseys.

February 23, 1907—Peerless Perfection and Grand Perfection Poland-China bred sow sale. Harry E. Lunt, Burden, Kans.

February 23, 1907—J. C. Larrimer, Derby, Kans., Poland-Chinas.

February 25, 1907—Poland-Chinas, Bollin & Aaron, Leavenworth, Kans.

February 26, 1907—G. E. Avery, at Kansas State Agricultural college, Manhattan, Kans., Aberdeen-Angus cattle.

February 26, 1907—Poland-Chinas, Holmes & McDaniel, Edmund, Kans.

February 27, 1907—Poland-Chinas, W. H. Bullen, Belleville, Kans.

March 21, 1907—Elderlaw Shorthorns at Manhattan, Kans. T. K. Tomson & Sons, Dover, Kans.

April 3, 4 and 5, 1907—Herefords, Aberdeen-Angus and Shorthorns, Kansas City, Mo., W. C. McGavock, Mgr., Springfield, Ill.

May 1, 2 and 3, 1907—Aberdeen-Angus, Shorthorns and Herefords, South Omaha, Neb., W. C. McGavock, Mgr., Springfield, Ill.

Improved Stock Breeders Association of the Wheat Belt—Feb. 13, 14, 15, 1907, at Caldwell, Kans. Chas. M. Johnston, Caldwell, Kans., manager.

Relation of Cost of Feeds to Profits in Cattle-Feeding.

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In attempting to estimate the probable number of cattle that will be fed during any given season, and the probable profit or loss to the cattle-feeder, there is no factor that is more frequently mentioned than that of the cost of feeds. From this we may assume that this factor, if not the most important one affecting profits in cattle-feeding, is certainly one of great importance and one that should be thoroughly understood by every man engaged in the business of finishing cattle for the market. Live stock journals begin as early as July and August to anticipate the probable size of the corn-crop, the probable demand for the same, and the bearing of these factors on the cost of corn to the cattle-feeders of the country. The cattle-feeder is inclined to wait until he can form some intelligent opinion as to what the market value of corn will be before he decides to what extent he will engage in the cattle-feeding enterprise. This is well, for, other things being equal, the cost of feeds determines the cost of gains and the cost of making gains has a very direct bearing upon profits and losses in cattle-feeding.

A discussion of this subject upon the basis of feeding the steers a simpler action like broken ear-corn and clover hay will be most helpful. At the Illinois Experiment Station the writer fed a car-load of choice, well-bred 2-year-old Shorthorn feeding cattle from November to June, or in other words, during a six-months' winter

feeding period on broken ear-corn and clover hay. These cattle weighed approximately 1,000 pounds at the beginning and made an average daily gain per steer for the six months of slightly over two pounds. To be exact, the total gain per steer was 386.27 pounds. Just enough hogs followed the steers to consume the whole corn in the droppings of the steers to advantage. No additional feed of any kind was supplied for the hogs. In this way it was determined that 74.13 pounds gain on hogs was made per steer fed. It took 57.73 bushels of corn and approximately 0.8 of a ton of clover hay to secure the above gain on steer and pig. It is probably that the gains made per unit of feed were larger than those usually secured by corn-belt cattle-feeders. Stated in terms of beef and pork per bushel of corn fed, it would be 6.69 pounds beef and 1.29 pounds pork per bushel of corn fed. With these figures as a basis, we may assume that it would be fair for purposes of this discussion to consider that 6 pounds of beef and 1.14 pounds pork (75 pounds per steer in six months) may be made from a

EXHIBIT B.					
Assumed price of corn per ton.	Assumed price of hay per ton.	Disbursements.	Receipts.	Profits per steer.	Net cost per pound of gain—pork credited.
\$0.30	\$ 5.00	\$69.00	\$84.02	\$14.22	\$0.053
0.35	7.50	75.60	84.02	8.42	0.068
0.40	10.00	81.40	84.02	2.62	0.082
0.50	10.00	88.00	84.02	-3.98*	0.099
0.60	10.00	94.60	84.02	-10.58*	0.116

*These figures represents losses.

bushel of broken ear-corn supplemented with clover hay where the corn is fed to well-bred 2-year-old feeding cattle with hogs following them to consume the waste. It should be stated that the load of cattle fed was not

The above "total cost" does not, of course, include interest on investment or labor, and to simplify the discussion it is assumed that the cattle are sold at home, thus doing away with marketing expenses.

For the first statement 30-cent corn and \$5 hay are taken as about the minimum prices that could be figured, even from the viewpoint of the cattle-feeder who produced his feeds. If the choice, well-bred feeding steer cost \$4.50 per hundredweight in the feed-lot and the purchaser gets what he pays for and properly finishes the steer, he ought to expect \$1.25 per hundredweight more for the steer at home in the feed-lot than cost price delivered in the feed-lot.

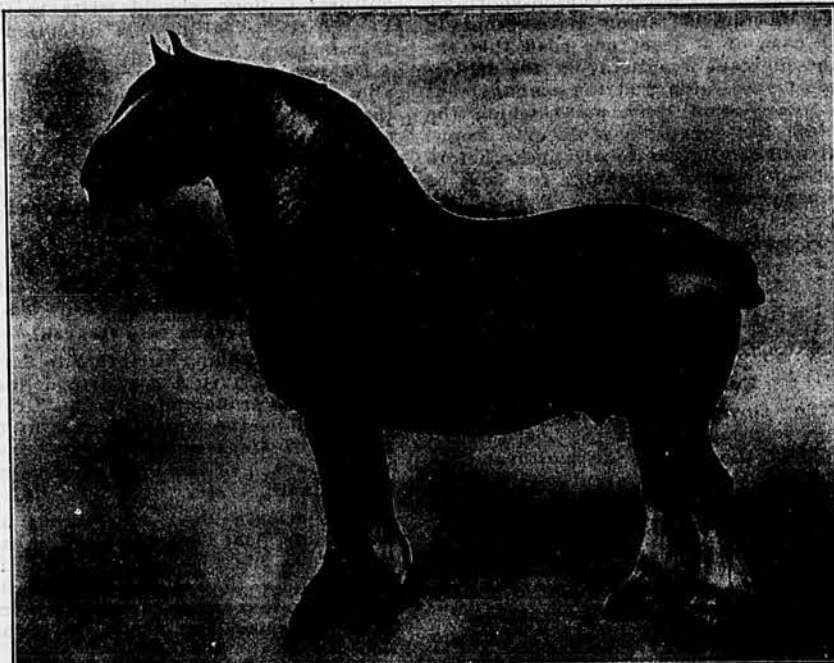
RECEIPTS, EXHIBIT A.
One 1,396-pound choice to prime steer at \$5.75 per cwt. \$80.27
75 pounds pork at \$5 per cwt. 3.75

Total receipts. \$84.02
Total expenditures. 69.80

Profit per steer on basis of 30-cent corn and \$5 hay. \$14.22

The following table figured out in the same manner shows the effect of price of feed on possible profits:

This table does not mean that profits in cattle-feeding are impossible when corn is worth over 40 cents per bushel with clover hay at \$10 per ton. It does mean, however, that with the conditions stated a larger at-home mar-



Bishopthorpe Menestrel (21134) 8547, owned and for sale by Watson, Woods Bros. & Kelly, Lincoln, Neb.

what would be called fully finished, as they sold in the market for \$5.95, when the top of the market was \$6.15 per hundredweight. Had these cattle been full fed for a longer time (they were full fed only about one hundred and twenty days), the total and average daily gains would probably have been larger. The writer believes it would not have been difficult to have secured an average daily gain of 2.2 pounds per steer, or 396 pounds in one hundred and eighty days.

We have then sufficient data as to gains and feed required to produce gains to discuss intelligently the subject of relation of the cost of these feeds to profits in cattle-feeding. To avoid misunderstanding, let us repeat that we assume that each steer involved in this discussion makes an average daily gain of 2.2 pounds, or 396 pounds for a six-months' winter feeding period, that 75 pounds of pork is made from the droppings of the steer, that 6 pounds of beef and 1.14 pounds of pork are made from each bushel of corn fed supplemented with clover hay. On this basis it would require about 66 bushels of corn supplemented with one ton of clover hay to secure the gains recorded for the whole time.

Granting that we are dealing with a choice 1,000-pound feeder that is worth \$4.50 per hundredweight in the feed-lot, the following financial statement might be made up:

DISBURSEMENTS, EXHIBIT A.	
One 1,000-pound choice feeder, at \$4.50 per cwt.	\$45.00
66 bushels corn at 30 cents per bushel.	19.80
One ton clover hay at \$5.	5.00
Total cost.	\$69.80

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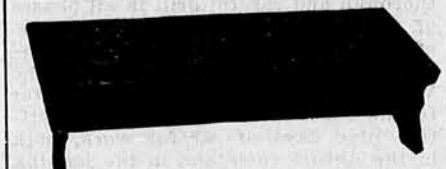
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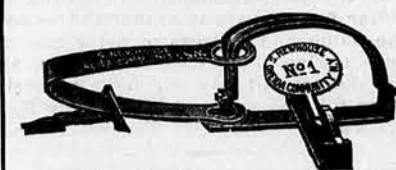
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ances our farmers are heavily engaged in the production of horses. What are the real facts concerning the number of horses in Iowa to-day, compared with that of six years ago? According to the most recent statistics published by our Department of Agriculture, we had in the State of Iowa in the year 1905 horses of all ages to the number of 1,238,159, while on June 1, 1900, we had 1,392,573, or 154,414 more horses than in 1905. If these figures mean anything it will be sometime yet before there will be an over supply of good horses in this State. It is doubtful if there was ever a time in the last decade when good, high-class draft-horses were as scarce in this State as they are at the present time. Horse-buyers will tell you that it is next to impossible to find a car-load of good draft-horses of a salable age in any one locality in Iowa. Even the men who make it a business to feed out young horses are experiencing no end of difficulty in finding suitable animals for their feed-lots. Good people, the time is not near at hand when good draft-horses will have to go begging on the market.

COMMON SENSE NEEDED FOR SUCCESS.

In the production of draft-horses, like all other classes of live stock, the man who first makes a study of the market demands and then sets out to produce exactly what the market wants will reap the greatest degree of success. There are many things in this world which are difficult to fathom. If a man has decided to go to Chicago, New York, or some other point, about the first thing he does is to consult the local ticket-agent or use a railroad guide so that he may ascertain the cheapest and shortest way of reaching his destination. If he did not do so you would not deem him a good business man. Why, then, are not the same tactics worthy of consideration in the production of good draft-horses? In the breeding of draft-horses the line of breeding that will produce the desired results in the cheapest and quickest way is the one which should commend itself to any man interested in the business.

A study of the market demands as they pertain to the draft-horse reveals the fact that weight is still as desirable as in past years, so that a draft-horse, to sell well, must weigh from 1600 pounds upwards, and be of the desired draft type. That is, he should be massively built, deep bodied, short coupled, heavily muscled, short legged, a good actor, and possess feet which are properly constructed and out of durable material. Such a horse can be economically raised on any Iowa farm, and owing to the strong demand for him, he finds a ready sale at a price much nearer his real market value than any other class of horse that can be produced.

A DESCRIPTION OF A GOOD DRAFT-HORSE.

Time will not permit of a detailed description of a typical present-day draft-horse. There are some points which are very essential, and these will be treated in detail. The conformation of the fore and hind limbs of a horse have a very marked influence on his value in the market, because his utility is very largely determined by the construction of these. The first point to which I wish to draw your attention is the differences that exist in the nature of the material that enters into the structure of these parts. We are accustomed to the use of the terms flat bone and clean-limbed, and these are quite expressive in themselves if we understand what they mean. A horse that is flat-limbed and also clean in limb is much more durable in those parts than one that is round, coarse, and "gummy." When we refer to a horse being flat-limbed or flat-boned, we do not mean that the bone is flat from a side view, but we do mean that the tendon stands back so far from the bone as to make it in the region of the cannon appear flat. The advantage of having this conformation is due to the better attachment it gives to the tendon and also to the freer play which they have as a result of this conformation. Cleanness of bone is desirable largely because it indicates a dense, strong texture of bone, with joints that are free from puffiness and not subject to coarseness.

The slope of the different parts is another important point to be observed. For instance, in the case of the fore limb, the shoulders should have a strong slope and the slope of the pastern should be correspondingly as great. Some good authorities claim that the slope of the pastern should be at least 45 degrees. A proper slope of shoulder gives a horse freer limb movement. It also shortens his back above, giving him greater strength in

that part, and also increases the length of the underline, thus giving him more room for action. Slope of shoulder, when associated with slope of pastern, and the two always go hand in hand, does away with severe concussion, a most vital point. An examination of the skeleton of a horse reveals the fact that in the construction of the fore limb there are a series of bones which act more or less directly upon each other. The presence of the great number of small bones below the pastern and their relation to each other in slope would indicate that this part below the pastern would be subject to considerable concussion, and on that account it would be necessary to arrange the slopes and the position of the bones so as to eliminate or distribute this concussion so far as possible. It is not difficult to understand that if the shoulder blade is straight and the pastern straight, this series of bones comprising the fore-limb will hit each other in a very severe manner and will eventually produce a great number of bone diseases which these parts are subject to, such as side-bones, ring-bones, and other troubles.

The set of the limbs is another very important point. Viewed from in front, the legs should be well placed under the quarters. If they are set too far apart the horse will have a rolling motion when in action. The feet should be in a straight line, neither turned in nor out, as both conformations interfere with the action. Viewed from the side the legs should be straight, neither bulging forward, called knee-sprung, nor backward, called calf-kneed. The proportion of the bones to one another in this re-



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gion is in a large measure responsible for these defects. When the leg formation is exceptionally long from where it joins the body to the knee, it is likely to throw too much weight on the knee and produce what we call calf-knees. If, on the other hand, the length of the cannon, that portion between the pastern joint and the knee, is unduly long, it is likely to cause the horse to be over on his knees. Too much attention can not be given to the importance of the slope of the pastern because it has so much to do with the protection of the feet. Extreme length of pastern may cause a weakness, but it should be of sufficient length and slope to insure springiness.

The construction and set of the hind legs is of vital importance. A great many of the diseases to be found in these regions are largely due to a wrong set of the limbs. In a correctly constructed hind limb, viewing it from the side, a line dropped from the hindmost point of the slope should strike the top of the hock and continue parallel with it until the pastern joint is reached. If the conformation of the leg be such that the lower part of the leg is thrown more under the body, thus making it more subject to a strain of a tendon or ligament just below the hock, it is termed sickled hocked, and is very likely to become curby. If the opposite conformation be present where the leg extends backward of a line dropped as previously described, fullness of the hock, or bog spavin, is likely to be the result. Spavins and ring-bones are very often found on legs of this kind because of the fact that the bones do not have the proper slope in relation to each other. Viewed from behind, the legs should be set in a straight line, and if there be any deviation from a straight line the hocks should be inclined together, but never

outwards, as a wide-hocked horse is a drug on almost any good horse market.

The feet should be large, round, wide at the hoof head, not too shallow nor too high in the heels, and above all, constructed of a good, dense horn, which indicates ability to wear well.

The action of a draft-horse is a point which is receiving more attention than it formerly did. A horse, to command the very highest price, must move well. He must be good at the walk, and also do the trotting act fairly well. Length of stride and straightness of stride are the two most important points to be considered at the walk. Snappiness is also essential. Height of action and flashiness are attractive, but not necessarily utility points. Winging, paddling, or rolling action in front, and wabbling hocks are all features which every good horseman condemns, thus are discriminated against at all of the leading horse markets.

THE QUESTION OF WEIGHT.

In breeding draft-horses, too much attention can not be given to the question of weight. At all of the leading draft-horse markets, horse flesh sells at the rate of twenty-five cents per pound for each additional pound from 1,600 to 1,800 pounds; for fifty cents per pound from 1,800 to 2,000 pounds; for one dollar a pound from 2,000 to 2,200 pounds; and from two to two and one-half dollars per pound from 2,200 pounds upwards, providing, of course, that the horse is sound, well made, and desirable in every other respect. Thus the heavy ones are the kind we should all aim to produce because at best we will get plenty of the

lighter weights too meet the demands for the same.

A DESIRABLE COLOR.

While a good horse can never be of a bad color, still some colors, such as the nicely dappled gray or blue roan, are more in demand than others, thus command fancy prices.

WHY THE FARMER SHOULD KEEP DRAFT-HORSES.

In discussing the advisability of the average farmer keeping pure-bred draft-mares, a somewhat new but very timely topic is opened up for consideration. Just why the average farmer has not been keeping pure-bred draft-mares for a decade or more is one of the questions which amazes almost every man who has had any experience in their production in this country, or has any acquaintance with the methods pursued in the production of horses in practically all of the European countries. Is there any more reason why the average farmer should keep pure-bred cows, pure-bred ewes, or pure-bred sows, than in the case of pure-bred draft-mares? Draft-horses are needed on the farm to perform the necessary farming operations. Is there any good reason why a considerable amount of this work should not be done with good, pure-bred brood-mares? If the English farmer, the Scotch farmer, the French farmer, and the Belgian farmer on their small farms find it profitable to keep a pair or two pair of pure-bred draft brood-mares to do their farmwork, why should not the same policy be a wise one to pursue in this country? When this policy becomes more general on the rich farm-lands of the Central West, two things, both of which are very much in evidence at the present time, will gradually disappear: First, the importation of such a large number



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of stallions, many of which are a detriment to the industry, and second, the presence of the glib-tongued chap whose business it is to organize companies of farmers to purchase these stallions at about five times what they cost on the other side of the Atlantic. In practically every one of the European countries in which draft horses are produced, more than 75 per cent of the same are produced on the small farms and by the tenant farmers. These farmers not only require their pure-bred draft brood-mares to do the major portion of the farmwork, but they also require them to rear a colt each year, which in turn is sold to pay the rent of the ground used. In this way these people have been able to pay their high rents and in addition comfortably support their families.

IT PAYS THE FARMER.

It will pay the average farmer in this country to keep pure-bred draft-mares. It does not cost any more to feed a pure-bred draft-mare than it does to feed a grade mare of the same size. The pure-bred mare will do just as much work as the grade mare. One good pure-bred stallion colt at one year old will readily command as much money as will a pair of high-class 5-year-old grade geldings. The speaker has in mind at the present time a dozen or more farmers in Iowa, Illinois, and Kansas who are using pure-bred draft-mares to perform their farmwork, and in addition raising good colts from the mares each year. The stallion colts find ready sale when from one to two years, at from four to seven hundred dollars each. These men have settled the question as to whether or not it will pay to keep pure-bred draft-mares. One farmer in Northern Illinois attended a neighbor's sale in March, 1903, and in order to help matters along, bid on a few things which he thought he did not need. He escaped trouble until a pure-bred 5-year-old Percheron mare, in foal, was led into the ring. He bid on her and she was knocked down to him at \$300. He thought he did not need her, thus offered her to another neighbor for \$290, but did not succeed in making the deal. He kept the mare, and she has raised him a good colt each year. He has had the mare a little more than three and one-half years, and she has done her share of the farm-work, he has sold three of her colts for \$1,250, and has one left for which he has refused the small sum of \$500 before it was eight months old. Has this mare paid her way? The owner is a most enthusiastic breeder of pure-bred swine, but he informed me last week that pure-bred mares were even better property than pure-bred sows.

I could cite you many other instances of a similar nature. Some one will say, but it is very easy to overdo this pure-bred mare business. Has it ever occurred to you that in Iowa, the leading draft-horse State in the Union, we have but one horse registered or eligible to registration for every one hundred and fifty-one that are not registered? It will take some time to overdo this business. There is no good reason why our farmers should not keep pure-bred mares of the very highest rank, and then by the judicious selection of sires produce home-bred draft-horses the equal, if not the superior, to those produced in any other part of the world. We have made good in cattle, in sheep, and in swine, so why not make good in horses.

This is a line of work which should receive more encouragement from our fair associations. While liberal premiums should be awarded for all classes of animals, more attention should be given to the home-bred animals, and more especially those produced on the farm of the man with comparatively small means. It is the so-called average farmer that makes a county, a State, or a nation. Thus his interests are worthy of the most careful consideration of those entrusted with the management of the various county, State and National live-stock shows.

Sow Out of Condition.

I have a Poland-China gilt, ten months old. I have never bred her, but she does not come in heat, and I do not believe she has ever been yet. She is in fine condition, that is, she is not fat, but will weigh 250 pounds. She is a registered sow and I am keeping her for a herd sow. What can I do to bring her in heat? L. B. Selbert, Stafford County.

I would suggest that you try feeding ground ginger to this sow in her slop. It is quite often successful in bringing sows in heat. I would also suggest that she have a variety of food, and be given plenty of exercise. If she will

not take exercise of her own accord, arrange your feeding so that she will have to do so, or else drive her about. G. C. WHEELER.

How He Cured Poll Evil and Fistula.

EDITOR KANSAS FARMER:—I see in nearly every issue of THE KANSAS FARMER inquiries from some of your subscribers, asking for a cure for poll evil and fistula. If you will allow space in the paper, I will tell how I cured my mare of a case of poll evil of four years' standing. I took about one gallon of blood from her every month for four or six months. I bled her on Friday evening before the full moon in each month. I cured one of my neighbor's horses that had the fistula the same way. J. R. U. Crabb, Sumner County.

[What does modern veterinary science say of this method? Editor.]

Who Knows a Cure for a Kicking Horse?

EDITOR KANSAS FARMER:—Will you please tell me what to do with my horse that kicks every time I hitch him up to the wagon? He pulls all right, but he always starts to kick after he has pulled the wagon a little way. He kicked back and broke the front end of the wagon box one day when I took him in the corn-field to shuck corn. I would very much appreciate it if you can tell me what to do for him, if there is any hope of getting him cured of this habit, as he is a good horse. Republic County. G. G. JENSEN.

Stock-Breeders' Annual Meeting.

Secretary Heath, of the Kansas Improved Stock-Breeders' Association, is sending out this week preliminary announcements for the seventeenth annual meeting of the Kansas Improved Stock-Breeders' Association, which will be held at the State Capitol on January 7, 8, and 9, 1907.

The executive committee of this State association has planned for this annual event a very attractive program which will include a symposium on the horse, cattle, sheep, and swine husbandry. Besides, a number of distinguished speakers who are recognized authorities on animal husbandry have been secured for this event.

The seventeenth annual meeting will have important business to consider in connection with the regular program, such as the proposed semi-centennial of 1911, the State fair, and needed legislation, especially along railroad lines.

The secretary has sent out this week over 2,500 letters to members and stockmen throughout the State, and he anticipates that it will be the largest and most important meeting ever held by the stockmen of Kansas.

The present officers of the association are as follows: President, S. C. Hanna, Howard; vice-president, Geo. W. Berry, Emporia; secretary-treasurer, H. A. Heath, Topeka; assistant secretary, I. D. Graham, Topeka.

Directors: M. S. Babcock, Nortonville; Dr. O. O. Wolf, Ottawa; H. M. Kirkpatrick, Wolcott; E. Harrington, Baker; H. W. Avery, Wakefield.

Honeyman's Hotblood Poland-Chinas.

Talk about rich stuff, but if you want to really see it you must visit W. J. Honeyman's fine herd of Poland-Chinas at Madison, Kans.

There is no breeder in the State better known than Mr. Honeyman. He has not been a breeder of fine swine very long, but he has brought himself into the lime-light in that time. You will find him at every notable sale buying always the best. It makes no difference how long the price, if he likes the animal he buys it. He has topped more than one sale to obtain what he wanted. At the head of his herd is Perfect Challenger 88403. He was sired by Chief Perfection 2d, dam E. L. Delightful, by Perfection E. L. Perfect Challenger is a \$3,000 hog. A half interest in him cost Mr. Honeyman \$1,500.

It is hard to do this royal fellow justice in a description. He is one of those big, mellow fellows, with nice head and ear, fine, well-arched back, and great depth of body, heavy ham, extra heavy bone, and good on his feet. But it takes a boar like Perfect Challenger to head a herd of sows such as Mr. Honeyman has. Forty of his sows are by champion boars.

He has eight sows sired by the great On and On, out of dams by Chief Perfection and Perfection E. L.; four by Chief Perfection 2d, including Orange Blossom, the \$317.50 sow that topped J. R. Young's last sale. This fine sow is a litter mate to Masticator, the \$850 boar, and a full sister to the \$3,000 Perfect Challenger. She will go in Mr. Honeyman's sale of February 12 bred to Meddler, F. D. Winn's great herd-boar.

There are eight sows by Perfection E. L., their dams out of Chief Perfection 2d, Contractor, and Prince Alert. There are two by Chief Sunshine 2d, including the great show sow, Tony, litter mate of the \$670 boar, Pace Maker.

Tony's dam was the \$415 sow, 100 and Won by Perfection E. L.

Two sows are by Keep On, the international champion, including the sow, Impudencia, litter mate to the \$7,000 boar, Impudence. Meddler Lady by the World's Fair champion, Meddler, is another good one. Three sows are by Impudence out of Perfection E. L. dams. And there are Perfection I Know, half-sister to the World's Fair champion, Lady Lucille, and many others equally good.

These sows are all splendid individuals. They are being bred to Perfect Challenger, and will be offered to the public in Mr. Honeyman's sale of February 12. This includes some of the richest stuff on the market. Come to this sale and buy some of these fine sows bred to these great boars. It makes no difference how long the price, it will pay you.

The Shawnee Breeders' Sale.

On the last day of the annual meeting of the Kansas Improved Stock-Breeders' Association, there will be held a sale of choice Shorthorn cattle selected from some of the best-known herds of Eastern Kansas. Included in the sale will be some extra individuals, among which are the following:

Violet Prince 145647, a fine young bull whose half sister sold for \$3,750 to the late Col. G. M. Casey, of Tebo Lawn. Her calf sold at the Casey sale in Kansas City for \$1,500.

Several animals are sired by Prince Consort 187003, who was bred by S. F. Lockridge and sold to C. W. Merriam for a long price. His dam was a full sister to Lavender Viscount 124755, champion of the United States. Many of his brothers and sisters may be found on the farm of C. E. Leonard, Bellair, Mo., where he lived before coming to Alysedale.

Sir Guilford 241520 by Mayor Valentine 224391 by Knight's Valentine 157770, who was the highest-priced bull at the American Royal of 1900.

Mayor of Alysedale 240395 by Lord Mayor 112727, who sired the highest-priced cattle sold at the closing-out sale of Colonel Harris and who has done such wonderful work at the head of the herd of T. P. Babst & Son, Dover, Kans.

Minnie, a red cow sired by Lord Butterfly 187717, who made such a fine record as a breeder while at the head of H. W. McAfee's herd. She has a calf at side sired by Orange Commander 220590, a straight Cruickshank bull that weighs over 2,100 pounds.

Miss Phyllis 4th by Lord Butterfly out of Miss Phillis and by Thistle Top 83876, the bull that brought honors to the herds of the Kansas State Agricultural College, Colonel Harris, and T. P. Babst.

Archer's Model, a straight Cruickshank bull calved February 7, 1906, sired by Victor Archer 223102 out of Scotch Victoria by Baron Pride 169827. Victor Archer is a pure Cruickshank Victoria by Golden Archer by Mystic Archer, one of the best bulls that ever came out of Aberdeenshire.

Rose of Mable by Kirklevington Duke of Hazelhurst 11th 123053 out of Sharoness 64th by Chief Violet 4th 111304. She was bred September 27, 1906, to Royal Bates Jr. 183571. There are plenty of other good ones in this sale. Address I. D. Graham, secretary, Topeka, Kans.

The Robert Burgess Horses.

Robt. Burgess & Son, of Wenona, Ill., and Wichita, Kans., were heavy winners at the International Live Stock Exposition at Chicago. While they are breeders and importers of a number of breeds of horses and are eminently successful in each, they especially excel with Shires. In this breed they won at Chicago, as follows:

Shires—Stallion 4 years old or over, first on Premvictor, third on Bank of Nildesperandum, fifth on Blaze of Worsley 3d; stallion, 3 years old and under 4, first on Bank Jack Tar; stallion, 2 years old and under 3, first on Lynn Jumbo 2d; stallion, 1 year old and under 2, first on King's Drayman; champion stallion, any age, Premvictor; first on best five stallions; first on best imported stallion.

Belgians—Stallion, 3 years old and under 4, first and reserve champion on Forten de St. Jean.

A glance at their advertisement in this issue of THE KANSAS FARMER will tell more about their winnings elsewhere. Then look at the remarkably low prices quoted for this class of stock. Roseberry and Coon, who are in charge of the branch barn at Wichita, are gentlemen who are always glad to answer questions or to receive visitors. You will receive every courtesy whether you buy or not, but if you once get to see the horses that they offer for these low figures, you will be sure to buy.

Walker's Fine Jacks.

Kansas is becoming noted for its good stock of all kinds. There is no place in the world better adapted to the production of fine horses, mules, and jacks than the Sunflower State. The climate, the soil, the water, and the abundant feed, all combine to produce the perfect animal.

Two miles south of the little city of Moline, Elk County, Kansas, Philip Walker has been raising jacks and jennets on his splendid 800-acre farm for twenty-five years. His foundation stock is the best that money can buy, being bred from such strains as the Spanish, the Warrior, and the Mammoth. These strains of blood produce the great big fellows from 14½ to 16 hands high, with very heavy bone that produces the stuff that always brings the highest market prices. Mr. Walker has 70 head of these fine animals for sale at reasonable prices, 30 jacks and 40 jennets, all of the best quality. These are sold under a positive guarantee of "Satisfaction or money refunded."

In the twenty-five years that Mr. Walker has been engaged in this business, he has established a reputation

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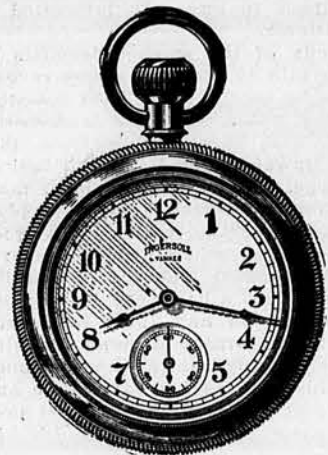
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I accept your trial offer to new subscribers to send me THE KANSAS FARMER three months free. At the end of the three months I will either send \$1.00 for a full year from that date or write you to stop the paper, and you are to make no charge for the three months' trial.

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for fair dealing, and for always having the best. There is no better paying property than a good jack, for it is impossible to supply the world's demand for mules. Any reader of THE KANSAS FARMER needing good jacks or jennets should write Mr. Walker at once, or better still, go and see him and inspect his stock. He will treat you white, and his prices will be right.

Mr. Walker also has 4 Percheron stallions and one Kentucky saddle stallion for sale. His advertisement will appear in THE KANSAS FARMER from week to week. Read it, and write him, or go and inspect his stock.

The Marion and Dickinson County Hereford Association Sale.

The combination sale held at Hope, Kans., December 14, by the Hereford breeders of Marion and Dickinson Counties, was a disappointment to everybody. The offering was an exceptionally fine one and merited a greater attendance of breeders and buyers. Thirty-five head were sold, being consigned by the well-known breeders, A. Dillon, J. W. Johnson, W. H. Rhodes, J. E. Shields, and A. L. Evers. Some of the stuff was sired by imported bulls and all of it was well bred and from the leading families of Herefords, but this did not prevent the buyers from slaughtering the prices. But the consignors took it good naturedly and next year they will be back with a stronger offering than ever, and we hope their efforts will be rewarded by better prices.

The vicinity of Hope, Kans., is one of the strongest Hereford districts in the State, and buyers who go there looking for good stuff never go away disappointed. Here's hoping that this jolly, good-natured bunch of Hereford breeders will soon again see the time when they will realize just returns for the efforts they are making to help improve the live stock of our country.

The Arbutnot Hereford Sale.

At Manhattan, Kans., on January 5, 1907, in connection with the State Farmers' Institute, Mr. J. G. Arbutnot, of Haworth, Kans., will disperse his entire herd of Hereford cattle. This is a well-established herd composed of excellent individuals selected by careful buying by a man of good judgment. There are twenty-one cows and heifers, all but three of which are bred or with calves at foot. Among the bulls are General Gordon, the herd-bull, and four yearlings and nine calves. Lord Wilton, Anxiety 4th, Columbus 17th, and other famous sires are represented in the offering. Be sure to attend the State Institute, enjoy all these meetings for nine days, and wind up the most profitable season you ever enjoyed by attending this great Hereford sale.

Gossip About Stock.

At the annual meeting of the American Galloway Breeders' Association, Allen M. Thompson, of Nashua, Mo., was elected president; S. M. Croft, Bluff City, Kans., was elected vice-president, and Chas. Gray, of Chicago, was re-elected secretary.

The American Poland-China Record Association elected H. E. Singleton, McKinley, Texas, as president, and W. M. McFadden, of Chicago, as secretary. C. F. Dietrich, Richmond, Kans., and F. A. Dawley, Waldo, Kans., were named as directors.

During the International Live Stock Exposition at Chicago the Aberdeen-Angus Breeders' Association held their annual meeting and elected Geo. Stevenson, Jr., of Waterville, Kans., as president. Thomas McFarlane was re-elected secretary-treasurer.

In the International sales of pure-bred stock last week the Shorthorns made the highest average and the Red Polls the lowest. The Shorthorns averaged \$304, the Herefords \$167, the Angus \$155, and the Red Polls \$120. The highest-priced Shorthorn was a cow which brought \$875, though she had a close second in a bull which sold for \$825. The highest-priced Hereford was a bull which brought \$725. The top of the Angus sale was \$910, brought by a cow.

Grant Chapin, of Greene, Kans., who owns the good Duroc-Jersey boar, Model Chief Again, writes that a young boar by this great sire topped the sale at \$130 at the Whitehall Farm sale at Yellow Springs, Ohio, which was held recently. Model Chief Again is a grandson of Ohio Chief, and very much resembles his illustrious sire. In Mr. Chapin's bred-sow sale, held January 29, there will be a number of sows bred to Model and the rest of the consignment will be bred to his other herd-boars, one of them being a son of Kant Be Beat, and the other a son of Ohio Chief.

At the dispersion sale of Purplebloom Herd of Shorthorn cattle at Windom, Kans., December 12, forty head of animals were sold at good prices. Mr. Wright, the owner, is one of the young Kansas breeders who bids fair to make a record for himself as a breeder, but for business reasons he has decided to move to Wyoming, and was compelled to disperse his herd. Among the tops of the sale was the good cow, Royal Lady by Barmpton Royal 122721, and Lady Gwynne 3d by Young Gauntlet 150073. These two cows brought \$150 each, the latter going to Ed. Rutledge, a well-known breeder of Little River, Kans. Mr. Rutledge has one of the best herds in the State. It is headed by one of the best sons of Choice Goods.

Whenever we think of good Berkshires we think of Manwaring Bros. and their Ridge View Herd at Lawrence, Kans. This is an old-established herd and one that maintains its popularity with the breeders by supplying them with plenty of good blood in good bodies. Manwaring Bros. report that

their fine trade continues and that they are now all sold out of spring farrow boars. Only a few gilts old enough to breed are left, but they have a very good crop of fall farrow pigs coming on. These were sired mostly by Forest King 72688. Forest King is a brother of the great Masterpiece and of Berryton Duke, and has proved himself fully their equal as a breeder. You can get some of this quality of Berkshires by telling Manwaring Bros. what you want.

Watson, Woods Bros. & Kelly, the great horse-importers and breeders of Lincoln, Neb., now have sixty head of choice Percheron, Shire, Belgian, and Oldenberg stallions in their barns and for sale. A picture of one of them appears on another page, which shows something of their quality. This firm is now ready and willing to satisfy the most critical buyer, both as to quality and price. All of these stallions were imported early in the season so that they are now thoroughly acclimated and in fine condition for good, hard work. Watson, Woods Bros. & Kelly report the largest fall business they have ever had, and Mr. Watson is now on his way across the Atlantic with forty more stallions with which to supply their spring trade. He expects to land soon and add the new importation to those already here.

C. A. Stannard, of Sunny Slope, Emporia, Kans., is undoubtedly the strongest candidate now in the field for the office of speaker of the House of Representatives. The live-stock interests of the State will be a unit in their approval of Mr. Stannard's candidacy. No young man in Kansas has done more for the live-stock interests than has Mr. Stannard, and no man is more worthy of such recognition at the hands of his fellow citizens. Not only has the great Sunny Slope herd of Hereford cattle been an object lesson to the entire West, and the Sunny Slope Berkshires have been the source from which the best blood has been drawn, but, of late, Stannard's Processed Oil has been a boon to the swine-breeders in preventing and curing diseases. Such men are needed in our offices.

A. J. Reed, of Madison, Kans., has some fine toppy sows that are as rich in Perfection blood as they get them. They were sired by such famous boars as Chief Perfection 2d, Keep On, On and On, and Perfection E. L. They are being bred by U. C. Perfection, the \$1,000 boar owned by Messrs. Reed, Honeyman & Pees. With this combination we predict that he will have a crop of spring pigs that will be hard to beat in this State or any other. U. C. Perfection is a line-bred Perfection and a prize-winner. He was sired by Perfect Perfection, he by Chief Perfection 2d. Twenty-three sows bred to him averaged \$82.25 in Honeyman & Reed's March, 1906, sale. Mr. Reed has a very fine young boar, Impudat Chief, that will make a herd-header. He was sired by the great Chief Perfection 2d (king of Poland-Chinas) and is out of a fine Perfection sow. Mr. Reed will be on the market next spring with some mighty rich stuff.

J. F. Ensor, owner of the Eureka Manor Herd of Duroc-Jersey swine at Olathe, Kans., writes that, as a result of his advertising in the old reliable KANSAS FARMER, his hogs have been moving off at a nice rate. His gilts and young sows have beaten his best expectations in their development and now show great quality and uniformity. This young stuff possesses some of the best blood known to the breed and, with the judicious care and feeding given them by their owner, have proved a surprise to him and the subject of much praise by visitors who see them. Eureka Tip Top 43641, who is one of the best sons of Tip Top Notcher 20729 is the head of this herd. His sire was grand champion boar at the Louisiana Purchase Exposition and weighed 1,123 pounds at 2 years and sold for \$5,000. His sons are breeding like him and their get are sensational. Eureka Tip Top is assisted by Pericles 27247 by Josephus, the grand champion of the Kansas State Fair at Topeka, and his get are rivaling those of the chief boar. The gilts and sows are now being bred to these great boars for spring farrow and, if you want something really good, just keep your eye on the Eureka Manor Herd.

One of the first as well as the most important sales of the new year will be that of Poland-Chinas at Beattie, Kans., January 4, which will be held by the well-known breeder, B. M. Bell. Mr. Bell is a veteran at the business, and while he has not been holding sales regularly for several years his fall sale, which was held in October, was one of the most successful of the season. Mr. Bell is breeding the type of Poland-Chinas that the farmer likes. They are great, thrifty fellows with lots of bone and muscle and plenty of quality and the kind that produces the large litters. At his October sale it was the unanimous opinion of all the fieldmen present (and they represented all the leading farm journals of the West) that Mr. Bell's offering was the largest and growthiest that had been offered in any sale during the year. In his January 4 offering he will sell the cream of his herd, which consists of 20 yearling sows sired by such noted boars as Prince Utell, Graniteer, Highland Chief Junior, and Quality Chief by Over Chief, who represents the largest type of the Poland-China hog. The offering will also include 20 spring gilts sired by Bell Mettle, one of the greatest sons of Expansion and by Highland Prince, a grandson of old Highland Chief Junior. This stuff will all be bred for early farrow to the great sires, Bell Mettle and Whats Ex, two sons of old Expansion, and to Highland Prince. We believe that it is to the interest of any breeder who wants this type of stuff to attend this sale as it will be one of the strongest offerings of the year. Mr. Bell's catalogue will soon be ready for distribution and a postal card will bring it.

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We want you to use STANDARD Stock Food this season whether we have a dealer in your town or not. If you deal with us direct, we will take every particle of the risk of your being satisfied. If you are not or if the food does not do all we claim, then we will return every cent you have paid for it, and it shall cost you nothing. This paper stands behind this guaranty.



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Can you ask a fairer offer?

Your animals are not like nature intended them to be; not like they would be under natural conditions. They are highly fed, quickly developed, and easy to get out of condition.

They need a little help from day to day—not medicine, or dope, or physic, but a condiment, a seasoning, to give variety to the feed ration, and make it taste better: a tonic to aid digestion and help get more nutrition out of the feed.

Your animals need a condiment, a flavoring, a seasoning just as you need salt and pepper, mustard, and catsup, sauces and gravies, and various flavorings and seasonings to make your food taste better; to aid your digestion.

Standard Stock Food makes the ration taste better so your animals eat with a greater relish. It promotes the flow of all the digestive juices so that they digest their feed more quickly, more easily, and more thoroughly.

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We can prove the value and the superiority of Standard Stock Food so fully on every point that all we need is the opportunity.

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A dollar's worth of Standard Stock Food contains more feeds, will go farther, last longer, and produce more and better results than a dollar's worth of any other stock food made whether it costs 5c or 15c a pound.

We know there is no question about Standard Stock Food paying you, and paying you big too. We have been making and testing it over 20 years. We have over 400,000 customers who have proved that it is the best condiment-tonic to mix with the feed ration that can be had at any price.

You take no risk. We guarantee absolutely, and without conditions, that it shall cost you nothing if you are not satisfied with it. You know that this paper would not print this advertisement unless we always make our word good.

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Tell us how much stock you keep, and we will tell you how much Standard Stock Food you need for a fair trial. If you request it, we will send you a copy, free, of our fine stock book, The Standard Feeder, regular price 50c, 160 pages, 200 illustrations, chock full of valuable information on the feeding and care of all kinds of live stock.

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Dr. B. J. Kendall Co., Enosburg Falls, Vt. Gentlemen.—Enclosed herewith find a two cent stamp for which please send me a copy of your "Treatise on the Horse and his Diseases." I have used Kendall's Spavin Cure for the past ten years on my horse ranch and have never found anything to equal it. Where a man once uses Kendall's Spavin Cure he will use no other, for it's a liniment that will do all it is claimed to do and the cheapest in the end.

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Our Club Roll.

Excelsior Club, Fortwin, Kansas, (1902).
Women's Literary Club, Osborne, Osborne County, (1902).
Women's Club, Logan, Phillips County (1902).
Domestic Science Club, Osage, Osage County (1888).
Ladies' Social Society No. 1, Minneapolis, Ottawa County (1888).
Challaco Club, Highland Park, Shawnee County (1902).
Cultus Club, Phillipsburg, Phillips County (1902).
Literature Club, Ford, Ford County (1903).
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.
Richardson Embroidery Club, Madison, Greenwood county (1902).
Prestis Reading Club, Cawker City, Mitchell County (1903).
Cosmos Club, Russell, Kansas.
The Sunflower Club, Perry, Jefferson County (1903).
Chaldean Club, Sterling, Rice County (1904).
Jewell Reading Club, Osage County.
The Mutual Helpers, Madison, Kansas (1906).
West Side Study Club, Delphos (1903).
Domestic Science Club, Berryton, Shawnee County (1906).
Mutual Improvement Club, Vermillion, Marshall County (1903).
Centralia Reading Circle, Nemaha County.
(All communications for the Club Department should be directed to Miss Ruth Cowgill, Editor Club Department.)

Industrial Exhibit and Conference to Be Held by Club Women.

Plans are maturing for the first industrial exhibit and conference to be held in this country for the purpose of showing the conditions under which the products of labor are produced. This conference will be held in Chicago in the Casino, Wabash Avenue and Peck place, the first two weeks in March. Mrs. Ellen M. Henrotin is arranging for the conference, assisted by a committee of women who are familiar with the conditions under which life's necessities are manufactured.

Reformers in all parts of the country have announced their intention to come and see and take part in the conference. According to the tentative program announced by Mrs. Henrotin at the business meeting of the Chicago Woman's Club recently, the following general topics relating to the condition of women and children in industry will be considered by the conference:

Industrial geography of Chicago.
Sweated industries.
Women in industry.
The ballot for women.
The organization of women.
The living wage.
Safety machinery and occupational disease.

Sweat shops in full operation will be shown, cigar-making, child-labor in its worst phases, and numerous other life-destroying conditions under which women and children toil. The purpose is not to educate the poor, but the well-to-do, who purchase cheap productions to satisfy their penchant for "bargains," and encourage production under unfavorable conditions.

Miss Helen Varick Boswell, chairman of the Industrial and child labor committee of the New York State Federation of Women's Clubs, lectured on November 21 before the Women's Industrial and Educational Union at Boston. Miss Boswell spoke as a representative of the welfare department of the National Civic Federation, on the subject, "What Employers Are Doing to Improve the Working and Living Condition of Their Employees." Miss Boswell said in part:

"Industrial problems are attracting the attention of the club women of the country to a remarkable degree, wherever they are assembled. Whether in the smallest gatherings, in State federations, or the General Federation of Women's Clubs, industrial economics has a foremost place in discussions, and women are aiming to become, not only generally but specially intelligent, and to be able to create and sustain a public opinion that will result in the betterment of all industrial conditions.

"The employer is, as a rule, a humane man. He wishes to do what is right and just, but often in the stress of business life overlooks many things that might conduce to the comfort, the health, and the happiness of his employees. When it is called to his attention that such and such things might

be done, he is glad to heed the kind word of advice.

"The womanhood of the country can do no better work than in a tactful and proper manner urge upon employers of their acquaintance such reforms as could be made, but they must equally urge upon the employee class that it should meet half way the effort of the employer, and that such a spirit should be engendered as will make it easy for both sides to help along in needed reforms."

Programs for State Meetings at Manhattan.

The State Farmers' Institute and Allied State Conventions will be held at Manhattan, Kans., December 27, 1906, to January 5, 1907. All meetings will be held in the Kansas State Agricultural College buildings.

STATE FARMERS' INSTITUTE

Will be held Thursday, December 27, 1906, 8 a. m., to Saturday, January 5, 1907, noon. The corn and corn-judging contests will be held under the direction of Professor TenEyck, and the stock and stock-judging contests under the direction of Professor Kinzer.

For the first three days this work will be given both in the mornings and afternoons. During the second week only two hours daily will be given to each subject. All members of the institute will be expected (although not required) to take both subjects. Lectures will begin at 8 o'clock each morning. Professor Kinzer's lectures in the stock pavilion, Professor TenEyck's in the old chapel, one-half the institute going to each for the first two-hour period and then changing. Score-cards will be provided for all members for each session.

Members will please register the first day at the office of the superintendent of institutes in the agricultural hall. Attendance cards will be given out then, to be returned at close of session, records to be made by each member. No fee of any kind, no incidentals, no books required, except note-books.

BOYS' CORN CONTEST ASSOCIATION

Will be held Monday and Tuesday, December 31 and January 1, Monday Afternoon.

2.00. Assembly and greetings (old chapel).
3.00. Visit to horse, cattle, and hog barns.
4.00. Visit to dairy barn and creamery.

Monday Evening (Auditorium).
8.00. The Boy and Scientific Agriculture, Prof. C. W. Burkett, director Kansas Experiment Stations.
8.30. Address, Hon. Jos. E. Wing, associate editor Breeder's Gazette, Chicago.

9.30. "Corn-Breeding" (with stereopticon views), Prof. A. M. TenEyck.
Tuesday Morning, January 1, 1907 (Girls' Gymnasium).

8.00. Drills in corn-judging.
10.00. Lecture on Corn-Judging, Prof. A. M. TenEyck, Kansas State Agricultural College.
10.30. Address, Prof. A. D. Shamel, United States Department of Agriculture, Washington, D. C.
11.30. Awarding of prizes.

KANSAS CORN-BREEDERS' ASSOCIATION

Will be held Tuesday and Wednesday, January 1 and 2, 1907.
Tuesday Afternoon (Girls' Gymnasium).

2.00. "The Opportunity in Seed Improvement," Prof. C. W. Burkett, director Kansas Experiment Stations.
3.00. "Seed and Soil Problems," Prof. E. G. Montgomery, University of Nebraska.

4.00. Inspection of corn exhibits.
Tuesday Evening (Auditorium).
8.00. "Qualities in Ear of Corn that Go to Make a High Yield," Prof. M. F. Miller, University of Missouri.
9.00. Address, Prof. A. D. Shamel, U. S. Department of Agriculture, Washington, D. C.

Wednesday Morning (Girls' Gymnasium).

8.00. Drills in judging corn.
9.00. Business meeting.
10.00. "Insects Injurious to Corn," Prof. E. A. Popenoe, Kansas State Agricultural College.
10.45. Address, Prof. M. F. Miller.

11.20. Awarding of prizes and sale of prize corn.
12.00. Adjournment.
C. E. Hildreth, Altamont, is the president, and V. M. Shoemith, Manhattan, is the secretary.

KANSAS GOOD ROADS ASSOCIATION

Will be held Wednesday and Thursday, January 2 and 3, 1907.
Wednesday Afternoon (Girls' Gymnasium).

2.00. President's address, Mr. C. F. Miller, Fort Scott.
2.30. "The Gospel of Good Roads," Mr. Barney Sheridan, Paola.

3.00. "Good Roads Laws," Hon. Edwin Snyder, Oskaloosa.
3.30. "Engineering Problems in Road-Building," Prof. W. C. Hoad, University of Kansas.

4.00. "Good Dirt Roads Right Now," Clarence D. Skinner, Topeka.
4.30. "Report of Work in Atchison County," Mr. L. S. Hereford, Atchison.

Wednesday Evening (Auditorium).
8.00. "Bridges and Culverts," Prof. E. R. McCormick, Kansas State Agricultural College.

8.40. "Road Inquiry and Road Economics," Hon. M. O. Eldridge, Office of Road Inquiry, Department of Agriculture, Washington, D. C.

Thursday Morning (Girls' Gymnasium).
8.00. "The Relation of Drainage to Good Roads Construction," W. R. Golt, Oklahoma City, Okla.

8.30. "My Experience with the King Road Drag," Hon. Bradford Miller, Topeka.

9.00. "Report on State Experiments on Oiling Roads," Prof. Albert Dickens, Kansas State Agricultural College.
9.30. "Importance of Engineering Control in Road Construction," Lute P.

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10.00. "Good Roads Commission and the Fort Scott Idea," Hon. Robt. Stone, Topeka.

10.30. "Report of Work in Bourbon County," A. J. Sherman, Fort Scott.

11.00. Business session.

C. F. Miller, Fort Scott, is the president, and I. D. Graham, Topeka, secretary.

KANSAS DRAFT HORSE BREEDERS' ASSOCIATION

Will be held Wednesday, Thursday, and Friday, January 2, 3, and 4, 1907.

Wednesday Afternoon (Room 54 Agricultural Hall).

4.00. Organization.

4.15. "Needed Legislation," Prof. R. J. Kinzer; discussion opened by H. W. Avery, Wakefield.

Thursday Morning.

8.00 to 10.00. Drill in horse-judging. Professor Kinzer.

Thursday Evening (Old Chapel).

8.00. "The Draft Horse Outlook," Mr. J. A. Gifford, Beloit.

8.30. "How to Feed and Develop a Colt," Mr. S. C. Hanna, Howard.

9.00. "The American Carriage Horse," Prof. W. J. Carlyle, Colorado Agricultural College.

Friday Evening (Auditorium).

7.30. Business meeting.

8.00. "Kansas as a Live Stock State," Mon. T. M. Potter, Peabody.

8.30. "Some Important Principles in Breeding," Hon. J. W. Robison, Eldorado.

9.00. "Comparison of Types in Meat-Producing Animals," Mr. F. D. Tomson, Chicago.

KANSAS DAIRY ASSOCIATION

Will be held Thursday and Friday, January 3 and 4, 1907.

Thursday Afternoon (Girls' Gymnasium).

President's Address, H. Van Leeuwen, Ottawa.

2.00. "The Farmer and the Dairy Cow," C. F. Stone, Peabody.

2.30. "My Success as a Dairyman," F. F. Fairchild, Tonganoxie.

3.00 p. m.—"Distributing Dairy Products in Kansas City," F. E. Uhl, Kansas City, Kans.

3.30. "The Lesson of Care in the Dairy Business," Prof. Oscar Erf, Kansas State Agricultural College.

4.15. Milking machine demonstration.

Thursday Evening (Auditorium).

8.00. "The Necessity of State Supervision and Inspection," Hon. R. M. Washburn, Columbia, Mo.

9.00. "The Successful Competition of the Large Creameries and the Place of the Small Creamery," Hon. E. H. Webster, Chief Dairy Division, U. S. Department of Agriculture, Washington, D. C.

Friday Morning.

8.00. Hand-separator and butter-making demonstrations.

9.00. Business meeting.

9.30. "Modern Dairy Methods," Prof. E. W. Curtis, Kansas City, Mo.

10.00. "How to Interest the Farmer in the Dairy Business," T. A. Borman, Topeka.

10.30. "Dairying an Important Factor in Economic Agriculture," Prof. C. W. Burkett, director Kansas State Agricultural College.

11.00. "The Dairymen of the Future," W. W. Marple, Chicago.

H. Van Leeuwen, Ottawa, is the president, and I. D. Graham, Topeka, secretary.

SWINE-BREEDERS' ASSOCIATION

Will be held Thursday and Friday, January 3 and 4, 1907.

Thursday Afternoon, Jan. 3, 4 O'clock.

Poland-China breeders. Room 54, agricultural hall; Berkshire breeders, Room 52, agricultural hall; Duroc-Jersey breeders, Room 56, agricultural hall.

Friday Morning.

8.00. Drills in hog-judging, Prof. R. J. Kinzer (general meeting, agricultural hall, Room 54).

9.00. Business meeting.

9.30. "Shows and Fairs," M. G. Hamm, Holton.

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10.00. Establishing a Type and a Herd," G. W. Berry, Emporia.
10.30. "Some Fundamentals in Breeding and Feeding," Prof. G. C. Wheeler, Kansas State Agricultural College.
11.00. "The Advertising Problem," J. F. Stodder, Burden.

ABERDEEN-ANGUS BREEDERS' ASSOCIATION

Will be held Friday and Saturday, January 4 and 5, 1907.

Friday Afternoon (Agricultural Hall, Room 54).

1.30. Organization and business.

2.00. "The Aberdeen-Angus Outlook," L. H. Kerrick, Bloomington, Ill.

2.30. "Why I Prefer the Aberdeen-Angus," Geo. Stevenson, Waterville.

2.50. "The Aberdeens on the Range," Charles E. Sutton, Lawrence.

3.15. "Some Important Principles in Breeding," Prof. R. J. Kinzer, Kansas State Agricultural College.

4.00. "The Association and Sales," F. D. Tomson, Chicago.

Saturday Morning (Stock Pavilion).

8.00. Points in judging the Aberdeen-Angus cattle.

Saturday Afternoon.

12.00. Sale of Hereford cattle, property of Mr. J. G. Arbuthnot, Haworth, Kans.

A Great Auction Sale of Land.

Here is an opportunity to buy a fine farm at a reasonable figure. On January 15, 1907, the master in chancery, W. H. Hackney, of Winfield, Kans., will sell at public auction at Marion, Kans., a tract of land containing over 7,000 acres. This land is located in Central Kansas in one of the most fertile districts of the West. It will be sold in quarter sections to enable the buyer to have a chance to bid on it. This sale is the result of a long drawn out law suit, and is made by order of the United States Court. Read the advertisement in this paper. It explains the matter fully.

When are soldiers like flannels?
When they don't shrink.

Agriculture

Management of Soils to Conserve Moisture.

GEO. H. FAIRYER, IN FARMERS' BULLETIN NO. 266, UNITED STATES DEPARTMENT OF AGRICULTURE.

(Concluded from last week.)

CONDITIONS IN THE SEMIARID REGIONS.

Quantity of Rainfall.—Regions generally called semiarid receive less than 20 inches average rainfall. Excepting limited areas in the Northwest and some parts of California, this includes the whole region west of the ninety-ninth or one hundredth meridian. In Nevada and California are limited areas with such low rainfall as to be truly arid. In the intermountain valleys the precipitation for the most part is during the winter months. In the Plains region the greater part of the annual rainfall is during the spring and summer months.

Absorptive Power of the Soil.—Speaking broadly and comparing large areas, it has been estimated that 50 per cent of the rainfall in humid regions runs off in the streams. A portion of this consists of flood waters which run off the surface and do not enter the soil, but a large part is subterranean water that finds its way to the creeks and streams from the lower depths of the soil. Estimating in the same way, it is believed that about 10 per cent of the rainfall of the Plains region runs off in the streams. For the most part this consists of storm waters. There are few springs, and the streams generally cease running soon after rains. If the rainfall be 18 inches and the run-off be 10 per cent, about 16 inches of rain will have entered the soil. However, in some portions of the semiarid regions and during some years in any portion, the rainfall may be no more than 10 or 12 inches. For the most part the soils of the Plains region are loams of exceptional fertility, when sufficiently watered. The 16 inches of water absorbed would saturate these soils with capillary water to a depth of 5 or 6 feet if none were lost between rains by evaporation. The rains moisten the surface to a depth depending, of course, upon the amount of rainfall, but the moisture is always confined to a few feet of the surface soil. It is during exceptionally wet seasons only that dry soil can not be found at a depth of 3 or 4 feet. The conditions are so different here from those in humid climates that it is difficult to realize them and their bearing upon farm practice.

Water is not readily taken up by dry soil, but if the surfaces of soil particles be already covered with thin films of moisture, water added to the soil will thicken these films. If a film becomes very much thicker than that on neighboring soil particles, a portion of the water passes to the new particle, and so on, tending to equalize the distribution of water over the grains of soil, the size of grains and gravity influencing the final condition of equilibrium. When the liquid layer is reduced to a certain thickness the grain does not readily give up water. A condition favoring the use of special methods to conserve soil moisture exists in the Plains region. With its dry undersoil the water can not readily sink deeply into the soil and escape in a downward direction. It remains for the farmer to prevent its loss by evaporation into the air.

Character of Rains.—There is an important difference in character between the rains of the East and those of the West. The summer rains of the West, and especially of the Plains country, consist largely of infrequent heavy showers. If the soil be open and deep, this rain sinks deeply into the ground. As previously mentioned, the hot sun and drying winds of the semiarid regions rapidly dry the topsoil, and this forms a mulch, or covering, which retards evaporation. Light showers in a dry time do very little good. They wet the surface, and if the water extends to the moist soil below, water from below actually flows to the surface over the wet soil grains, and the water of the light shower, as well as some of that previously in the soil, is lost by evaporating into the air. In humid countries, where much of the precipitation consists of frequent light, slow-falling rains, with much cloudy weather, the surface dries more slowly, giving less protection to the lower soil, so that much more water is lost from the soil as a whole than would be the case if the same quantity of water came in less frequent rains, provided,

of course, the heavy rains all soak in to the soil.

SOIL MANAGEMENT UNDER IRRIGATION.

Conditions in the semiarid regions differ so much from those in humid regions that special attention should be called to them; but, where water is available for irrigation, methods of handling soils may be much the same in the two regions. It is important that irrigation water should be made to go as far in crop production as possible. Systems of farming that increase the duty of water so that a greater acreage can be irrigated with present supplies are of the greatest value to the irrigation farmer. The deep bed of finely granular but well-firmed soil to absorb and hold the water applied, and the surface cultivation to conserve the moisture, are more important under irrigation than in humid climates. Light soils consisting largely of sand and gravel may be made more retentive of moisture by the admixture of organic matter, and loams and heavy soils may be improved by thorough and deep plowing. After soils have been irrigated the surface dries rapidly and frequently forms an objectionable crust. Therefore, special care should be taken so to cultivate them as to break up the crust while it is forming. If the work be done at the right time a granular mulch will be produced. Heavy soils require very careful handling after irrigation in order to leave them in good condition.

SOIL MANAGEMENT IN DRY FARMING.

The farming operations in the semiarid sections of the country have generally been of the roughest kind. The effort has been to grow a broad acreage of crops. In good seasons the profits have been large; in dry years the losses were not considered to be so great as if better farming had been practised. But some few farmers have followed better methods, and have shown that the benefits resulting from good farming, as compared with poor farming, are even greater under semiarid conditions than under humid conditions. Good farming not only gives better yields in good seasons, but often secures fair yields when poor farming gives absolutely nothing.

It is not to be expected in the semiarid regions that any method of farming without irrigation will insure crops in all years. There will be years of such light rainfall or of rainfall so poorly distributed that the best system rigorously applied will not prevent crop failures. But by proper soil management and farm management the disastrous years may be rendered less frequent.

Successful management of soils under semiarid conditions requires that thought and effort be directed to accomplish these three things:

1. The collection within the soil of all water falling upon it.
2. The retention within the soil of the water it has absorbed.
3. The growth of crops that thrive well under semiarid conditions.

STORING WATER IN SOILS OF THE SEMIARID REGIONS.

A Deep Bed of Porous Soil.—In dry farming (farming without irrigation) in the semiarid regions the quantity of water available to plants is the limiting condition of success. Land is abundant and cheap and the soil is fertile. Water is the one element that may be needed to produce a crop. Such being the case, it is obvious that no water should be allowed to run off from farm lands. It should all be made to enter the soil. The rains of the semiarid regions, as has been said, often come in the form of sudden and heavy showers. Such rains fill the upper soil completely. The pore space becomes full of water, and unless the lower soil permits the excess to move down rapidly much of the subsequent rainfall runs over the surface and off the fields. This loss of water and accompanying injury by washing is greater as the surface of the field is steeper. In the Plains region the lands are generally level, and in this respect every opportunity is given the farmer to save the water. To enable the water to run down quickly into the lower soil, a deep bed of porous soil should be prepared. This does not mean that the soil should necessarily be loose and open with large air spaces. It should be a mellow, close-grained mass, without any tendency to solidify or to stick together. When the soil is in the condition described by saying it is in good tilth, it will take up water readily. This layer of fine, close-grained soil should be deep, in order that much water may be stored in it. Water occupying the interstitial spaces in this upper soil will slowly sink into the deeper soil. Thus, when the soil is properly prepared, the water of a heavy rain may

be collected and held as in a sponge-like reservoir. It will sink down so as to equalize itself and leave the soil in good condition for surface tillage and for the development of plant roots. The tilth should be deepened gradually in semiarid regions as well as in humid ones, although less injury will result from turning up the better-weathered subsoil of the former.

Subsurface Packing.—In the process of plowing, the furrow slice is completely separated from the soil below. Trash of various kinds is often turned under, further separating the two. This loosened soil should be settled to reestablish connection with the lower soil. Rains will do the work in time, and in humid regions this may be all that is required, but in semiarid regions it is not. Evaporation is rapid from such loosened soil, and it should not be left in this open condition where water is so valuable. A process of settling and firming the lower soil while leaving the immediate surface loose and granular has been called subsurface packing. This packing may be done with an implement especially devised for the purpose, or less effectively with a weighted disk harrow, setting the disks straight so as to cut down into the soil and turn it as little as possible. A corrugated roller or a spike-tooth harrow also serves to settle the soil when other tools are not available. If much trash has been plowed under or the furrow slice is thick the harrow will be less effective. The common smooth roller by compacting the surface increases the loss of water by evaporation. The ground plowed in the forenoon should be packed and harrowed before stopping work for noon, and the same at night. This is very important, as a fresh moist surface loses water to the air very rapidly. The surface loosened by the harrow dries out quickly and protects the soil below. If the soil becomes too dry before the harrow is used a fine dust will be the result and winds will carry much of the latter away.

When Seed-bed Should Be Prepared.—The time when the seed-bed is prepared is of importance. It will vary with the nature of the cropping of the land. With wheat, oats or any that is harvested in the summer, the ground should be stirred as soon after the removal of the crop as possible. In this case more will depend upon the time of doing the work than upon the kind of tillage. Owing to the crowding of work at harvest time some rapid way of breaking up the surface should be adopted so that the whole of the field may be gone over quickly. Double-disk the ground and follow with a smoothing harrow. Keep the harrowing close up to the disking. By performing this work early the moisture in the soil will be retained and the plowing may be done more at leisure, but it should not be postponed too long. Plowing will leave such fields in much better tilth than those not so disked. Any rains that come previously to plowing will be taken up by the disked land better than by the dry stubble ground. After plowing pack or settle the soil by one of the methods already given and surface with the harrow. Should the plowing be delayed too long after the disking, and especially should heavy showers intervene, stir the surface of the soil with the harrow. This should be done as soon after the rain as the soil is in a condition not to puddle. After the ground is plowed use the harrow as frequently as is necessary to maintain the mulch 2 or 3 inches deep. Continue this until seeding time.

If the previous crop was harvested in the fall, a forage crop, for instance, the double-disking may be done before the ground freezes. If this has not been done, it should be done as early in the spring as the surface is dry enough. Unless there have been late snows or early rains, disk the ground as soon as the frost is out. The crop to be grown will, of course, determine the time of plowing. If fall wheat is to be grown, the plowing need not be done until late spring or early summer if the surface tillage be kept up. Plow not later than mid-summer, pack and harrow as directed for the wheat stubble. In all cases of fall seeding, summer tillage with harrow or disk should be continued so as to maintain the soil mulch.

Advantage of Summer Culture.—The treatment of soil outlined above has been called summer culture by some. While quite similar to the old custom of summer fallowing, it is something more than that. In the fallow the land was plowed to keep down the weeds and to aerate it. The culture was not specially timed to conserve moisture nor of a special character adapted to

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that purpose. The culture here described will give all the benefit of the summer fallow and at the same time save the moisture. It should be pointed out, however, that in regions of high wind some types of soil will not permit of constant stirring, which causes the loosened surface to drift. Such soils are not as well suited to dry farming as more stable types, especially where intertillage crops are to be grown, or where the surface is left unprotected.

Listing.—Whether listing such crops as corn, Kafr-corn, sorghum, and cowpeas will be better in semiarid farming than level culture can hardly be said with certainty. All depends on whether more is gained by having the plants more deeply rooted than is lost by greater evaporation from uneven surface. It must be remembered that the ridges are soon worked down so that the greater evaporation is for a short time and in the cooler weather of the spring, while the deep root system exists through the whole growing period. It would therefore appear probable that listing these cultivated crops is the better practice in the semiarid regions, as well as farther east where there is more rain, and experience where it has been tried sustains this view. The listing should be done in the moist seed-bed prepared the previous year, as already directed. The soil should be firmly pressed about the seed by a wheel following the drill.

FREQUENCY OF CROPPING LAND UNDER SEMIARID CONDITIONS.

In several of the Western States many of the farmers are successfully following a system by which they raise a wheat-crop once in two years, storing up water in alternate years. Where the rainfall is somewhat greater a crop is grown two out of three years. The system is perfectly flexible, and should be adopted quite generally in the semiarid region.

Plow and cultivate the land as directed for storing and retaining moisture in the soil. If at seeding time the soil is in a moist condition to a considerable depth, put the crop in, even if a crop was grown on the same ground the preceding season. If sufficient moisture has not been stored in the soil, let the land lie over and continue the tillage. The work on the whole will be less than if a crop be attempted each year and the crop will be greater. Indeed, by saving the rainfall of one year to help out the next year, a profitable crop will often be secured when there would have been nothing had an attempt been made to grow a crop each year.

In the mountain States, where the rains largely come in the winter, there is little trouble to conserve moisture sufficient to produce a crop of winter wheat. In the Plains region it is more difficult, for the falls and winters are the dry portion of the year. If there be a deep, moist seed-bed in the fall, the crop will generally succeed by the aid of the spring and early summer rains, but if the condition of the soil is not right, do not attempt a fall crop. Let the land lie over and grow a spring crop, or cultivate during the next summer and seed to fall wheat.

Since corn is not so exhaustive of soil water as is wheat, by thorough and late cultivation of the corn a crop of wheat may be secured after corn, when wheat after wheat would fail. Along the border between the humid and the arid regions an alternation of corn and small grain is the most profitable system. In this case, as in others, the condition of the soil at seeding time should determine whether an attempt be made to grow the wheat-crop. If the ground has been kept in good condition, disking the corn ground preparatory to seeding is better than to plow it. Such late plowing would make the soil too loose for wheat. The seed should be planted in the firm, moist soil below the dust mulch. The shoe drill or press drill will do this work satisfactorily. This alternation system should be varied sufficiently to allow an occasional leguminous crop to restore nitrogenous compounds to the soil.

CROPS FOR SEMIARID REGIONS.

Plants have habits of growth, and these extend to their minute structures, thus affecting their relations to their environments. These habits or characteristics are partly acquired through climatic influences, but this change of habit requires many generations. In dry farming the seed used should be from plants that have been grown in a dry climate. No seed should be purchased without knowing its history. If this does not show the adaptability of this particular seed to the climate where

the crop is to be grown, on no account should it be used. Seed produced in humid regions or on irrigated fields should not be used in semiarid farming—only that from dry farms.

The following suggestions are made as aids in selecting crops rather than as absolute guides. Even were the latter desirable, much additional information would be necessary before attempting it.

Live Stock.—While wheat will always be a tempting crop in this section, because it is a ready-money crop, and a large acreage can be handled by the use of machinery, stock raising should form an important element in all Plains farming. Rough feed can be grown in even the driest years if moisture has been kept over by summer tillage the previous year. This will not always be true of grain-crops. With stock the labor is well distributed through the year. The manure will be a valuable addition to the land if plowed under and the soil packed some time before seeding the ground. Moreover, stock may be considered a money-crop.

Wheat.—The best fall wheat now grown in the dry West is the Turkey Red. It is a hardy sort, standing the climate well and making a fair yield of hard wheat. A strain of this wheat, more recently introduced, seems to be superior to that generally grown. This strain has received a different name—Kharkov. These wheats come from Russian Asia, a semiarid country. The Durum wheats, introduced by the Department of Agriculture, are good spring sorts. They likewise are from dry climates. Some of them have given good spring crops in portions of the dry West, and there are indications that valuable fall varieties will develop from some of these Durum wheats.

Corn.—Corn may be grown especially for the fodder, with the grain as an adjunct in favorable years; but by cropping alternate years grain should be secured frequently. It requires less water to produce a pound of dry matter of corn plant than of wheat, and the continued tillage of the corn will conserve the moisture of the soil. But, since an average crop of corn weighs more per acre than one of wheat, the chances of the two with equal rainfall properly distributed will be about the same. The periods of growth of these crops differ, and the distribution of the rains may be such as to favor the one or the other. A small early maturing corn should be selected. There will be greater yield of grain to the weight of stocks than with the larger kinds, and less water will be required. The writer believes that a flint corn gives most promise; this is true of one grown under arid conditions, if such can be secured.

Kafr-corn.—This is perhaps the surest feed in dry farming. The plant stands drought well and responds to rain at any time before it is killed by frost or dry soil. If the soil has been properly handled by summer fallowing, a fodder-crop will be assured, and a seed-crop if there be the usual rainfall. The seed is a valuable feeding stuff, but should be ground or soaked for most kinds of stock, since the hardness of the grain causes much of it to escape mastication and digestion. The white-seeded, black-hulled Kafr has met with most favor. Kafr is a nonsaccharine sorghum. Although the stalks are not sweet they are quite leafy and afford considerable fodder.

Sorghum.—The varieties generally called sorghum are the saccharine kinds. The sorghums withstand drought well, and are valuable feeding stuffs for both semiarid and humid sections of the country. Like Kafr-corn, they may be grown for hay by drilling like wheat, or for grain and fodder by cultivating like corn. The sugar in the stalks increases their value, and the crop should be cut when the seed begins to ripen and cured to prevent loss by fermentation of the juices of the cane after freezing, as happens when pastured off in the fields. There are several good varieties of sorghum, among which may be mentioned Early Amber, Kansas Orange, and Coleman.

Alfalfa.—Alfalfa will be a valuable crop for the semiarid region if sufficient moisture can be secured to sustain the plant from two to four years. It should at first be tried in any particular section and on any particular soil on an experimental scale. The success of this trial will show whether it is wise to extend the area; the experience of neighboring farmers should always be considered. Be sure to have a good store of water in the soil and the latter in good condition, a firm, fine-grained, deep seed-bed with a soil mulch protecting it. With a

moist seed-bed brought over from the previous year seeding should be done in early spring, as soon as danger of severe frost is past. The plants will get the start of the weeds and grass and become well rooted before the summer heat. In humid regions late summer or early fall sowing is most successful; but in the semiarid districts this late seeding does not generally do so well, owing to the dry falls and winters. Under no consideration should alfalfa be seeded with a so-called nurse crop. Give it all the moisture in the soil—it will pay; a better, more even stand will be secured and the plants will be better established and more able to withstand a dry fall and winter. Certain alfalfas coming from a dry country seem to give promise for the plains.

In Utah semiarid farming, where the greater part of the annual rainfall comes in the winter season, it has been found advisable to make hay of the first alfalfa-crop and let the second crop make seed. The moist soil of the spring favors the development of foliage, while drier conditions are more favorable for the production of seed. The rainfall being mainly in the later spring and the summer months in the plains region, it will frequently happen that because of delayed spring rains the first alfalfa-crop should be permitted to seed. If rains come later, a hay-crop may be secured. Whether it is wiser to make hay of the first crop or to let it seed can be determined by the season, the moisture condition of the soil, and the size of the alfalfa at the time of blooming. If a good crop of hay has grown at cutting time, make hay of it. If the crop is light and the soil dry when the plants begin to bloom, a crop of seed may be produced and the alfalfa should be allowed to stand to mature the seed. One hay-crop and a good seed-crop per year is very profitable.

Rate of Seeding.—In order to make the most of the moisture in the soil, the stand of the several crops must not be too thick. Even in humid farming the stand of corn and the several grains is often so thick that the growth of the stalks exhausts the moisture of the soil or they crowd each other and the yield of grain is lessened. Two good stalks of corn with one good ear each are better than five or six stalks with nubbins, and many of the stalks without even these. In dry farming it is especially necessary to guard against thick seeding. One-half the quantity of seed usual in humid farming is enough, and some very successful farmers claim the rate of planting should not be more than one-third that usual in the humid sections of the East.

It has been customary in humid regions to use 20 or more pounds of alfalfa-seed per acre. If the plant be planted in a well-prepared seed-bed that is full of moisture, 10 to 15 pounds are ample. In semiarid regions 6 to 8 pounds of good alfalfa-seed properly put in will give a sufficient stand.

One-half bushel to 3 pecks of wheat drilled in soil prepared as directed will give a better yield of fall grain one year with another in dry farming than if the usual 1 or 1½ bushels be planted. The plants will more readily find moisture, and if conditions are favorable they will tiller or stool out and give a really stronger stand because of the better-rooted plants. While spring-sown crops do not tiller so much as fall crops, and therefore require more seed per acre than the latter, the same rule applies. For the several spring crops use about one-half the seed usually sown in humid regions.

If corn be planted in rows 4 feet apart and the seed be drilled one grain every 2 feet and it all germinates, it will give a stand of corn that will tax the soil moisture in all but unusually wet years. Experience may show that if grain be the object of the crop the stalks should be 2½ to 3 feet apart in the row. However, when corn, Kafr-corn, and sorghum are grown for rough feed rather than for grain, these should be planted about as is usual farther east when the object is to secure grain. The land will support about twice as many stalks of sorghum or Kafr-corn as of corn. When drilled in for hay, it is usual in humid regions to use 1 bushel of seed per acre. One-half bushel to 3 pecks will be about the proper rate in dry farming.

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humus in soils. The organic matter of soils is used up by oxidation during tillage and the soils become out of condition and run together and cake after heavy rains, unless this loss be made good. Organic matter may be increased in soils in several ways. It may be applied in the form of barnyard manure, straw, stalks, etc., and by green manuring—that is, by plowing a green, growing crop under for the special purpose of improving the soil.

Barnyard Manure.—Barnyard manure is the most valuable form of organic matter to add to soils, because it is rich as a fertilizer. For this reason the production and proper care of barnyard manure is just as necessary in farming as the growing of the staple crop. One of the great needs of some important agricultural sections is a great increase in live stock to produce manure and make possible the growing of a greater variety of crops, such as are required in an intelligent rotation.

Coarse Litter.—Where corn is the principal crop the stalks are generally cut as fodder; if not, they should never be burned, but should be cut and turned under; if fed to stock, the manure should be put upon the fields. Too often straw stacks are burned or permitted to rot down, and the various kinds of vegetable matter about the farm are burned or allowed to waste in outlots. It should all be added to the soil. The mechanical condition of the soil is improved by its decomposition, bacterial life prepares plant-food from it, and by giving these agents a suitable home it would be valuable even if this were its only benefit.

In semiarid farming wheat is often cut with a header. The straw left on the ground should be completely covered in plowing and the soil packed to facilitate the rotting of the straw. Until the straw decays it will have an injurious effect, causing the soil to dry out more rapidly; but by cropping alternate years there should be no harm from this cause.

Green Manuring.—When plants are plowed under green, they decompose more rapidly than cured plants do. The crop should not be allowed to stand until it has exhausted the soil moisture. If left too long the soil will be cloddy, the plants will not rot well in the dry soil, and the soil may be too dry for a subsequent crop to get a good start. The ground should not be seeded until the material has decomposed.

The crop grown for green manuring will depend largely on the main object to be attained. If the principal consideration be to add organic matter without regard to its nitrogen content, some quick-growing plant with heavy foliage should be selected. Oats, rye, sorghum, and even corn sown or drilled, are good crops to produce humus. The sorghum and the corn should be seeded close so as to make a large mass of vegetable matter and still not have large stalks.

Leguminous Crops.—Not only does the humus content of soils decrease during cultivation, but the nitrogen content does also. It will therefore generally be profitable to grow for green manuring a crop that adds this element to the soil. Leguminous crops, such as beans, peas, clover, and alfalfa, use atmospheric nitrogen through the medium of bacteria infesting the root tubercles, while grain crops can not use it, but must get their nitrogen from the soil itself. A leguminous crop used for green manuring will add both humus and nitrogen to soils. The crop selected will vary with the climate. In the northern portions of the humid regions clover has been used as a nitrogen-gathering crop and is well suited for green manuring. Cow-peas have served the same purpose in the South. In the subhumid region cow-peas and alfalfa give good results. In semiarid sections alfalfa will be the best crop for the purpose if sufficient moisture to sustain the crop for a few years can be secured. An annual crop, however, will generally be most successful as a nitrogen gatherer. Cow-peas are a promising crop for this purpose as they stand drouth well. Cured as hay they make good feed, if the crop can not be spared for green manure, and the stubble and roots by their decay add both nitrogen and humus to the soil. It is a common practise in the South to plant cow-peas between the corn rows when the last cultivation is given the corn. The long season and the moist climate mature a crop of peas from this planting. During unusually wet seasons the same practise might be followed in the semiarid regions, letting the land lie idle the next

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year and giving it thorough summer tillage. However, the corn and the peas together may require so much water that each would interfere with the other. The plan should be first tried on an experimental scale only.

When wheat is grown in alternate years, advantage may be taken of an unusually wet summer to grow a green-manure crop after the wheat is harvested. Immediately after harvest put the crop, cow-peas, in the stubble ground after having thoroughly disked it. Plow the crop under just before killing frost and pack and settle the soil. Give it thorough summer tillage the next season and plant to wheat the following fall.

By taking advantage of seasons and conditions of cropping, the organic matter and the nitrogen of soils may be maintained without serious hindrance to the system of cropping, whatever that may be. But plans should be made so that each field may bear a nitrogen-gathering crop every few years. Cultivated crops should also form a part of the system for each field. They do not deplete the soil of moisture as small-grain crops do. Wheat after wheat keeps the soil continuously drier than corn after corn, or even an alternation of corn and wheat.

The desirable succession of crops can be best secured by adopting definite rotations. The particular crops must be determined upon by local conditions, but the system or rotation must include legumes, cultivated crops or fallow, and grain crops.

SUMMARY.

A deep soil of good tilth will absorb and hold for the use of plants a large part of the rainfall. Such soil is in good condition for the growth of common crops.

Soils can be put in the best of tilth when in proper state of moisture, by deep plowing, disking, and harrowing.

Evaporation from soils can be lessened by covering them with mulch. The best mulch and the only practicable one on a large scale is a soil mulch. This can be produced and maintained by surface cultivation. To be most effective, the cultivation must be repeated after rains that puddle the surface soil. To reduce the labor of frequent cultivation, implements that cover a large surface may be employed.

In semiarid regions special effort should be made to utilize the rainfall. The ground should be plowed soon after the removal of a previous crop; it should then be settled and smoothed. By frequent cultivation of fallow land, moisture may be stored for a crop the next year. In this way crops have been grown in semiarid regions once in two years when crops every year on the same land have failed.

In dry climates the corn-crop succeeds better when put in with the litter. It roots deeper, stands up better, and the work in growing a crop is less than when planted in level-plowed soil.

Strains of plants that have originated or been grown for many years in dry climates should be selected for the semiarid regions, and the rate of seeding should not be more than one-half that common in humid regions. Stronger, better-rooted, and more hardy plants will thus result.

Organic matter should be maintained in soils to improve their physical condition. This may be accomplished by green manuring, and by the plowing-in of manure, straw, stalks, and other vegetable refuse.

Leguminous crops, such as clover, alfalfa, and cow-peas, used as green manure, not only increase the humus of soils but supply nitrogen from the air. This is the cheapest way of adding this important fertilizer ingredient.

Any one who proposes to begin farming without irrigation in a region of light rainfall should be properly cautious. He should not be misled by glowing accounts of large crops; he should investigate carefully the possibilities of the particular region in which he expects to settle; he should have clearly in mind beforehand the kind of crops which he will produce, and he should not undertake dry farming if a failure of crops at the beginning will mean to him complete and permanent disaster. It should be clearly understood that farming in the semiarid regions, without irrigation, can not in the nature of things be as certain or as profitable as farming under favorable conditions in the humid regions.

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All Russians are interested in the development of their empire in Asia, and tens of thousands among those whom a casual visitor in the summer



A Russian Dump Wagon.

months would suppose to be merely agricultural laborers, are to a great extent dependent upon the Oriental markets in which their products are sold. The coopering industry is now almost entirely in the hands of peasant associations and presents us with a very curious example of this Oriental trade. All goods sent by land to the Asiatic market must, of course, be securely packed but many Russian merchants have adopted a system for avoiding the loss sustained by transporting packing cases that are of no value upon reaching their destination. Whenever possible, goods intended for Persia, Bokhara, Turkestan, or China are packed in casks, tubs, or buckets which on their arrival are often sold for as high a price as an equal weight of the goods they contain. The tubs are generally made with the staves of different colored woods and ornamented in various ways, with sometimes very artistic designs burnt in. All over the East certain colors and designs are considered "unlucky," and those of course must be avoided. The Russian government now gratuitously supplies these peasant associations with colored plates of designs that will not offend the Persian and Chinese purchasers. In the province of Nikn-Novogorod and the neighboring governments many thousands of peasants are engaged in the manufacture of enameled wooden spoons. The number they produce now exceeds 120,000,000 spoons per annum, and more than half are exported to Persia, Bokhara, and China. Many of the more expensive of these spoons are carved and painted in very artistic designs, but the work is so complicated that every spoon passes through the hands of fifteen different artels, associated together but often in different villages, each of which has made a specialty of some particular process. The manner in which the varnish is hardened so as not to melt in boiling water is a trade secret which the peasants jealously keep. In other districts, especially in the province of Vladimir, a large number of village communities are wholly occupied in the manufacture of toys. More than 5,000 peasants are engaged in this trade alone. Many important metal trades are also carried on by these peasant associations, and there are some branches of trade in which not only the Russian, but the German and Belgian firms established in Russia have been completely beaten out of the field by the artels. One of these is the extremely important manufacture of the national samovar, or tea-urn, to be found in every house and cottage in Russia, and another is the painting of icons, or sacred pictures, one at least of which will be found in the hut of even the poorest peasant. These icons are not only sold in Russia, but are largely exported to all the neighboring countries where inhabitants belong to the orthodox church. In two provinces alone, Vladimir and Kursk, no fewer than 2,000,000 icons are made annually by these associations. Each is drawn and painted entirely by hand, and the peasant artists are unaided by mechanical contrivances of any description; nor would they be, since they regard their occupation as a religious work, and in their belief the

icon would lose its religious character if produced by other means than hand-work alone. Formerly the painting of icons was carried on exclusively by monks in the monasteries, but is now almost entirely in the hands of the peasantry. The cheaper kinds are generally painted on small pieces of lime or alder, and the pigments that they use are all prepared by themselves. Many are of extreme brilliancy, but the process they employ in their preparation is a jealously guarded secret. One peasant association makes a specialty of drawing and painting the figures of the Saints, and then passes them on to another, sometimes in a different village, where the background only is put in. A third group completes the painting or varnishing and finally the fourth adds the tinfoil ornamentation which replaces the silver used in the more sumptuous kinds. All four of these groups of peasants work together in a single cooperative partnership, and the slightest deviation from the old models copied would be regarded as a deadly sin. ENORMOUS AMOUNT OF JEWELRY MANUFACTURED.

A great deal of cheap jewelry and trinkets of all kinds are manufactured in immense quantities by these cooperative associations. In the government of Kostroma, for example, there are more than fifty villages along the banks of the Volga in which almost the whole of the inhabitants are engaged in this trade during the winter months, and where more than 15,000,000 earrings, bracelets, brooches, lockets, rings, etc., are made every year. Most are in copper, brass, or other cheap material, but notwithstanding this they are carefully made and are often gilded with a gold leaf which is said to be imported by the Tartars. The gold and silver leaf employed is of course the product of peasant industries carried on in many villages. The rural industries have been greatly aided during the last ten or twelve years by the action of the government and associations under the patronage of the late and present Emperors, both of whom regard the development of peasant industries as a matter of the highest national importance. Trained technical teachers are sent during the winter from village to village at the state's expense and their services are eagerly sought by the peasant industry leaders. Exhibitions of peasant productions are frequently held at Moscow and other leading centers, and the government advances to the peasant communities loans at a low rate of interest for the purchase of raw material.

Unfortunately the Russian peasants have far greater industrial than commercial capacity, and they are consequently sadly exploited by the middlemen, Germans, Jews, Belgians, Armenians, and Greeks, who purchase the products for half the price eventually obtained for them. The principle of cooperation in the artel has permitted the industries of the Russian peasants to survive the competition of capital, by which hand labor and small factories have been largely crushed out of existence in other countries.

Consolidated Schools and Agriculture.

Fasset A. Cotton, State Superintendent of Public Instruction in Indiana, is a firm believer in the doctrine of centralized schools, and in a bulletin just issued by his department says:

"The compact population of towns and cities seemingly gives them the advantage in conducting schools. This is not true in fact. The township is the unit of our school system. The interests in a township are generally common. Five miles in a comfortable wagon over good roads is not so far as a mile or two on foot. Recent visits to schools that are taking advantage of centralization have more than ever served to convince me that here is the solution."

Referring to the relation of the country school to agriculture Mr. Cotton pertinently remarks:

"The supreme business of the school is to prepare for manhood and womanhood in the largest and best sense. To this end every boy and girl should be given a chance to be all he and she can be at any stage in the process. Whatever best develops the boy and girl is the best preparation for the future. The nature and needs of the child and the general nature of the life he is to live determine best the work he ought to do in school.

"The particular process is largely



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Every house has its cold room. Abnormal weather conditions, inadequate stove or furnace heat often result in some particular part of the house being cold and cheerless. You can make home warm and cheerful with the

PERFECTION Oil Heater

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Carry it about from room to room. Turn wick high or low—there's no danger. Smokeless device prevents smoke and smell. Easy to operate as a lamp. All parts easily cleaned. Brass oil fount beautifully embossed. Holds 4 quarts of oil and burns 9 hours. Gives intense heat. Two finishes—nickel and japan. Handsome, useful, reliable. Every heater warranted. If not at your dealer's write our nearest agency for descriptive circular.

The Rayo Lamp

is the best lamp for all-round household use you can buy. Equipped with latest improved burner. Gives bright, steady light at lowest cost. Made of brass throughout and nickel plated. Suitable for any room whether library, dining-room, parlor or bedroom. Safe and satisfactory. Every lamp warranted. Write to nearest agency if not at your dealer's.

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This Company is conducted on the cooperative plan by the Independent Cooperative Elevators. We are the terminal for Farmers and Independent Elevators and solicit your membership and patronage.

ARE YOU POSTED

on the recent development in the Grain Trust investigation by the Interstate Commerce Commission? IF NOT, ASK US. Why don't you farmers fight the Trust? We will help you, if you will help yourselves.

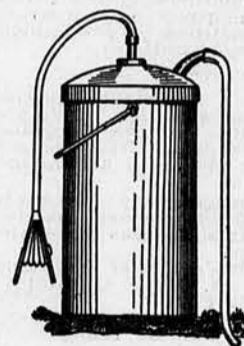
DO YOU KNOW

that the President of the Kansas City Board of Trade admitted in his testimony at the hearing of the Interstate Commerce Commission that they had boycotted The Independent Farmers' Terminal Co.?

The National Grain & Elevator Co.

Kansas City, Mo.

References—The Editor of this paper.



Destroy the Gophers

In Your Alfalfa Fields by Using

Saunders' Gopher Exterminator

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

Filnt Saunders, Lincoln, Kans.

Mention the Kansas Farmer.

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We Sell Premium Machine Oil at Less Than Half the Price You Now Pay.

Our Premium Machine Oil is sold at \$3.50 per barrel. Thousands are using it and find it all right.

Every barrel guaranteed, and you be the judge. Other oils cost 35c to 40c per gal.; ours costs \$3.50 per barrel. Freight rate is 32c per barrel all points within 100 miles of Benedict, Kans. For each additional 25 miles add 2c.

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.

We Can Save You Money on Cylinder Oil. Write for Particulars.

T. C. Davis, Benedict, Kansas

WHEN WRITING OUR ADVERTISERS MENTION THE KANSAS FARMER.

determined by the nature of the community in which the child lives. In a rural community farming overshadows everything else. The problems are agricultural. It is fair to conclude that in a farming community the school should take some note of this industry. The child must be made to realize as soon as possible that these things with which he is dealing in school are just the things he is dealing with at home and elsewhere. An intelligent use of the community's agricultural experience in the schoolroom serves a double purpose. It furnishes the only real basis the child has for development, and it at the same time becomes a basis for an intelligent choice of a life work. The skillful teacher who studies the problem will be able to show incidentally the tremendous importance of agriculture in the world and the great opportunities it offers. A few years of intelligent and scientific teaching with this idea uppermost will work a complete revolution in our industrial conditions. What is true with regard to agriculture is just as true with regard to other dominant industries in other communities. The school must consider the life of the people."

Horticulture

Kansas Horticulturists—The Fortieth Annual Meeting.

In announcing the program for the coming session of the Kansas State Horticultural Society, Secretary Barnes opened with the following greeting:

"Now comes our 'ruby' anniversary, the fortieth annual assembly of the useful Kansas State Horticultural Society. Beginning, under not very encouraging conditions, in 1867, after four decades of time, two-fifths of a century, we still annually greet each other. Forty years ago less than a dozen men met to organize; of these, not one is with us yet, and only one, S. T. Kelsey, is still living. What changes! The early recruits to our rolls were young men, with dark hair and vigorous, sprightly action; to-day many of these have dropped out, and many others show signs of age; yet probably no body of progressive men have made a greater impression for good upon the State. Your teaching and influence have been of the best and for the best, inducing the husbandmen of the State to plant and grow the good things that Mother Earth is capable of bringing to perfection in our latitude; not a single influence of this society has been harmful. In forty years the fruit frontier has moved fully 200 miles westward, and, through the encouragement of this society, fruit-trees are now growing and promising clear to the Colorado line, and in every county in the State. The following comparison will give you some idea of this great improvement. The first census of fruit-trees was taken in 1878; the last in 1906. In 1878 from fifty-two to sixty-seven counties reported—the fifty-two on grapes, the sixty-seven on apples, peaches, plums, and cherries. The figures are of bearing trees only:

	1878.	1906.
Apple.....	1,530,275	6,654,624
Pear.....	57,829	253,462
Peach.....	5,069,579	4,622,937
Plum.....	123,479	612,624
Cherry.....	461,237	652,522
Grapevines, acres..	5,558	8,897

"The value of these trees and their influence can not be computed. With this has also gone the timber line, and the treeless plains of 1878 are now dotted with groves, orchards, hedge-rows, and cities embowered in shade-trees.

"May the next decade not only show an increase in area and numbers, but may selections be more carefully made, and the quality of all improved.

"In conclusion, let me say that no influence in the State has done more for the improvement of the physical, intellectual, and moral conditions of our citizens than the influences that have gone out from this society and its work. You may well be proud of it. So come! Come, and let us reason together, for the fortieth time."

Sessions open at 9 a. m. and 1.30 and 7.30 p. m.

Question box is always open to those interested.

After every day paper or report, discussion pertinent to the subject, limited by the will of the presiding officer, will be in order.

THURSDAY, DECEMBER 27.

11 a. m.—Trustees' session.

1.30 p. m.—Meeting called to order by president, Maj. Frank Holsinger. Prayer.

Annual reports of trustees, in writing, by Congressional districts, on horticultural conditions and progress:

First district, A. E. Dickinson, Meriden; Second district, E. F. Diehl, Olathe; Third district, E. L. Kenoyer, Independence; Fourth district, John Cou-

sins, Eskridge; Fifth district, William Cutter, Junction City; Sixth district, J. J. Alexander, Norton; Seventh district, C. A. Blackmore, Sharon; Eighth district, Geo. A. Blair, Mulvane.

Communications and announcements. Queries Nos. 1, 2, 3, 4, 5.

Appointment of session committees on credentials of delegates, election, new members, exhibits, auditing, obituaries, and resolutions.

THURSDAY EVENING.

7.30 p. m.—Meeting opened by the president, Maj. Frank Holsinger.

Welcome to Horticulturists, Hon. E. W. Hoch, Governor of Kansas.

Response to Welcome, F. Holsinger, president.

"Mysteries of Fruit Pollination," Dr. J. C. Whitten, dean of horticulture, State Agricultural College, Columbia, Mo.

"Civic Improvement," Christian Jensen, landscape artist, Topeka, Kans.

"Beautifying Country Homes," A. Reinisch, superintendent of public parks of Topeka.

"Some Desirable Trees, not Native," A. T. Daniels, Topeka.

Choice music at evening session.

FRIDAY, DECEMBER 28.

9 a. m.—Meeting called to order by Maj. Frank Holsinger, president.

Prayer.

Report of officers: President, vice-president, treasurer, secretary, official entomologist.

Report of the committee on audit.

"Practical Spraying," by Practical Men," W. H. Underwood, proprietor cold storage and large orchards, Hutchinson; William Newlin, successful orchardist, Hutchinson; and others.

Queries Nos. 6, 7, 8, 9.

During noon adjournment, representatives from Districts 2, 4, 6, and 8 will choose nominees for trustees.

1.30 p. m.—Report on credentials of delegates.

Report of committee on order of election.

Election of officers.

Election of trustees for Districts 2, 4, 6, and 8.

Amendments to constitution—for passage.

Amendments to constitution—newly offered.

"Marketing in Large Cities," Clarence Holsinger, fruit-grower, Rosedale, Kans.

"Cooperation or Competition," Geo. W. Collings, fruit-grower, Wichita, Kans.

"Cooperative Marketing," Geo. W. Kinkead, secretary and treasurer of Fruit-Growers' Association, Wathena, Kans.; R. W. Rader, secretary Arkansas Fruit-Growers' Association, Fayetteville, Ark.

"Fruit Disposal," Hon. John P. Logan, secretary of Arkansas State Horticultural Society, Siloam Springs, Ark.

Queries Nos. 10, 11, 12, 13, 14.

FRIDAY EVENING.

7.30 p. m.—Meeting opened by president-elect.

"Using Horticultural Products in the Home," Mrs. Henrietta W. Calvin, B. S., Kansas State Agricultural College, professor of domestic science.

"Success with Flowers," Prof. W. A. Harshbarger, professor of mathematics, Washburn College.

"Nature Study in Our Common Schools," Miss Eva Schley, teacher of natural history, Topeka high school.

"A Fruit-Grower's Letter to Her City Cousin," Mrs. Geo. E. Rose, daughter of President Holsinger, Rosedale, Kans.

Choice music at evening session.

SATURDAY, DECEMBER 29.

9 a. m.—Meeting opened by the president, Frank Holsinger.

Prayer.

"Peach Culture," William Cutter, fruit-grower, trustee of Fifth District, Junction City, Kans.

"Fruit-Growing in Southwestern Kansas," C. A. Blackmore, fruit-grower, trustee of Seventh District, Sharon, Kans.

"Fertilization of Fruit Blossoms by the Aid of Bees," Geo. W. York, editor Beekeepers' Journal.

Queries Nos. 15, 16, 17.

Unfinished business.

Report of committees on exhibits.

Reports of committees on new fruits.

Report of committees on obituaries.

Report of committees on resolutions.

Song, "America," by all.

QUESTIONS.

These highly important queries should receive our attention. They are placed, by number, in the foregoing program. It is hoped the persons named will each prepare a five-minute reply to the point.

1. What legislation is needed regarding the control of noxious insects? Prof. E. A. Popenoe, Kansas State Agricultural College.

2. Is nursery inspection of any value to horticulture? A. Willis, Ottawa; T. H. Smallwood, Fort Scott.

3. Would dipping bundles of nursery stock answer as well as fumigation? J. J. Alexander, Norton.

4. How may purchaser know if nursery stock has been fatally frozen? J. F. Cecil, Topeka.

5. Is not the representation from local horticultural societies—two delegates with ballots too great? B. F. Smith, Lawrence.

6. Are the recognized commercial varieties of apples deteriorating? Philip Lux, Topeka.

7. How can we improve the quality of our commercial varieties of fruit? E. J. Holman, Leavenworth; Geo. A. Blair, Mulvane.

8. Can nut-growing be made profitable in Kansas? Edwin Snyder, Oskaloosa; J. N. Macomb, Lawrence.

9. Is there any money in sweet potatoes? F. P. Rude, Topeka.

10. Will cooperative neighborhood cold storage pay? Col. J. W. Robison, Eldorado; B. F. Van Orsdol, Topeka.

11. Should the appropriations for the society be limited? Hon. T. J. Tredway, Iola.

12. Should the rooms of this society be cleaned, repaired, and more appropriately furnished? S. M. Crow, Topeka.

13. Would not an annual instead of a biennial report be more useful, profitable, and acceptable? F. L. Kenoyer,

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We sell direct to the user. We'll save you all the middleman's profits.

Our Harrows are not for sale by Dealers anywhere. Be sure to remember that. No dealer can sell you a Detroit Tongueless Disc Harrow.

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on every Harrow to prove that they are exactly as represented.

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Write at once for our FREE book and other valuable information.

Let us quote you a price on this Harrow. We give extra dating on advance orders.

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Front truck takes the weight of frame and controls movement of harrow. Double levers make easy handling.

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Saves horses and turns quicker at the corner. Ball bearings take the end thrust.

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We want district managers in every county in the United States. Call and see practical demonstrations at our office.

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2-hole and 4-hole Custom and 2-hole Farmers' Positive Force-Feed Shellers

They have Chilled Working Parts and other points of strength and convenience. We make Horse Powers, Wood Saws, Huskers, Farm Trucks, Manure Spreaders, etc. We guarantee our Goodhue Wind Mills for five years.

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30,000 Members

The Farmer's Alliance Insurance Company of McPherson, Kansas

We furnish insurance at cost; 18 years of successful business. Why carry your insurance with others when you can get it in this company at much less cost. Write for full particulars of our plan.

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Kentucky Blue-grass Seed

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SHAWNEE NURSERY CO., TOPEKA, KANS.

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We sell direct to the planter at reduced prices.

Send for catalogue and price list.

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Independence; Hon. Edwin Taylor, Edwardsville.

14. Should there not be some way to compel assessors to make more careful statistical returns? Hon. F. D. Curn, Topeka.

15. Can cabbage be profitably grown as a side crop? O. F. Whitney, Topeka.

16. Shall Kansas horticulture take a place at the Jamestown Exposition? E. P. Diehl, Olathe.

17. Is it advisable for this society to continue to issue specials such as the apple, grape, etc? Ex-president F. Wellhouse.

ANNUAL FRUIT EXHIBIT.

One hundred dollars has been set apart for awards on exhibits of fruit. The exhibition is not competitive, and every exhibit of merit will receive an award. Uniformity will require that five (no more, no less) specimens shall constitute a plate of apples, pears, peaches, or quinces; nine specimens of crabs and plums; grapes, one pound.

Several plates of same variety may be exhibited by same person.

Displays by counties, societies, or individuals may include all, not duplicates, which they exhibit, whether already awarded a premium or not.

All fruit must be correctly named.

Preserved and dried fruits, or preparations of fruit, will receive the attention and consideration of the committee.

New fruits of value, noted varieties, or those of peculiar excellence, from anywhere, will receive awards of "Special Merit," or "Honorary Mention."

New varieties will be specially classed and distinctly and separately reported upon.

The exhibit will be made in the north corridor of the State house, and only Kansas-grown specimens, exhibited by the grower or his representative, will receive premiums.

Fruit carefully packed can be sent by express, in care of the secretary, or brought in your baggage.

RAILROADS.

All railroads will give the usual holiday round-trip tickets for a straight-one-way fare. Buy a round-trip ticket on the right day.

HOTELS.

Topeka contains hotels, boarding, and rooming-houses to suit the taste and purse of each one.

Forty-Ninth Annual Meeting Missouri Horticultural Society.

The Missouri State horticultural meeting, at Boonville, December 4-6, 1906, fulfilled our anticipations and was a fine one in attendance, enthusiasm, and in program. The sessions were held in an attractive and well-adapted hall. The large display of fruit was exhibited on tables in the arcades of the same room. This exhibit amounted to twelve barrels of apples, with some plates of pears, peaches, chestnuts, crabs, and almonds. Some fifty varieties were on the tables. Every exhibitor received an award, the total sum of money paid out amounting to \$130. The platform was decorated with vases of chrysanthemums and carnations and boxes of Chinese lilies, which were awarded ten dollars premiums.

SOME SUBJECTS DISCUSSED.

Miss Anna L. Clarke, of Boonville, made a plea for the preservation of the forests in the United States, especially for those in Missouri; also for the reforestation of denuded tracts. Her arguments presented the weight of sentiment and of commercialism.

Dr. J. C. Whitten, horticulturist at the Missouri State Experiment Station, spoke on replanting in orchards, advising the practise up to the age of five years in the balance of the orchard. Some replants need extra good cultivation.

The program of Wednesday was given up to the subject of orchard work. Mr. H. S. Wayman, Princeton, Mo., discussed some of the mistakes made by orchard-growers.

Under the topic, "Some Impressions of the Fruit-Growing Industry in the Central Mississippi Valley," Mr. H. P. Gould, Assistant Pomologist, U. S. Department of Agriculture, took up the conditions he had observed in this district and urged thorough and clean cultivation, with proper alternation of cover-crops. Careful and annual pruning should be carried on, though to a much lighter degree than when pruned less frequently. Thorough and continual spraying was advised, as also more particular work in grading and packing.

The advantages of organizations for selling fruit were zealously affirmed by Mr. C. J. Graves, of Neosho, Mo., as shown in the results obtained by the Neosho Fruit-Growers and Shippers' Association, namely, better terms for packages, better rates from the railroads, surer redress in case of loss, higher returns because of higher standards in picking and packing, bet-

ter knowledge of markets, and larger supply of pickers because of larger fields or combined efforts. The attention of the audience was called by Mr. G. T. Tiffin to the necessity for honest packing, for closer knowledge of markets and supply. He pointed out the unprofitable results from ignorant expectation of too high prices on the part of the growers, and from misapprehension on the part of the commission men as to the size of the crop. He also advocated organizations as a means to remedy this ignorance.

H. M. Kingsbury, of Boonville, continued the approval of reliable packing, of a constant standard, of a brand and trade-mark known and maintained.

In his paper on "Keeping Apples," Mr. W. T. Flournoy, of Marionville, reported further results and lessons from his cold storage on his farm, repeating with emphasis his belief that keeping apples is not only a question of temperature but even more a matter of well-sprayed, well-picked, and well-graded fruit. Dr. J. M. Stedman, entomologist of the Missouri Experiment Station, rehearsed the description and life history of San Jose scale, and reported the presence of it in additional parts of the State, warning the members without undue alarm, and prescribing the remedy of the hot lime and sulfur wash (salt being of no added benefit). Dr. Stedman also admonished great caution in the use of hydro-cyanic gas for fumigating infected trees or nursery stock, as it is easily dangerous to life.

For an easy way of having flowers Mrs. G. E. Dugan, of Sedalia, recommended the wild blossoms of "The Master's Garden," praising their beauty, hardiness, and abundance, as also that of a number of perennials. Mr. H. W. Collingwood, of the Rural New Yorker, gave as his "Message from the East" the belief that the Eastern growers are not afraid of Western competition, averring his faith in Yankee ingenuity and perseverance that shall find its markets among its own people. He is an enthusiastic missionary for the Apple Consumers' League, commends its practise of eating five apples a day and calling for apples at every hotel and restaurant, as a means for increasing the demand and market as well as for the health of the people. He furthermore prophesied that the West would soon have upon it the same conditions that now prevail in the East, making shipping less profitable and local marketing more so.

Mrs. W. K. James, president Missouri Federation of Women's Clubs, proved herself an ardent supporter of the school garden movement, detailing her arguments as for the benefit of the children in training of mind and hand, in giving them happiness in an appreciation of nature, and for the advantage of the commonwealth in beautified plots, in fewer juvenile misdeeds, and in higher civic ideals.

Prof. W. R. Lazenby, of Columbus, Ohio, gave an address on the food value of fruits, which was an exhaustive explanation of the nature of fruit, analyzing the constituents of the same as various acids, starch, water, and aromatic and volatile oils, which latter give the odor and flavor. Since such a large per cent of every fruit is water, it can not be considered of much nutritive value in the diet; neither is it advisable, in Professor Lazenby's opinion, to regard fruit as medicine. Medicinal value it certainly has, but it is chiefly valuable because of giving the supply of acid needed to the system and of inciting activity in the digestive tract.

"Plant Nutrition from the Standpoint of the Orchardist," by Dr. B. M. Dugan, professor of botany Missouri University, Columbia, Mo., was a thorough study of the fundamental principles of plant nutrition. The chief point for this Western country is that much of our land needs a supply of lime to correct the acidity too apt to be present, to counteract the over supply of magnesium prevailing in this district, and to release the potash and nitrogen present but often unavailable.

That the enterprise of a Westerner equals the ingenuity of a Yankee is shown by a young man, K. B. Wilkerson, Mexico, Mo., who carried his peaches twenty-eight miles by road and sold 55 bushels at a dollar per bushel in a town where a resident peach-grower said there was no demand. He stood with his wagon in the shade of a tree and gave a peach to every passer-by until he created a demand and people began to buy. In five hours he gathered in \$55.

A record of experiments to learn of the hardiness of peach buds was given by Mr. W. L. Howard, assistant professor of horticulture, Experiment Sta.

(Continued on page 1377.)

SPECIAL OFFERS

SPECIAL OFFER NO. 1.

The Greatest Magazine Bargain of the year. A saving of 40 per cent on the best you can buy.

Review of Reviews.....	\$3.00
Woman's Home Companion.....	1.00
Success Magazine.....	1.00
The Kansas Farmer.....	1.00
Regular Price.....	\$6.00
Our Price Only	\$3.75.

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Another great offer which includes Country Life in America, the most beautiful magazine published.

Country Life in America.....	\$4.00
The Garden Magazine.....	1.00
McClure's Magazine.....	1.00
The Kansas Farmer.....	1.00
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Our Price Only	\$4.75.

SPECIAL OFFER NO. 3.

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Home Departments

CONDUCTED BY RUTH COWGILL.

Christmas Carol.

The earth has grown old with its burden of care,
But at Christmas it is always young.
The heart of the jewel burns lustrous and fair,
And its soul full of music breaks forth on the air,
When the song of the angels is sung.

It is coming, old earth, it is coming to-night!
On the snowflakes that covered thy sod;
The feet of the Christ-child fall gentle and white,
And the voice of the Christ-child tells out on the night,
That marked are the children of God.
On the sad and the lonely, the wretched and poor,
The voice of the Christ-child shall fall;
And to every blind wanderer open the door
Of a hope that he dared not dream of before,
With a sunshine of welcome for all.

The feet of the humblest may walk in the field,
Where the feet of the holiest have trod.
This, this is the marvel to mortals revealed,
When the silvery trumpets of Christmas have pealed,
That mankind are the children of God.
—Phillips Brooks.

Christmas Greetings.

On that first Christmas eve the wise men were searching the heavens for new constellations and studying the stars, trying to find out God. They had made a study of the old books and knew the prophecies concerning the coming King, and were expecting the new star. Great was their joy when it appeared to view, and with rare and precious gifts they started out to find the newly born King. Following their shining guide, they found Him, not in palace, but in the stable, where with love and adoration they laid their gifts at His feet. The star that shown so brightly on that memorable night and led the wise men forth with gifts to the wonderful Babe, to-day sends its rays into the uttermost parts of the earth. It is still leading mankind forth. It is the love that prompts the heart to deeds of kindness to the poor and humble; that shows us the unfortunate and those unused to the comforts of life, and says, "As ye did it unto the least of these, my children, ye did it unto me."

While the wise men were searching for their King, the simple-minded shepherds, watching their sheep by night, were startled by the appearance of an angel fair, who announced to them the joyful news, "Unto you is born this day a Savior which is Christ the Lord." After telling them where they would find Him, the angel joined a multitude of the heavenly host in the immortal song, "Glory to God in the highest and on earth peace, good will toward men." The glad tidings "of great joy which is to all the people" has been told far and wide. The song the angels sang is heard this twentieth century Christmas day in every part of the earth.

I wish you one and all a merry Christmas, and may all the joys of the day in their fullest sense come to each of the readers of Home Departments.

Some Christmas Recipes.

Escalloped Oysters.—Put one-half pound of butter in a frying pan and let it brown, then add half of a loaf of bread, except the crust, which has been crumbed fine. Place a layer of these crumbs in your shells or individual dishes, add five or six oysters, season with salt and pepper, cover with crumbs, and moisten with three tablespoonfuls of oyster liquor. Bake half an hour in a slow oven. Serve immediately.

Old-Fashioned Brown Bread.—Two and one-half cups of sour milk, one-half cup New Orleans molasses, one heaping teaspoonful of soda, two cups cornmeal, one cup graham flour and one-half cup currants. Steam one hour, then place in the oven long enough to brown.

Fruit Cake.—Two cups of sugar, one cup each of butter, cold coffee, chopped raisins, and currants, three eggs, one teaspoonful each of allspice, cinnamon, and soda, the last dissolved in two tablespoonfuls of boiling water, and sufficient flour to make the mixture quite stiff. Bake slowly, as it scorches easily.

English Plum Pudding.—One pint of flour, one pound each of suet chopped

fine, sugar, currants, and raisins, one-quarter pound candied lemon peel, one nutmeg, one-half teaspoonful of cinnamon. Mix these ingredients together dry, then add slowly sweet milk until the batter is of the right consistency to drop from a spoon. Turn into a dish with a close-fitting cover, and boil for six hours. It can be made several days before it is used, and steamed before being placed on the table.

Escalloped Potatoes with Parsley.—Slice thin sufficient cold boiled potatoes to fill a baking dish, salt and pepper to taste, and pour over sufficient sweet cream to moisten the potatoes. Bake one-half hour and garnish handsomely with parsley.

Nut Candy.—Two cups of granulated sugar, one and one-half teaspoonfuls of flour, one cup of water; boil fifteen minutes, flavor and stir in the nuts. When cool enough mold into balls.

Chocolate Fudge.—Grate one cake of unsweetened chocolate and mix thoroughly with two pounds of brown sugar, add one cup of milk and one-half cup of butter. Let all come slowly to the boiling point, then stir constantly until a little dropped in cold water will harden, when remove from the fire, beat steadily for five minutes, then pour into shallow pans. Before it hardens, cut in squares with a sharp knife.

An Old-Time Christmas.

On the way home our host's heart seemed to overflow with generous and happy feelings. As we passed a rising ground which commanded something of a view, the sounds of merriment reached our ears. Our friend paused for a moment and looked about with an expression of joy. The beauty of the day was enough to inspire gratitude. Notwithstanding the frostiness of the morning, the sun in its cloudless journey had acquired sufficient power to bring out the still living green of the landscape, even in the midwinter. Large tracts of smiling verdure contrasted with the dazzling whiteness of the shaded slopes and hollows. Every sheltered bank on which the broad rays rested yielded its silver rill of cold and limpid water. There was something truly cheering in this triumph of warmth and verdure over the frosty thralldom of winter; it was, as our host observed, an emblem of Christmas hospitality breaking through the chills of ceremony and thawing every heart into flow. He pointed with pleasure to the indications of good cheer. In the smoke that came from the chimneys of the comfortable farmhouses, "I love," said he, "to see this day well kept by rich and poor; it is a great thing to have one day in the year, at least, when you are sure of being welcome wherever you go, and of having, as it were, the world all thrown open to you. The ancient fountain of good feeling, where all hearts meet together."—Irving, "The Sketch Book."

Thoughts of Long Ago.

'Tis Christmas eve, the fire upon the hearth is low,
While empty stockings, here and there,
Hang waiting to be filled with care;
And as the shadows around me creep,
A childish treble breaks the gloom;
Softly from another room
Comes: "Now I lay me down to sleep."

'Tis Christmas eve, with memories of that little prayer
And that sweet treble in my ears,
My thoughts go back to distant years,
And linger with the loved ones there,
Who often met with me in prayer.
My mother's faith comes back to me,
While at her side I seem to be
Enrolled in her arms so dear.

The Christmas time is just at hand.
Oh, how many little things stand ready for busy hands and loving hearts to do.
Outside show may be purchased, but happiness is of home manufacture.
The most of us look forward to the time when we can have opportunity to do what we most desire to do, and to be all we had hoped to be in our most ambitious moments. Christmas brings to such this God-given time. There are little ones all about us with sparkling eyes and anxious faces, whose expressions give utterance to the motto, "Christmas Gift." A smile may increase the sunshine in their lives. Little attentions, little acts of kindness which cost nothing may prove to be worth more than silver or gold. Surely those characteristics help us over many hard places. Let us not look far into the future to do something great for our own aggrandizement, but in our outlook not forget the present, by

making our own sunshine now. "It is more blessed to give than to receive." Give love, cheerfulness, kindness.
A. H.

For Christmas Trees.

Don't forget the strings of crimson cranberries for the Christmas tree.

Pretty snowballs may be made of white cotton-batting.

For some of the branches thrust tiny flags (ten cents a dozen) into smooth red apples.

Color English walnuts as you would Easter eggs and hang them where the lights will fall upon them.

Home-made candles are better than most "boughten" ones. Put them in dainty boxes or bags made of mosquito netting.

Let the peal of the Christmas chimes that fall joyous on the midnight air ring through our hearts and souls to the innermost recesses, filling our lives with good cheer that shall radiate in the glowing warmth of human love and sympathy upon our fellows not only on that day of joy and gladness, but through all the days to follow, and into the darker shadows and deeper sorrows that come to all of us, for the gift of Christmastide is the surpassing Love that conquers evil and establishes joy.—The Philosopher.

Wigwam Dinner in Courses.

Years ago Colonel Crocker, a doughty Indian fighter—peacemaker as well as among the soldiers and copper-colored inhabitants of the hills of Nebraska—became the object of an old chief's sincere admiration. The chief has long since passed to the happy hunting ground. Colonel Crocker was a gentleman to the manner born, and punctilious to the furthest degree, whether on the trail of a band of red-skin marauders, in the camp on the plains, at the army post, or at a social gathering in Washington.

On one occasion while the Colonel was in Washington, the old chief who so admired him was among the Indian guests invited to the city of the White Father. The old chief soon found his old friend—and former foe—and at once attached himself to the officer. The Colonel was not averse to the attention; indeed, he enjoyed hobnobbing with his ancient enemy of the plains and valleys of Nebraska, and bethought himself how he might best entertain the old chief. Why not give a dinner to the old chief, do things a la mode, and give him food for thought to take back to his wigwam under the foot-hills?

The "spread" was most fastidious, the viands were all that could be desired, the dinner was served in seven courses, and just as the Colonel intended it should be.

The old chief ate in silence, and seemed to pay attention to nothing so much as the stiff backed waiter who came and went like an automaton during the meal.

After it was over the chief grunted as he rubbed his stomach. "Heap good eat! Big man make much fuss—tree, four, seven time."

After the Colonel returned to his post, he was approached by the old chief, who invited him to his wigwam for "big eat." Colonel Crocker often told about the episode.

Times have not treated the old chief well; the hunting season had failed to stock his larder with the good things of the chase. There was not an ounce of deer or bear or buffalo meat in the wigwam. The place was poorly lighted, smoke curled from the small fire in the back and slowly floated from the opening at the top. The Colonel found the old chief already seated at his plain board table. He pointed to the block opposite, and the Colonel seated himself.

The old man's squaw came in and placed before each of them a dish of—mush and molasses. After eating, the chief uttered in a loud voice:

"Here 'em, squaw, take 'em away, squaw."

The stolidlike creature took the dishes away.

"Here 'em, squaw, bring 'em back, squaw."

Again the squaw entered with the dishes—mush and molasses as before. Again they cleared the dishes, and again the old chief ordered:

"Here 'em, squaw, take 'em away, squaw."

This strange proceeding took place precisely seven times. Not another word was passed between the chief and the Colonel. The tawdry old squaw waitress was as one graven from stone; the silence of it all was only broken by the command, "Here 'em, squaw, take 'em away, squaw; here 'em, squaw, bring 'em back, squaw."—Youth's Companion.

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Christmas.

Step wid de banjo an' glide wid de fiddle,
Dis ain' no time fu' to pottah an' piddle;
Fu' Christmas is comin', it's right on de way,
An' dey's houghs to dance 'fo' de break o' de day.

What ef de win' is a tainin' an' whistlin'?
Look at dat fah how hit's spittin' an' bristlin'!
Heat in de ashes an' heat in de cindahs,
Ol' Mistah Fros' kin des look thoo de windahs.

Heat up de toddy an' pas' de wa'm glasses,
Oon' stop to shivah at blowin' an' blas'es,
Keep on de kittle an' keep it a-hum-min',
Eat all an' drink all, dey's lots mo' a-comin'.

Look hyeah, Maria, don't open dat oven,
Want all dese people a-pushin' an' shovin'?

Res' fom de dance? yes, yon done catch dat odah,
Mammy done catch it, an' law, hit nigh flo'd huh;
'Possum is monstous fu' mekin' folks an' it!
Come, draw yo' cheers up, I's sho' I do' min' it.

Eat up dem critters, you men folks an' wimmens,
'Possums ain' skace w'en dey's lots o' pu'simmons.

—Paul Laurence Dunbar.

Christmas Joy.

RUTH COWGILL.

FIRST PART.

Mr. and Mrs. Dillon did not get along well together, so the neighbors said. And the neighbors knew, for Mrs. Dillon was not one to keep things to herself, especially her troubles. They lived in a little square white cottage, the only one of its kind in the neighborhood, which was scattered lonesomely over the wide brown prairie in the southwestern section of the "short-grass country." They had no children; they had no pets; flowers would not grow for the heat and the wind. And so having nothing else to think about but their two uncongenial selves, small wonder that they quarreled and led a cat-and-dog life.

Mrs. Dillon was large of frame and straight as an arrow, a handsome woman, despite the somewhat harsh set of her features. She had smooth red hair, discontented, stern eyes of the clearest blue, a large, straight nose, and lips thin and sensitive. Her husband was a wiry, well-preserved man, some twenty years older than she, with a stubborn, half-sullen expression of face, grown habitual in the nineteen years of their married life. He evidently was a man much superior to her in point of education and culture. He spoke with a correct Massachusetts accent, while her dialect was illiterate and distinctively her own. They were a strangely mated pair to live their childless life on the sparsely peopled plain.

One evening they were sitting in the kitchen toasting their stockings feet in the oven. It was one of those clear, cold nights in early autumn which often follow a bright day in Western Kansas. The stars were small and remote, and the night looked black through the windows. The wind howled and whistled like a fiend around the house, and altogether it was a lonesome night to be alone with unhappy thoughts. Mrs. Dillon was thus alone, for her husband was snoring in his chair. It had been a stormy day in their family circle. He had insisted upon burning off some land close to the house and she as usual had objected, nervously anxious lest it get away from him in the wind and sweep over the prairie, taking their home and barns in its way. The more she had talked, the more fires he had started till she was worked up to a pitch of nervous rage almost insane.

"I jist wish it would git away from you and burn the laigs right off you, so I do," she had said at last, tears

running down her cheeks unheeded, and with that last word she had gone into the house, leaving him still doggedly at work.

That was before supper, and now as she thought it all over, and reviewed the evening of wrangling and vindictive argument, she glanced at him irefully. And as she brooded, the bitterness in her heart, and the lonesomeness and the unnamed longing which a childless woman knows grew intolerable, and she wept in passionate pain of soul.

In a little while—it was hours in the living—she was thrilled from her self-absorption by a knock at the door.

"Charley!" she cried, and she took him by the shoulder. "Charley! wake up—there's somebody knocking—and I'm afraid."

He opened his eyes stupidly and blinked at her.

"Go to the door," she said, peremptorily. "Somebody knocked, I tell you."

"Why who would be knocking tonight?" he asked argumentatively, with that slowness of wit which was one of his wife's grievances.

But she had risen, and she took him by the arm and half pushed, half pulled him to the door, fearfully drawing back yet peering forward over his shoulder.

"I told you there was nobody there," he said, resentfully. But she stooped and reached under his arm and picked up the bundle that lay on the doorstep.

"Why—Charley, it's a baby," she exclaimed, in a shrill, awestruck whisper. "A baby?"

Sure enough, when she unwrapped it, it was a young baby, crying.

They looked at it in her arms and at each other in utter astonishment.

"Here. Run, take it to its mother—take it," she said, pressing it into his arms. He looked out of the door, through which the wind was whistling, at the black shadows outside.

"Hark!" he said. And far down the road they fancied they could hear uncertainly the distant rattle of a heavy wagon.

He pushed the door shut with his foot and went back toward the stove, holding the child helpless in one arm where she had put it.


"Don't you think maybe it wants something to eat?" he asked, uncertainly.

With the question, suggesting something to be done, she came to herself. She took the child gingerly, got clean blankets to wrap it in, ordered Charley to a neighbor's for a bottle. She was rather awkward with it all, being unused to such work, but she was gentle enough. And when her husband was gone, she began to cuddle it a little experimentally. When he came back she was holding it snugly against her, and crooning a tender, low monotone.

That was the beginning of a new life for them. Where the child had come from, no one ever knew or could guess, though it was popularly supposed that it had belonged to some movers, seeking a home in the new land south. Perhaps they had not cared to be troubled with a little young baby; perhaps the mother found the hard journey and the cold nights would be too severe for it and preferred to risk its finding kindness and a home in the little white house on the plains. However that may be, it found a mother kind and indulgent however autocratic, and it brought to its foster mother something upon which to lavish the tenderness of her stormy heart, and to Mr. Dillon a welcome diversion in his monotonous life.

SECOND PART.

It was Christmas eve, and Mr. and Mrs. Dillon were very busy. In one corner of the kitchen stood a gnarled and bare branch, stuck into a pot of earth, to simulate a tree, and upon its bare limbs Mr. Dillon was tying all kinds of leaves, some picked from the few geraniums that grew in the window, some dried ones from the old and winter-killed vine that rattled against the window, and a few carefully pressed and faded ones, treasures from the old home in South Missouri. Mrs. Dillon was industriously hindering him, while she fastened a few large and unwieldy candles in the most conspicuous places, stopping her work now and then to undo some of his, while she told him she would rather do it herself. But the old man took it all with remarkable patience, only now and then doggedly asserting his independence. And if one did but listen a few moments, she could observe that her tirades were but a feeble reminiscence of her ancient outbursts. They lacked the bitterness that had used to




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T. L. King, Agt. Topeka.

make her more unhappiness, and the sharp words were apt to end in some more gentle phrase.

For it was two years and more since the little child had come to them, out of the darkness, brought in the very arms of the wind, so it seemed, for never a word or a hint of its parents had reached them. And the little, merry child had unconsciously to itself and to them, worked a miracle, and brought the two conflicting natures of its foster parents into some kind of harmony.

"Now, Charley," she would begin in an exasperated tone. "Well, well, a man never could do anything right," and something that he had been patiently working at for a quarter of an hour would be ruthlessly torn down, the leaves crushed, and the whole grotesque-looking tree dangerously shaken.

"There, now, you'll spoil it all," says "Charley." "Why can't you leave well enough alone?"

"Well enough? 'Tain't well enough. You're the awkwardest, fumblingst man alive and I wish—" but the old man never heard what she wished, and smiled a little quietly, for from the bedroom opening into the kitchen came the sound of a bed softly creaking, and Mrs. Dillon in two steps of her long limbs was at the door looking sternly down at a tiny head dropped hastily back upon the pillow. She stood there a second and two bright eyes cautiously unclosed to peer straight up into hers.

"Helen Louise," she said, severely. "If you don't go to sleep this minute, I'll come right in and spank you. Now go to sleep," very peremptorily, "go to sleep. Old Santy never brings things to bad little girls."

The bright eyes were closed—so tightly the lids were wrinkled—before she had finished, and she went back to her work.

"I declare, that child," she said to her husband—it was a favorite remark of hers—"that child ain't worth all the trouble I put on her. Nothin' but a charity child—I declare I don't know why we kept her." She picked up a doll and smoothed its gorgeous gown, while she looked for a place upon the tree worthy of its splendor.

"Well," said the old man, slowly; "I'd hate to see her go to the poor house."

"Jest to think of all I've did for her and took off her! And she that ungrateful she wants to peek—there, I believe she's up agin."

She tiptoed to the door and stood there a moment, then turned and beckoned to her husband. "Come here, Charley," she said in her loud and sibilant whisper.

Charley came and together they stood looking down at the little round, rosy face on the pillow, calm in the profound sleep of childhood.

"Ain't she sweet? So kind of serene, ain't she, Charley?"

Charley said not a word, but their two old temper-marred faces were wonderfully gentle as they stood in the narrow door, close together, looking down at the "charity child."

In the frost-clear distance a train whistled shrilly. "There's the one o'clock train. We must go to bed if we want any sleep to-night," she said. She did not know what freight of good and evil that train bore, what Christmas joy, what every-day sorrow, what gifts for some, what burden for her.

THIRD PART.

Among the few passengers that alighted from the north-bound train very early Christmas morning was a man, a commonplace, hard-looking individual not worthy of our notice did not the most insignificant sometimes have in his power the welfare or the misery of some one.

He loafed around the station, cheering the cold and cheerless hours now and then with the contents of a dark bottle in his pocket. A few early loafers began to appear as the time for the early morning train drew on, and to these he made advances, talking casually, as loafers do, of one thing and another. At last when the tardy train came and pulled out again, and the station was once more deserted, he exchanged a question or two and an answer with the ticket-agent, and then with a last long pull at the dark bottle, he struck off up the road toward the country. It was a long walk, eight or nine miles, but it was brisk weather and he was not cumbered by superfluous clothing, so he made good time. It was about nine o'clock when he stopped before a mail-box and spelled out the name printed upon it—"D-I-L-L-O-N." This satisfied him and he walked around to the back door, his cold hands in his ragged pockets, his unsteady eyes taking in vaguely the thrift and

neatness of the little place.

"Is your name Dillon?" he asked of the old man who opened the door at his knock. It smelled warm inside, and he could see in progress appetizing preparations for a Christmas dinner.

"Yes, sir," said the old man. "Well, I guess I'll just step inside," he said.

"No, you don't," said the old man, unexpectedly. "You don't come in without my asking you."

"Oh, is that so?" he said, half-insolently. "Well, I rather guess you'll be askin' me."

"Charley, shet that door," came in a woman's sharp voice from within.

The old man paid no attention but stood wondering staring at the stranger. A handsome, red-headed woman came to the door and peered down hostilely at the tramp outside.

"I don't feed no tramps," she began.

"I come to get my darter," said the man. "My woman left her here two years ago September last. I'm goin' to take her back now."

"Excuse me," said Mrs. Dillon, strangely white about the lips, but the first of the two to recover herself. "I thought you was a tramp. Come in."

Mr. Dillon opened the door wider, and the man slouched in. A bright-faced little child was playing beside a grotesque-looking Christmas tree with dolls and toys.

"Yes, that's her," said the man, his small, greedy eyes looking cunningly at the couple before him. "We left her here, knowin' she would be took good care of. My wife was aillin' then. She's died since. But she says to me to go and find her darter. So here I be."

Mr. Dillon glowered at his wife. Her face was dark and hard.

"She's jest a charity child," she said. "We've took a lot of care of her. She's ben a sight of trouble." She kept her back turned toward the child.

"Come here, Helen Louise," said Mr. Dillon. And as the child came, her arms full of dolls and toys, he laid his hand on her shoulder and said, "Here's your father come to get you." Mrs. Dillon's face was working, but still she did not look at the child.

The child did not understand. She caught Mrs. Dillon's dress and held her little hands toward her asking, as babies do, to be taken up. "Mammy," she said, "Mammy."

Mrs. Dillon held herself under control for a second, then she broke down. "Mammy's baby, mammy's baby," she said, and stooped and gathered the child in her arms, showing her quivering face over the little curly head.

"Ye'll never git her as long's I've strength in my arms," she said. "She's mine. She's my baby," she insisted.

The man looked at her, then at her husband, two old people simple as children. Yet for once they were agreed and in that they were strong.

The stranger held out his hands to the baby.

"Come to your pap," he said. But the

child did not look at him. She slipped to the floor and went back to the fascinating Christmas tree.

The man's bleary eyes watered weakly.

"Ain't it sad," he said, "for a child to turn agin her own pap?"

"How do I know you're her pap?" asked Mrs. Dillon.

"Well, I am," said the man. "We come along here in an old covered wagon two years ago last September. We was moving to Oklahoma and we had a load and couldn't be bothered with no more kids. So my woman she got out when she see this house and laid the baby on the steps and run away. She come back though and watched you pick it up and then she was satisfied to go. Seems like she wasn't never no good to me after that. though. She got to aillin' and last month she died. Seemed like she kept thinking about the kid—sakes knows there was enough more of 'em—but she made me promise to come an git the kid. So I come. I asked them in town about it, and they told me where it was and so I come right out in time for Christmas dinner."

The man was uncouth and shiftless, half-drunk, a soiled and tattered piece of humanity to be claiming relationship to the clean and bright-faced baby. Yet he told a straight story and neither of the two old people doubted it.

"What will you do with her when you get her?" asked Mr. Dillon.

"Oh, give her to some of her aunts or uncles same's I did the others."

"Give her to us—we'll take good care of her."

"Yes, and give you a Christmas dinner, too," broke in Mr. Dillon, eagerly.

The man hesitated only a moment. He had been actuated only by a half-superstitious respect for a dying woman's wish, and now, having carried out his promise, he was glad to be well out of it all. Besides he was hungry.

"Couldn't you give me my dinner, now?" he asked. "I never had no breakfast"—there was a whine of self-pity in his voice. "I guess I'll take the next train out. I am going up north where I used to live. Mebbe they'll give me a job."

He rambled along in his unsteady voice, his shifting eyes watching greedily while Mrs. Dillon set out an abundant dinner. She, good woman, in the relief of her soul, could only express her happiness by the eagerness and energy with which she set about her task and soon the man was partaking with them of the generous Christmas meal with the relish of a hungry stomach and a virtuous soul. He ceased talking and devoted himself strictly to business for a half hour or more, then, under the influence of the food and warmth he began to expand and his manner grew beneficent and condescending, as befitted the gratitude which the old people showed toward him. They could not do enough for him and piled his plate high again and again.

"Well, now, my friend," said the ragged guest, "if you will just nitch up, I'll have to be going. You naven't got a overcoat you could loan me, have you, and mebbe a pair of shoes?"

Mrs. Dillon rummaged diligently in old trunks and store-rooms, while her husband "hitched up," and the man sat dozing stupidly before the fire. And when the team was ready, the stranger appeared at the door so completely changed as to garb that Mr. Dillon hardly knew him. He was warm and comfortable and well-fed, and he got into the buggy with a flourish. There was no word of thanks on his lips, no backward glance of affection for his child. But Mrs. Dillon did not think of it. She stood a moment in the door with the child in her arms, her heart full of relief and gratitude, something also of the Christmas joy of giving, for had she not taken in a stranger and fed him and clothed him? Her tuneless voice hummed the air of an old Christmas song, "Peace on earth, good will to men." But old habit was strong, and she expressed her profound happiness in her old accustomed way, "Now, Helen Louise, you pick up them doll things of yours this minute, or I'll spank you."

Given Into Custody.

FROM AN OLD LEGEND.

It is Christmas eve, and the snow lies deep upon the ground at Valley Forge. From the little cottage of old Michael Kuch a light shines cheerfully out across the wintry scene. Inside, he and his daughter Kate are sitting by the cosy log fire. The time passes. The big clock in the corner of the room strikes twelve, and the old man and his daughter arise from their chairs and offer their evening prayer.

Michael Kuch prays for the safety of his only son, Albert, who is a trooper with Washington's army.

Barely have they arisen from their knees when the door of the room is burst suddenly in, and a panting, wild-eyed man stands before them. He is trembling from head to foot, as he hurriedly closes the door and sinks into a chair.

Father and daughter hasten over to him.

"What is? What is it, John?" cries the girl, in great alarm, for the man is her betrothed.

"I shot at him—at the rebel, Washington. I shot at him, but missed—and killed one of his attendants," stammers the fugitive. "His men are on my track; give me shelter, let me hide," he implores.

Old Michael Kuch looks hard at the young man.

"You did murder?" he asks, bluntly. "I killed one, but not Washington; not the rebel chief; 'twas him I aimed at."

"'Twas a coward's act," condemned the old man. "Thou knowest that I am a neutral in this war, John Blake, though my boy be in yonder camp. I will not raise my hand against my

king, but if I did it would be in open war, not like a cowardly assassin, from some hiding place."

"Give me shelter; let me hide," implores the fugitive, frantically; "I hear them, they are coming!"

The scrunching of horses' hoofs and the tramp of men's feet are heard in the snow outside.

"Quick!" cries the assassin, "or I am lost."

"Out here, then—to the spring-house, but remember, John, 'tis for my girl's sake, not thine; I despise an assassin."

Michael hastens the fugitive out at a rear door, and runs with him to the spring-house. Then he hurries back to the house. As he enters again, the front door is flung wide open and a crowd of men in the blue and buff rush in.

"A murderer has come this way!" shouts a sergeant. "He killed one of our dragoons. We want him; where is he? Give him up, old man, or 'twill be the worse for thee."

"He is not in this house," calmly says Michael Kuch.

"But he came here; we tracked him in the snow."

"If ye tracked him, find him."

"He is here; give him up," cry the soldiers, gathering around the old man with threatening gestures.

Kate flings herself between them.

"What he says is true; only my father and I are in this house," she cries.

"Stand aside, girl. We are going to take this assassin. We know he is here—Out of the way, old man!"

At this moment the door of the room swings gently open and a tall, dignified-looking man in a general's uniform steps in. He carries in his arms the limp form of a dragoon, whose breast is dyed with blood.

"The General!" cry several of the soldiers, springing to attention.

"Washington," mutters old Michael Kuch to himself.

The officer lays the form of the man reverently on the little couch at the further side of the room, and then turns toward his men. As he moves, the light from the leaping flames falls for a moment on the fallen soldier and lights up his white features. Old Michael suddenly starts forward, and then falls on his knees at the side of the couch.

"My son! my son!" he cries, "he has killed him."

Then in mad haste, he leaps to his feet and dashes from the room.

Next moment he is at the spring-house.

"His life shall pay for it," he mutters hoarsely to himself, as he faces the concealed man.

He draws his pistol and fires full at him, but quick as he is, the girl, who has followed him, is quicker. She dashes the weapon up with her hand, and the ball goes wide.

"He is mine!" she pants. "You shall not kill him!"

The soldiers have followed them from the room, and they drag the skulking assassin from his place of concealment. He is brought into the room, and faces the general.

"What harm have thy countrymen ever done thee, that thou shouldst murder them?" asks Washington, with great severity.

"The ball was meant for thee; kill me," says the prisoner defiantly.

There is a stirring of the form on the couch, and one word, "Father," comes from the lips.

The dragoon is not dead.

His father and General Washington bend over him. They examine his wound.

"'Tis not fatal; he may live," says the leader, calmly. Then, turning toward the would-be assassin he speaks in slow, measured tones:

"You are not yet fit to die. I will put you under guard until you are wanted."

Then, bowing to Kate, he continues: "Take him into your custody, my dear young lady, and see if you can not make an American of him."

The clock strikes one.

"See!" he adds, with a pleasant smile, "It is Christmas morning. A glad Christmas to you all! May you all be very happy. Come!"

And turning from the room, he leads his men away.

Six months later two dragoons are fighting side by side in the Continental Army. They are Albert Kuch and John Blake.

Like what month is a falsehood spoken by a Jew? July (Jew-lie)

Why is a bad picture like weak tea? Because it is not well drawn.

The Little Ones

Santa Claus.

On Christmas eve, when the moon shone bright, Nelly and Kate saw a wonderful sight Where the fire had faded away: A funny old man, with a pipe as funny, A flowing white beard, and a face so sunny That it gave the pale moonlight a golden glow, And seemed to warm the glittering snow. The funny old man was laden with toys, And he tossed them down without any noise, Till in beautiful heaps they lay.

Not a whit frightened were Nelly and Kate, For they thought it a dream (it was so very late), And they slept again, unaware. The first crimson ray, when it came to tell That Christmas had risen, and all was well, Saw Nelly and Kitty among the rest, Happy, and loving, and merry, and blest, Taking their treasures from stockings and floor, And thanking the giver a hundred times o'er— But the ashes were gray and bare. —Selected.

Just 'Fore Christmas.

Christmas, with its lots and lots of candles, cakes, and toys, Was made, they say, for proper kids, and not for naughty boys. So wash your face and brush your hair and mind your p's and q's, And don't burst out your pantaloons, and don't wear out your shoes; And when there's company don't pass your plate for pie again; But thinking of the things you'd like to see upon that tree, Just 'fore Christmas, be as good as ever you can be. —Eugene Field.

Santa Claus.

There's a jolly little fellow who comes riding into town When the north wind blows his trumpet, and the snow is dancing down; In a coat of fur and ermine, he is muffled to his chin, And his face, whatever the weather, always wears a pleasant grin.

He's a friend of all the children, for he carries on his back Gifts to make their bright eyes sparkle, safely stowed within his pack; And they always hang their stockings by the fireplace, because Christmas eve is sure to bring them presents from old Santa Claus. —H. M. Richardson.

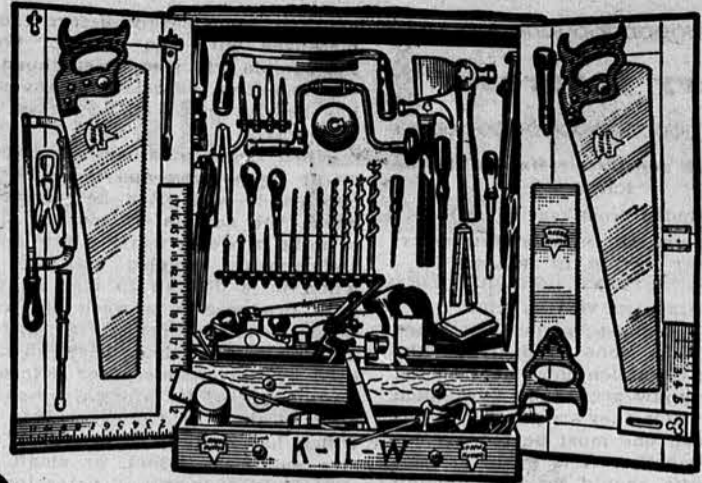
A True Story of Julius Caesar.

Julius Caesar is the little darkey boy who runs errands for the cook and makes himself generally useful in our home.

This is what I said to the little negro with kinky wool and a big smile just before Christmas: "Julius Caesar, does Santa Claus ever come as far South as Panama?" "Yes, mum. He comes here and leaves presents for the children, mum." "But what is Christmas, Julius? Why do we celebrate it?" "Because Jesus Christ was born in Bethlehem of Judea, mum, and on that day Santa Claus comes to Panama, mum." "But, Julius, there are no chimneys or windows to the houses here, and when the doors are closed nights, I don't see how he gets in." "Through the door, mum," and he went to the great double door that opens onto the overhanging balcony and showed me how the jolly old saint pushes back the shutters and crawls through a half inch of space.

"I have always been told," I said, "that Santa Claus is very stout, indeed; at least, he is in the States. Is your Santa Claus thin?" "No, mum, but he squeezes through, mum." "How does he look, Julius?" "Big and fat, mum. He wears a long, fur coat that covers him all up." "It is so very hot here in Panama, he must have to throw his coat aside, and his sleigh must scrape deadfully on the bare ground. How tired his poor reindeer must get!" "O, but he walks, mum," Julius Caesar said eagerly. "Yes, mum, he walks. He has a big bag on his back full of toys for the children, but he doesn't know about me, mum." This last was said very sorrowfully. "Every night before Christmas I hang up my stocking on the latch of the door, so that he can find it, and he never left me a thing yet, mum." It was dark, but I could see his lips quiver.

"What would you like old Santa Claus to bring you, Julius? What do you want more than anything else in the world?" "A pair of skates, mum." Now at the old Spanish fort, overlooking the Pacific Ocean, is a broad smooth cement walk, where all the boys in Panama who own skates gather. Julius Caesar had often watched them with envious eyes. "I think I



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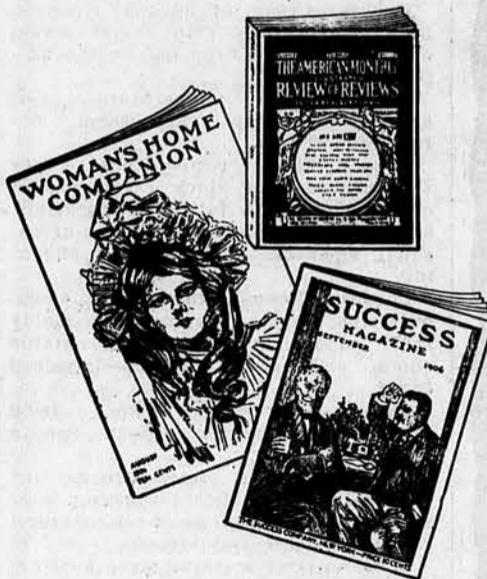
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will try and see Santa Claus myself," I said thoughtfully. "I am sure it is all a mistake that he has never been to see you. I know he will feel so badly when I tell him about you. Nine years old, and no visit from Santa Claus—how dreadful!"

Christmas morning, a small negro with kinky wool rushed into the house. In his hand he grasped a kite and a bag of candy; in the other a pair of

roller skates. Christmas had come to Julius Caesar at last.—Grace B. D., Ancon, Canal Zone, in the Congregationalist.

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Dairy Interests

Care of Milk and Butter-Making on the Farm.

(Concluded from last week.)

H. E. VAN NORMAN, PERDUE UNIVERSITY, EXPERIMENT STATION, IN BULLETIN 96.

WEIGHING AND TESTING MILK.

One of the most important things which may be done to increase the profit from the milk-cows kept on the farm is to know accurately how much milk and butter they are producing annually. Each one must be fed a year, no matter whether it is grain or pasture, and she should produce enough over and above cost of care and feed to make a reasonable profit.

While it may pay to weigh the milk of each cow at each milking, especially with pure-bred dairy-cows, it is often impracticable to do this, but it will pay every farmer to weigh the milk one morning and one night each month throughout the year and multiply this by the number of days in the month, and use this as a basis for estimating the year's production. Careful experiments show that this method will give reasonably close results. It has been repeatedly shown that even the person who is milking the cows can not determine the relative amount of milk or butter produced by the several cows in a herd without the aid of the scales and tester.

When the milk is made into butter or sold on the basis of the butter-fat, a Babcock test should be used and an estimate of the yearly fat production secured. This may be done as follows: At the milkings, when the weighing is done, have a pint fruit jar or other convenient vessel for each cow that is to be tested. After weighing the milk, pour from one pail to another at least twice. The first milk drawn from the cow is very poor in butter-fat, often testing as low as 1.5 per cent, while the last is very rich; the last pint or two may test as high as 8 or 9 per cent. In order to get a fair test it must be thoroughly mixed as described. A sample taken during the milking will not be a fair one. After thoroughly mixing, place a little in the jar, say three or four tablespoonfuls, at the second milking, add about as much more. From this mixed sample the small amount required for testing may be taken.

Directions for operating the test usually accompany the machine, only some suggestions are here given which may be useful. Any bright boy or girl, 14 or 15 years old, can learn to operate the test accurately with a little practice.

Mixing Samples.—Samples should be mixed by pouring from one vessel to

another, immediately before they are measured with the pipette. Shaking the sample will sometimes churn parts of the butter, especially if the sample has been warmed up. Pouring is the best way.

When lumps of cream are not broken up by pouring and the milk is not curdled, it will often help matters to warm the sample by placing the jar of milk in warm water a few minutes.

Composite samples may be taken when it is desired to test all of the milk produced in a week or two, but when it is not desired to test each milking separately. They should be used at the creamery for determining the amount of fat brought by each patron. Taken as follows: Into a jar which has a tight cover, put a corrosive sublimate tablet, or small quantity of bichromate of potassium, and each day add a small amount of milk. Care should be taken to see that the new milk and any cream adhering to the sides of the vessel are thoroughly mixed by rotating rather than by shaking the jar.

At the end of the desired period test this composite sample in the usual way. With the pounds milk given during the period covered by the sample, and the per cent of fat given by the test, the pounds of fat produced are easily determined.

In creamery practice, if the composite sample has not kept properly, it can often be dissolved by putting a very little common lye into the sample when ready to test, and allow it to stand a short time, shaking it occasionally.

A test that is not clear may be due to too strong acid, in which case use less of it; or allowing the milk and acid to stand before mixing. Particles of cork in the acid may do it. If acid is weak there will be a light deposit below the fat column; it may be avoided by using more acid.

Reading should be done from the lowest part of the bottom curve of the fat column to the point where the upper curve of the fat touches the glass. A pair of dividers may be used in reading. Spread the points as far apart as the length of the fat columns; then place the lower one on the zero mark, and the upper point shows the reading.

The following causes and effects are met with in the dairy:

SEPARATING.

Causes.—Irregular inflow, vibration of bowl, irregular speed, cold milk. Effect.—Large loss.

Causes.—Increased flow, insufficient speed. Effect.—Thin cream.

Causes.—Small cream exit, increased speed, reduced inflow. Effect.—Thick cream.

Causes.—Uniform speed, sufficient speed, proper temperature. Effect.—Small loss.

Causes.—Sour milk, too rich cream, cold milk. Effect.—Clogging.

Causes.—Skims cleanest, smallest bowl, slowest speed, fewest parts, skims at lowest temperature, best workmanship, easiest adjusted, lightest running, easiest cleaned. Effect.—Best separator.

CHURNING.

Causes.—Gluten-feeds, oil-meal, high temperature. Effect.—Soft butter.

Causes.—Cream of unequal ripeness, high temperature, thin cream, sweet cream. Effect.—Large loss in the buttermilk.

Causes.—Low temperature, ripe cream, evenly ripe, rich cream. Effect.—Small loss.

Causes.—Low temperature, very thin cream, very thick cream, sweet cream, churn too full, slow agitation, cream from stripper cows, cream of unequal ripeness. Effect.—Slow churning.

Causes.—Cream exposed to odors, over-ripe cream, decaying feed, moldy feed, impure drinking water, stable odors, sick cows. Effect.—Impaired flavor.

Causes.—Over-ripe cream, dried cream, foreign matter. Effect.—Specks in butter.

Causes.—Uneven temperature, uneven salting, insufficient working, sudden chilling, change of temperature. Effect.—Mottles and streaks.

Causes.—Over working, over heating, over churning, slipping of tools in working. Effect.—Texture injured.

Causes.—Thin cream, sweet cream, churn too full, cold cream, advanced period of lactation. Effect.—Difficult churning.

Causes.—Succulent feeds, summer feeds. Effect.—Higher-colored butter.

Cause.—Cottonseed-meal. Effects.—Light-colored butter, hard butter.

Causes.—Bran, legumes.—Hard butter.

TESTING.

Causes.—Too warm milk, too strong acid. Effect.—Chars fat.

Causes.—Insufficient mixing, foreign matter. Effect.—Dark sediment.

Causes.—Cold milk, cold acid, weak acid. Effects.—White fat, white sediment and light-colored fat.

Causes.—Insufficient speed (tester), too cold, delay in reading, broken pipette. Effect.—Low reading.

Causes.—Too hot, unclean bottle, unclean pipette. Effect.—High reading.

Cause.—Sample by weight. Effect.—Cream.

Causes.—More acid, higher speed, more heat, double-neck bottle. Effects.—For skim-milk, for buttermilk.

Causes.—Maintains uniform temperature, maintains uniform speed, easiest controlled, breaks fewest bottles, does not tremble, easiest balanced, has top and bottom bearing. Effect.—Best tester.

MISCELLANEOUS DATA.

Temperatures.—Milk when drawn, 98°; for shallow setting, 60°; deep setting, 40° to 45°; separating, 85° to 95°; ripening cream, 65° to 75°; churning, 50° to 60°; milk for city delivery, 45° to 50°; milk for calf-feeding, 95° to 100°; reading test bottles, 120° to 140°; skim-milk starter set at 90°. Keep above 75°; if necessary warm up after six to ten hours.

Time.—For cream to rise in shallow pens, twenty-four to thirty-six hours; in deep-setting, twelve to twenty-four hours; cream to ripen, eighteen to twenty-four hours; churning ripe cream, twenty to forty minutes; first whirling of test bottles, five minutes at full speed; second and third whirling of test bottles, one to two minutes.

Per Cent of Fat.—Average milk, 3.7; Guernsey, 5; Jersey, 5; Shorthorn, 4.1; Ayrshire, 3.7; Holstein, 3; first milk drawn, 0.8 to 2; last milk drawn, 5 to 12; rich cream, 35 to 50; commercial cream, 20 to 25; butter, 83 to 88.

Loss of fat should not be over.—In dilution skim-milk, 0.7 to 1 per cent; shallow pan skim-milk, 0.5 to 0.7 per cent; deep-setting skim-milk, 0.2 to 0.5 per cent; separator skim-milk, .03 to .05 per cent; buttermilk, 0.1 to 0.2 per cent.

FERTILIZING MATERIAL REMOVED IN FARM PRODUCTS.

The following figures are presented to emphasize the reason why it is desirable to feed on the farm the crops that are grown upon it, and sell only live stock and dairy products, thus removing from the farm the minimum amount of valuable fertilizer elements and eventually returning to the land the major portion of the manure, solid and liquid, if properly taken care of.

The purchase of concentrated feeds, bran, linseed-, cottonseed- and gluten-meals, brings onto the farm from \$10 to \$12 worth of these same valuable elements per ton of feed, about three-fourths of which goes into the manure.

An understanding of these facts suggests why dairying is one of the surest and quickest means of building up and maintaining the soils which have been depleted by continuous cropping.

To estimate the value of commercial fertilizers, the State Chemist values nitrogen at 15 cents per pound, phosphoric acid 3½ cents, and potash 6 cents per pound. These prices with Table III in "Feeds and Feeding" as a basis for the fertilizer elements in the common farm products show that \$100 worth of the various farm products will contain nitrogen, phosphoric acid, and potash worth as follows:

Roughness.—Oat straw at \$3.50 per ton, \$99.65; corn stover at \$4 per ton, \$97.47; wheat straw at \$3 per ton, \$82.20; timothy hay at \$8 per ton, \$65.39.

Grains.—Corn at 35 cents per bushel, \$64.30; oats at 20 cents per bushel, \$59.98; wheat at 60 cents per bushel, \$41.16; barley at 40 cents per bushel, \$33.95.

Live Stock.—Sheep at \$3 per 100 pounds, \$11.44; cattle at \$4 per 100 pounds, \$10.41; wool—unwashed—at 20 cents per pound, \$6.69; hogs at \$4.50 per 100 pounds, \$6.59.

Dairy Products.—Milk at 90 cents per 100 pounds, \$10.72; cheese at 10 cents per pound, \$6.82; cream at 48 cents per gallon, \$1.05; butter at 20 cents per pound, 11 cents.

If the market price is higher than given above, it will take less of the product to make \$100 worth, consequently the loss of fertility will be less in each \$100 worth. If prices are lower the loss will be greater.

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GENERAL INFORMATION.

The following helps are available for the person who wants to learn more about the production, care, and handling of cows and dairy products:

Books.—Most any agricultural paper will send the following on receipt of price: Milk and Its Products, Wing, \$1; Outlines of Dairy Bacteriology, Russel, \$1; Testing Milk and Its Products, Farrington and Woll, \$1; Creamery Patrons Handbook, \$1; Feeds and Feeding, Henry, \$2; Feeding Farm Animals, Jordan, \$1.50.

Dairy Papers.—Hoard's Dairyman, Fort Atkinson, Wis., weekly, \$1; Dairy and Creamery, Chicago, semi-monthly, 50 cents; Kimball's Dairy Farmer, Waterloo, Iowa, semi-monthly, \$1.

Creamery Papers.—Chicago Dairy Produce, Chicago, Ill., weekly, \$1.50; New York Produce Review, New York, weekly, \$1; Creamery Journal, Waterloo, Iowa, monthly, \$1.

Some Dairy Statistics.

From Bulletin No. 57 of the Census Bureau it appears that from 1900 to 1905 the milk used in the manufacture of butter, cheese, and condensed milk in factories increased during the five years from 11,678,082,821 pounds in 1900 to 12,183,375,885 pounds in 1905, and the gathered cream increased from 203,673,958 pounds to 588,186,471 pounds.

As gathered cream is not received at cheese factories, nor, to any large extent, at condensed-milk factories, the heavy increase in cream used must be considered as representing the rapidity of the change going on in our creamery system, from factory to farm separation.

It will be seen that the increase of cream used amounts to nearly 190 per cent. The cost of the cream used in

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The Sharples Dairy Tubular is the cream of cream separators—the pick of the whole bunch. Supply can wait low, you can fill it with one hand. All gears enclosed, dirt free, absolutely self-oiling—no oil holes, no bother, needs only a spoonful of oil once or twice a week—uses same oil over and over. Has twice the skimming force of any other separator—skims twice as clean. Holds world's record for clean skimming.



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Free A Cleveland Cream Separator

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

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

1900 is given as \$8,154,068 and in 1905 as \$28,371,040—an increase of some 248 per cent, indicating a very substantial rise in cream value during the five years.

The change in creamery system is further indicated by the statement that factory cream-separators in the above industries had fallen from 9,701 in 1900 to 8,842 in 1905, and skimming-stations had fallen from 2,050 to 1,620.

The butter product of the factories reporting increased from 328,956,590 pounds solid packed and 91,169,956 pounds in prints in 1900 to 364,432,996 pounds solid packed and 167,045,145 pounds prints in 1905. This shows the increase in print production to have been some 83 per cent, while of solid packed it was only about 11 per cent. The total increase of butter product indicated is about 26 per cent in the five years.

Breaking the Heifer.

Not infrequently we hear farmers, talking about getting their stock into new quarters, make such remarks as, "It takes a good deal of prodding with the pitchfork to get them all to their places in the fall," or, "It took the hired man, the boys, the dogs, and myself all to put that red heifer in the stable and three of us to tie her after we'd knocked her down a time or two." When these things exist, civilization is only in its infancy, and it is gratifying to note that such methods are few and far between.

Intelligent dairymen have long since learned—even they who may be devoid of any finer sentiment—that nothing but gentleness pays. Breaking the heifer is best begun while she is yet fed on milk. She can be taught to lead, to stand tied in her stall, and to back her foot as for milking. These are the main essentials. We also teach our cattle at this period to open their eyelids, their mouths, and to lift their feet for examination. We have often removed chaff from their eyes quite easily by having them thus previously trained—and save them considerable suffering and possibly the loss of an eye. Pieces of feed, such as pumpkin and roots, can be removed from the jaws and throat if the animal has been trained to being handled while young. What a cow has once learned she retains, even with semi-yearly practise, if guided by kindness.

Every time a milch-cow is excited her owner is the loser, not only for that milking, but she is not apt to regain her former flow until coming fresh again. Then the milk retained by the cow is the better part, usually called strippings. Besides, the milk she gives is not fit for human food. Horsemen coming in with their teams heated from overwork never allow the colt to feed from the dam until she has cooled down to blood heat, and yet cattle are driven in by the dogs and under the lash until they are unduly excited and overheated, the milk to be used as human food, with what results it is difficult to estimate. The proper training of a heifer should begin in its earliest calfhood, and while youngsters are often very provoking in their stubborn way of refusing milk in a pail and the like, it always pays to be gentle with them, and it is this lack of consideration that has filled our Western land with so many broncho cows.—Farm and Ranch.

Miscellany

The Dual Features of Our Government Are Passing.

EXCERPTS FROM ADDRESS OF SECRETARY OF STATE ROOT.

What is to be the future of the States of the Union under our dual system of constitutional government?

The conditions under which the clauses of the constitution distributing powers to the National and State Government are now and henceforth to be applied are widely different from the conditions which were or could have been within the contemplation of the framers of the Constitution, and widely different from those which obtained during the early years of the republic.

It is plainly to be seen that the people of the country are coming to the conclusion that in certain important respects the local laws of the separate States, which were adequate for the due and just regulation and control of the business which was transacted and the activity which began and ended within the limits of the several States, are inadequate for the due and just control of the business and activities which extend through all the States.

More power of regulation and control is gradually passing into the hands of the National Government. Sometimes by an assertion of the interstate commerce power, sometimes by an assertion of the taxing power, the National Government is taking up the performance of duties which under the changed conditions the separate States are no longer capable of performing adequately.

EXAMPLES OF NATIONAL QUESTIONS.

The federal and anti-trust law, the anti-rebate law, the railroad rate law, the meat inspection law, the oleomargarine law, the pure-food law are examples of the purpose of the people of the United States to do through the agency of the National Government the thing which the separate State governments formerly did adequately, but no longer do adequately.

The end is not yet. The process that interweaves the life and action of the people in every section of our country with the people in every other section continues, and will continue with increasing force and effect. We are urging forward in a development of business and social life which tends more and more to the obliteration of State lines and the decrease of State power as compared with National power; the relations of the business over which the Federal Government is assuming control, of interstate transportation with State transportation, of interstate commerce with State commerce are so intimate, the separation of the two is so impracticable that the tendency is plainly toward the practical control of the National Government over both.

New projects of National control are mooted; control of insurance, uniform divorce laws, child-labor laws, and many others affecting matters formerly entirely within the cognizance of the State are proposed.

Under conditions which now exist no State can live unto itself alone and regulate its affairs with sole reference to its own treasury, its own convenience, its own special interests. Every State is bound to frame its legislation and its administration with reference not only to its own special affairs, but with reference to the effect upon all its sister States.

STATES MUST BE PUBLIC SPIRITED.

It is useless for the advocates of State rights to inveigh against the supremacy of the constitutional laws of the United States or against the extension of National authority in the fields of necessary control where the States themselves fall in the performance of their duty. The instinct for self-government among the people of the United States is too strong to permit them long to respect any one's right to exercise a power which he fails to exercise.

The governmental control which they deem just and necessary they will have. It may be that such control could be better exercised in particular instances by the governments of the States, but the people will have the control they need either from the States or from the National Government, and if the States fail to furnish it in due measure, sooner or later constructions of the Constitution will be found to vest the power where it will be exercised in the National Government.

The true and only way to preserve State authority is to be found in the awakened conscience of the States, their broadened views and higher standard of responsibility to the general public, in effective legislation by the States in conformity to the general moral sense of the country, and in the vigorous exercise for the general public good of the State authority which is to be preserved.

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Medical Experts Say That Catarrh Asthma and Bronchitis are Curable.

It will be joyful news to thousands of sufferers from catarrh and bronchial asthma to learn that these lesser diseases of respiration can positively be cured. Heretofore it was impossible to overcome these diseases in unfavorable climates, but now they readily succumb to this truly marvelous remedy.

This is a marked advance in medical science and in order that every one needing the Toxic treatment may test it without cost. The Toxic Laboratory, 1267 Broadway, New York, are sending a free trial to every one writing for it.

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

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

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Farmer's Account Book and Five Year Diary of Events An Indispensable Book

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

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

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

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

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

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

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

Bound in Leather and Cloth, or heavy board cover, and delivered to your express office, including a year's subscription to THE KANSAS FARMER and THE HELPFUL HEN.

Leather and Cloth \$2.50.

The Account Book alone without the Five Year Diary of Events, in Heavy Board, \$1.50.

The Kansas Farmer Co.
Topeka, Kansas

PLYMOUTH ROCKS.

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

FOR SALE—40 White Plymouth Rock cockerels, also one M. B. gobbler and three hen turkeys. J. C. Bostwick, Hoyt, Kans.

BARRED ROCK COCKERELS—Bradley strain. Few exhibition. Also breeding cockerels and pullets. Write for prices. Mrs. W. A. Scheier, Argonia, Kans.

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

FOR SALE—Buff Rock cockerels; good scoring birds \$1 and \$2 each. Mrs. John Bell, Ackertland, Kans.

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

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

BARRED PLYMOUTH ROCKS

FOR SALE—Barred Plymouth Rock cockerels at \$1 and \$1.50 each. Address A. C. Merritt, Hill Crest Fruit and Poultry Farm, North Central Ave., Topeka, Kans. Ind. phone 4351.

BARRED ROCKS A SPECIALTY

Also Nine Other Leading Varieties. If you want to win at the poultry shows, or make a success of poultry on the farm, we can supply you with stock. Circulars free. Write your wants. A. H. Duff, Larned, Kans.

SPECIAL SALE OF BARRED PLYMOUTH ROCKS.

I will sell 60 yearling hens to make room, at \$1.00 each. These hens are barred to the skin. All my last season's pen breeders, the kind that produce exhibition cockerels. Right here is a chance to get some No. 1 stock at a low price. Let me mate up a trio or a pen that will start you right. I will also sell 10 cocks including the 2d and 8th prize cockerels at the Kansas State show of 1906. Description, price and photographs of any winners sent free. I will also sell cockerels until December 15 at \$1.50 each, sired by my first prize males. Write for prices on exhibition stock. Satisfaction guaranteed or money refunded. A. H. Miller, Bern, Kans.

B. P. ROCKS, Exclusively

Cockerels for sale from yard headed by prize bird from Kansas State show 1906. Birds are well barred, good, even color, large bone; scored by C. H. Rhodes; out of number scored, three-fourths went 90 to 93. Also have good hens and pullets. Can mate you a breeding pen. Prices reasonable.

MRS. GEO. CLARK,

Station A, Route 6, Topeka, Kans.

White Plymouth Rocks
EXCLUSIVELY.

Good for Eggs, Good to Eat and Good to look at. W. P. Rocks hold the record for egg-laying over every other variety of fowls; eight pullets averaging 298 eggs each in one year. I have bred them exclusively for twelve years and have them scoring 94 to 96, and as good as can be found anywhere. Eggs only \$2 per 15; \$5 per 45, and I prepay expressage to any express office in the United States. Yards at residence adjoining Washburn College. Address THOMAS OWEN, Sta. B, Topeka, Kans.

LEGHORNS.

SINGLE COMB BROWN LEGHORNS—Bred for show and egg purposes. Stock and eggs for sale H. C. Short, Leavenworth, Kans.

FOR SALE—A limited number of S. C. White Leghorn cockerels; pure bred birds bred for laying and size. Price \$1, if sold at once. Mrs. T. R. Wolfe, Route 2, Conway Springs, Kans.

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

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

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

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

EGGS FOR SALE—S. C. W. Leghorns, W. Wyandottes, \$1 per 15. W. H. turkeys, \$1.50 per 9. Emden geese, 20 each. W. African guineas, \$1 per 17. All guaranteed pure-bred. A. F. Rutley, Route 2, Maple Hill, Kans.

FOR SALE—Exhibition S. C. Black Minorca cockerels, \$2. I guarantee them. Address George Kern, 817 Osage Street, Leavenworth, Kans.

Buff Leghorns

Pure-bred S. C. cockerels \$1 each, 6 for \$5. J. A. Reed R. 3, Wakefield, Kans.

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S. C. White and Brown and R. C. Brown Leghorns, winners at Kansas State Show. Young and old stock for sale. Some exceptionally fine cockerels for immediate sale at \$2 and up. A few hens at \$10 per dozen.

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Examine any fowl bought of us at the express office. If not satisfied return and get your money, less express charges one way. Our fowls are strictly tops. Buff Black and White Langshans, five varieties of Leghorns, and many other breeds to select from. Get busy or your choice will be gone. Write J. A. LOVETTE, Prop., MULLINVILLE, KANS.

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Of thirty-two of the leading varieties, being farm raised, no two on the same farm. To make room for winter quarters, Leghorns three for \$5, all other varieties in proportion. Address W. F. Holcomb, Mgr. Nebraska Poultry Co., Clay Center, Neb.

The Poultry Yard

CONDUCTED BY THOMAS OWEN.

Getting Eggs in Winter.

PRIZE ARTICLE IN COMMERCIAL POULTRY, BY THOS. OWEN, TOPEKA, KANS.

To get eggs in winter, four things are essential—proper stock, proper feed, proper housing, and proper care. To decide what is proper is where the rub comes in. By proper stock I do not mean any particular breed of fowls, for I believe there is more in the feed, proper age, and condition of the birds than there is in the breed. It has been demonstrated by scores of experiments, both in this and foreign countries, that pullets will lay in the proportion of two eggs to one for the 3-year-old hens, the accepted ratio being 200 eggs per year for pullets, 150 for 2-year-old hens, and 100 for 3-year-old hens. Old hens generally lay in the summer time, when almost any old thing will lay, but the pullets, if you get them to commence laying before the cold weather sets in, will lay all winter and well into summer. They have got to lay in winter, for there are not days enough in summer for them to shell out 200 or more eggs.

At an egg-laying contest at the Kansas Experiment Station, there were entered six pens of six pullets each and one pen of six hens. These six hens during November, December, January, and February (the winter months) laid only 65 eggs, while the pullets in the other pens laid from 111 eggs to 239. The profit on the pen of hens for the year was only 18 cents, while on the pullets the profits ranged from \$3.31 to \$5.98 per pen. This clearly demonstrates that to have eggs in winter you must have pullets or hens not over 18 months old for your stock, and you must have them in the proper condition to commence laying early in November.

The next essential is proper feed. Winter is not the natural time for a hen or any of the feathered tribe to lay. Summer with its warmth and bugs, insects, green grass, and vegetables, is the ideal time for laying hens. We must, therefore, if we would obtain eggs in winter, try and make the conditions of winter similar to those of summer. In summer the hen gets bugs and insects by the hundred. In winter we must provide her with something to take the place of these, in the way of cut green bone, beef scraps, boiled liver, hearts, lights, etc. In the place of the green grass of summer we must feed her with cabbage, beets, turnips, mangels, small potatoes, and such like.

I have experimented with dry feed and mash and have demonstrated that it is best to feed only a small proportion in mash form, and that at noon. In the morning I would feed a mixture of wheat, oats, cracked corn, and millet-seed. This I would place in the scratching shed in five or six inches deep of cut straw or millet hay, and let the hens scratch for this till noon. At noon I would feed a mash of the following proportions: One pound pea-meal, 1 pound cornmeal, 1 pound bran, 1 pound fresh meat scraps or boiled liver, 1 pound cut green bone, 1 pound alfalfa-meal or 2 pounds cut alfalfa, 4 pounds boiled potatoes, 1 pound boiled rice. I would moisten this with skim-milk, not making it too wet, but of crumbly consistency. I would change some of these ingredients on different days, substituting barley for cornmeal or rye-meal for bran. I would boil a beef head, or liver, lights, and hearts of cows or hogs, feed the boiled meat in place of the meat scraps, and moisten the mash with the soup in place of the skim-milk. I would salt this soup and mash to make it more palatable. At night I would feed cracked corn, soaked oats, peas (split or whole), and sunflower-seeds. I would vary the night feed by feeding Kafir-corn, rye, barley, and buckwheat in place of the other cereals. Fowls, like every living creature, like a variety of food—sameness palls on them. I would, therefore, have no Mede or Persian law that never changes, no set rule or law to go by, but give them as many changes of diet as I could, always remembering that the highest in nutritive value are peas, sunflower-seeds, wheat, rye, oats, millet, barley, corn.

Pure water, of course, should be provided at all times, and skim-milk as a drink would be found profitable and beneficial. Grit, oyster shells, and shell-forming materials should be provided. As a conditioner I would occa-

sionally feed a little flaxseed-meal in their mash. I would char some corn and feed it warm on very cold days. Green feed should be supplied liberally. A cabbage or beet hung up in the pen is good to induce the hens to exercise themselves.

I give no stated quantity of feed to so many hens for the simple reason that fowls vary in appetites according to breed, size, and condition, and a rule for one flock of fowls would not apply to another. I believe in liberal feeding. Feed all they will eat up clean of the mash and as much dry feed as they will scratch for. The hens must have plenty of pure, wholesome feed if you would have plenty of eggs. They can no more make eggs out of nothing than the Israelites could make brick without clay and straw. Some claim you can get a hen too fat to lay by overfeeding. Occasionally there may be such, but where there is one hen over-fat there are ten too thin. I will risk the too-fat business if you give the pullets plenty of exercise. It is hard to get a thrifty laying pullet too fat, though old hens sometimes get in that condition.

The next essential is proper housing. A hen won't lay eggs in an ice house, and though there are lots of eggs in a cold storage plant, the hens do not lay them there. Laying hens must have a warm, roomy house. Artificial heat is not necessary, but a house warm enough to prevent water from freezing in it is requisite. I believe in lots of glass to get all the sunshine possible. A house facing the south is preferable. I have demonstrated the fact that I can get eggs six weeks earlier in a house facing the south with plenty of glass in the front, than from a house facing the east and with little glass in it. Some say that much glass will cause the house to be too cold at night, but I would much rather have too much glass than too little. I can prevent the radiation of heat at night by having thick canvas curtains over the windows.

The style of house is immaterial, though I prefer one with a roof sloping to the north, with a passageway in the rear. To be warm, I would build with matched lumber on the outside, three-ply tarred paper on both sides of the studding, and matched lumber again on the inside. This gives an air-space of four inches, which is almost impervious to cold. Provide darkened nests, for fowls love to hide their nests. It also prevents egg-eating. Let them out in the scratching shed on five days, and on cold, damp days keep them in the hen-house. The house ought to be roomy enough so that they could be kept in it for several days during a cold spell without endangering their health.

On very cold days I would parch some corn and give it to them warm and feed the mash quite warm. The object of this would be to prevent the hens from a cessation of their laying during the cold spell, for it is much easier to keep them laying right along than to make them commence again after they have once quit.

The last essential is proper care. This consists of keeping the premises clean and sanitary; seeing that the fowls are free from lice and the house free from mites. A lousy fowl won't lay. Provide dust boxes filled with earth as there is no deodorizer like mother earth. Feed the mash and drinking water through slats, placing the utensils in the passageway. They can not then scratch filth into the water or soil the feed with their feet. Much disease comes because fowls are compelled to eat their own droppings with their feed.

I will end as I commenced, by saying four things are essential to getting eggs in winter—proper stock, proper feed, proper housing, and proper care. If you give your fowls these essentials, you will have all through the winter, eggs to sell, eggs to eat, and eggs to give away to your friends.

Notes and Comment.

Early maturity is good when it is really maturity; but in the rush for early maturity, breeders think the beginning of laying positive and only evidence needed of maturity.—American Poultryman.

This is a very timely warning against a growing fallacy. Early ma-

WYANDOTTES.

FOR SALE—High-class poultry, White Wyandottes, Silver Laced Wyandottes and White Plymouth Rocks. Prices reasonable. R. F. Meek, Hutchinson, Kans.

WHITE WYANDOTTE COCKERELS—\$1, \$2 and \$3 each. Great grandsons of Old Duke. Thirty three premium at three shows. Order direct from this ad. Hattie A. Weld, Greeley, Kans.

GILT EDGE POULTRY CO.

We have special bargains in S. L. Wyandottes, S. C. Brown Leghorns, Buff Wyandottes and B. P. Rocks, if taken at once. Write for catalogue. Walter Hogue, - Fairfield, Neb.

WHITE WYANDOTTES.

If you need the highest quality for breeders or show birds at reasonable prices write me. Cockerels now ready for shipment. Illustrated catalogue free. Address G. A. Wiebe, Box 4, Beatrice, Neb.

SILVER LACED WYANDOTTES—Thoroughbred cockerels \$2; pullets \$1.50. Jewett Bros., Dighton, Kans.

WYANDOTTES—Pure white. Young stock at \$1 each. L. E. Brown, Norton, Kans.

WHITE WYANDOTTE COCKERELS—Show birds or choice breeders at \$1.00 to \$5.00 each. B. W. Arts, Larned, Kans.

BLACK LANGSHANS.

BLACK LANGSHAN cockerels and pullets from prize winner, \$1 each, if taken at once. Mrs. Geo. W. King, Solomon, Kans., Route 1, box 4.

BLACK LANGSHANS

which will please you at prices that will satisfy you. Bred from stock from such breeders as Mrs. M. A. Smith, Ben S. Myers, Ashe, Hettich, King, etc. Write for prices and descriptions.

MRS. E. S. MYERS,

Box 174, Chanute, Kans.

RHODE ISLAND REDS.

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

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turity is desirable but "feeding for early maturity" in most cases amounts only to feeding for immature laying. It is a very short-sighted policy if the birds are to be used later as breeders.

For scaly legs soak the feet and shanks to the knee in kerosene oil once a day for two weeks.—The Feather.

That treatment ought to cure scaly legs unto the third and fourth generations.

The laying propensities of hens are capable of great development as shown by past records. We have lately seen a great increase in the number of heavy laying strains established.—American Poultryman.

It is probable that most of these heavy laying strains are established by weeding out poor layers and not at all by the development of laying propensities. A few trap-nests and a year or two seems to be all that is required in the establishment of these laying strains. Proof of real development by breeding is rarely furnished. We know of no place where this matter has been tried more honestly or scientifically than at the Maine Experiment Station, where the effort to develop big layers by breeding has proved, so far, a failure.

For evening mash take ten pounds each of coarse cornmeal, hulled oats, whole wheat, and wheat bran, five pounds each of linseed-meal, animal-meal, and coarse green bone.—Ex.

This is mash feeding gone mad. It is a mistake to put anything into the mash that can be fed separately.

"Speed the day when the trap-nest will be found in the pens of every poultry-raiser." The trap-nest has more merit than its opponents will admit and a good deal less than its friends claim. It is indispensable to some lines of breeding, but impractical and useless to the commercial poultryman.

See to it that the poultry has fresh water three times a day; wash the fountain or dish every time you change the water.—Poultry Success.

When poultry papers are edited by poultrymen instead of misdirected housekeepers we shall miss from their columns much which now adds to the gaiety of nations.

For green feed there is nothing better than well-cured second-crop clover hay. It is not only highly nitrogenous, but it is rich in lime, a substance required by the hens for providing shells for eggs and which is in a much more soluble form in the food than in the shape of oyster shell.—Commercial Poultry.

Clover hay is a good substitute for green feed but inferior to almost any of the root-crops. I am not able to take the feeding value of clover very seriously; one can't feed it with a hay-baler. And it is incredible that any one should seriously recommend it as superior as a source of lime to oyster shell. In contrast with this, The Poultry Book says: "Shells are rich in lime and are so easily broken up by the action of the gizzard that the mineral matter seems to be almost immediately available."

Twenty-five years ago the census showed the egg yield of the country to be 35 eggs to each hen per year; the last census, 70 eggs per hen per year. It is now thought that the average has been increased to 80 or 85.—The Feather.

The hen census has been notoriously inaccurate and its figures for twenty-five years ago are obviously untrustworthy. Any effort to use them for comparison with present averages will give an utterly false impression as to the advance made during the period.

The water in milk has more food value than an equal amount from the well because of the change naturally resulting from having gone through the system of the cow.—"Science in Breeding," in The Feather.

The food value of water and the increase in value secured by going through the system of the cow is the latest discovery in scientific feeding. It opens up a new and exciting field for investigation. We need to know not only the breeds of cows which add more largely to the food value of water, but the possibilities of other farm animals should be thoroughly investigated—particularly hydraulic rams.

So soon as the people throughout the country learn that corn will not pro-

duce many eggs during the winter months and that wheat will produce a profitable egg yield the more pleased they will be.—The Feather.

This is only true when either grain is fed almost or quite exclusively. If corn is properly balanced with bran and meat it is not only the best grain for egg-production, but it will produce eggs of the best quality. It is practically impossible to get high-grade eggs without corn.

There is more in the feed than the breed.—Exchange.

And more in the feeder than in either.

A balanced ration is one in which the protein and carbohydrates are combined in such proportions that they will supply the needs of the fowls and at the same time not be a surplus of either.—Commercial Poultry.

A good editorial definition, but not practical. A balanced ration is one in which protein, carbohydrates, and cost are so combined that the needs of the fowls will be supplied at the lowest possible figure.

"Just as sure as the 200-egg hen is here to-day, the bird with 300 eggs a year to her credit will exist to-morrow. It is a natural step in the law of evolution."—Ex.

To speak of an increase of 100 eggs a year in average production as only "a step" is to show an enthusiastic and impartial ignorance of both hens and evolution which makes one envious.

"A ration of one pound protein to four and a half pounds carbohydrates will give good results."

Not in the winter time.—National Stockman and Farmer.

Poultry Notes.

N. J. SHEPHERD, ELDON, MO.

Buckwheat is one of the best foods for cold weather. It is especially valuable as an egg-producer and will keep the fowls in a good condition without making them too fat.

During the winter the hens will not lay so many eggs or thrive so well, do what you may about feeding, if they be cramped for room to exercise in. Exercise is essential to health and fecundity.

Three ways of improving your fowls and the profit from them are by introducing new blood, by better care, and by better feeding. But it is poor economy to practise the first of these and neglect the others.

Where a large number of fowls are kept, disease comes as the result of over crowding. Hens do not lay as well in large numbers as in small, and the expense mounts up so rapidly that the thing becomes a heavy loss and has to be given up.

Farmers who kept common fowls for eggs and poultry will find it greatly to their advantage to breed for pure-bred males. Young pure-bred cockerels, suitable for crossing, of any of the leading breeds may be obtained from breeders of pure poultry at very low prices compared with the prices obtained for high-scoring birds, and such an investment is sure to pay if properly managed.

The aim to be kept steadily in view is the points an exhibitor requires to win. If you have a cock with too much white, mate him to a hen darker than the color required or vice versa. In breeding for color always select birds a shade darker than the color you want to breed, as fowls are inclined to breed lighter and you can never get depth of color unless you breed from birds very deep in color themselves.

Keeping fowls on hard floors or runs will frequently cause swollen feet and legs. They must have some bare ground to scratch over and it does them good in various ways. During the winter it is always a good plan to scatter small grain among loose soil and allow the hens to scratch it out. This is one of the best ways of affording exercise, especially in the winter.

Breeders must learn to observe closely and detect at the earliest possible moment the defects of their own chickens. A wry-tailed pullet will always be so, and unless it is the result of an accident, will never carry a straight tail. A single-combed bird with irregular serrated or side sprigs in his comb will never improve and in most cases the defect will increase with age. The hatchet is the only safe remedy.

Why are some women like facts? Because they are stubborn things.

The man who makes a character makes foes.

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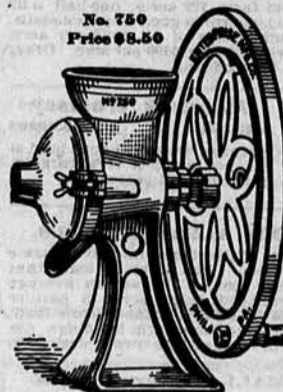
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Upon the advice of several specialists I am going to New Mexico for my health. On this account I must dispose of all my Kansas property, including the famous Walnut Grove farm, the most complete and profitable stock farm in Kansas. This includes 130 acres of the best land in Kansas, two miles from Emporia. Over 200 good O. I. C. hogs. All our Barred Plymouth Rocks, 35 Colliers, 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. H. D. NUTTING, Emporia, Kans.

Grain and Dairy Farms

Around Topeka. Also Fruit farms and Stock farms for cattle, hogs and horses. Raise corn, wheat, oats, alfalfa, tame grasses. Unreasonably cheap; too cheap to last. Write for particulars.

GEO. M. NOBLE & CO. Real Estate and Loans. OPPOSITE POSTOFFICE. TOPEKA, KANS.

Watch Tacoma Grow!

Population, 1900, 37,714
Population, 1905, 55,000

Leading industrial center of Pacific Northwest. Five additional transcontinental railroads building to Tacoma. Chief distributing point for leading products of Washington; wheat, lumber, coal. Send stamps for descriptive literature to Secretary Chamber of Commerce and Board of Trade, Tacoma, Washington.

A Splendid Section Farm.

No. 1099 is a fine farm of 640 acres; well improved; with good house of 7 rooms; good barn and granary; 300 acres in wheat, all goes; 340 acres fenced; 2 good wells and windmills. Close to good market and in one of the best farming communities in Pawnee county. Price \$28.00 per acre. Come and see us and we will be pleased to show you this fine bargain.

Frizell & Ely

Larned, Kansas

"BARGAINS IN LAND"

320 acres well improved farm adjoining small town, all good soil, corn, wheat, and alfalfa land; 20 acres now in alfalfa; farm under fence, good pasture and meadow, fine water, good orchard; 8-room house, cattle barn, 32 by 100, horse barn, 16 by 26, granary and implement house 22 by 130, calf barn 16 by 24, several other buildings; price \$12,000; terms, one-half cash, balance on time.

200 acres farm, bottom land, mostly under cultivation; 6 miles from Lindsborg; good buildings; \$10,000.

240 acre well improved farm, 4 miles from good market; \$8,500.

160 acre farm on Smoky Hill River, 1 mile from Lindsborg; \$11,000.

160 acre farm, one-half bottom, one-half upland, buildings, fences; \$5,500.

160 acre farm, 5 miles from Lindsborg; \$3,800.

160 acre farm, 7 miles from Lindsborg; \$2,800.

80 acres farm, 3 1/2 miles from Lindsborg; \$3,300.

160 acres good land in Meade County; \$1,000.

160 acres all level land, in Logan County, will be sold cheap.

Other bargains to offer, write for list and prices.

JOSEPH A. BRANDT, Lindsborg, Kans.

The Blossom House

Kansas City, Mo.

Opposite Union Depot. Everything first class Cafe in connection. Cars for the Stock Yards, the up town business and residence parts of the city and for Kansas City, Kansas, pass the door. Solid comfort at moderate prices. A trial will please you.

Forty-Ninth Annual Meeting of the Missouri Horticultural Society.

(Continued from page 1367.)

tion, University of Missouri. It has been found that light-colored twigs resist the warm days of winter better than the dark-colored ones, that a coat of whitewash is protective, and that the smaller, but heavier buds, back on the year's growth, are hardier than those nearer the end, and that therefore it is well to trim off a half or two-thirds of the year's new growth.

At the last session Mr. H. W. Collingwood gave an entertaining talk on the home side of fruit-growing, illustrated with lantern views of his own methods at Hope Farm. Miss Alice Kinney gave a paper on "How to Interest Our Boys in the Farm."

The committee on resolutions reported the dissatisfaction with rates charged by the railroads in our State on apples, and a resolution was adopted authorizing the president of the society to appoint a committee to take up the matter of rates with the Interstate Commerce Commission. Resolutions were also adopted asking for a State Forest Commissioner, encouraging a more general observation of Arbor Day, commending the fish, game, and bird law, and endorsing the spirit of cooperation in the bettering of market facilities.

NEW OFFICERS ELECTED.

The session of Thursday morning was entirely taken up with business, including reports of committees, of Secretary Goodman and Treasurer Nelson, and the election of officers.

New officers are as follows: President, C. H. Dutcher, Warrensburg; first vice-president, T. H. Todd, New Franklin; second vice-president, W. D. Maxwell, St. Joseph; secretary, G. T. Tipplin, Nicholas; treasurer, A. T. Nelson, Lebanon. These officers take their places in June.

A TRIBUTE TO SECRETARY GOODMAN.

The following resolution was presented by J. C. Evans and adopted by a unanimous vote:

"The Missouri Horticultural Society records its sense of bereavement in the refusal of Mr. L. A. Goodman to accept further election to the office of secretary of this society. For twenty-five years the society has had the benefit of his masterful leadership. His annual election has been an annual expression of love and appreciation. The record of his service to the society is the record of its achievements. He has been more than a leader—he has been an inspiration—and the service of the society has been made a joy by virtue of participation with him in it. A full acknowledgment of the debt our society owes Mr. Goodman would cover its history and its services to horticulture during the past twenty-five years.

"No consideration less than Mr. Goodman's positive and repeated request to be released from the arduous duties of the secretaryship would induce us to allow his retirement.

"Our deep regret in losing Mr. Goodman from the office he has so long held and honored is somewhat mitigated by his promise to continue to give the society the benefit of his advice and helpfulness. We earnestly hope that the change of secretaries may be little more than a change in names and that the society may continue to be dominated and guided by his skillful hand.

"We comfort ourselves that we are not saying goodbye to Mr. Goodman—only relieving him of trying and burdensome duties from which he has earned relief by faithful service. To few men is it given to hold such a position for a quarter of a century—such tenure of office is possible only to a man of sterling character and magnetic power. Mr. Goodman has not alone fulfilled these conditions of leadership, but he has also won our love, and this record is a meager expression of our affectionate regard and unbounded admiration for him."

The Seedless Apple.

Can any good thing be said of the seedless-apple promoters? Yes, one good thing at least, but before I tell what that one good thing is, I wish to relate a little story. It is told of an old lady that she would never speak evil of any one, but, on the contrary, would always say something in favor of each one. Two men were one day talking of this trait of the old lady's when one of them offered to bet that he could mention one person of whom the old lady could not say one good thing. The bet was taken. So matters being arranged, they called upon the old lady and one of the men said: "Grandma, we have a bet that you can not say one good thing of the devil; now, can you?" She folded her hands

and thought for a moment and then, looking up with a sweet smile, said: "I think the devil has a great deal of perseverance." Just so it may be said of the promoters of the seedless apple. They have a great deal of perseverance. This perseverance will, in a good many cases, win and a goodly number of the trees of this worthless apple will be sold. As a resume of the present status of this matter, I make the following clipping from the editorial page of the Practical Farmer, of which the accomplished Prof. W. F. Massey is editor: "One by one our contemporary farm papers, especially some that make a special boast of their attention to their advertising, are inserting the advertisement of the seedless apple humbug, which has been positively refused by the Practical Farmer. If any of our readers invest in this apple, it will not be our fault. The advertisement states that it is of splendid flavor and absolutely seedless, when it has been shown that it is as poor or poorer than Ben Davis, and often has seed, and always a core. It has been positively stated that it is an old variety formerly grown in Virginia, and the promoters decline to say where they got it. As we have said, those who now get it will certainly know where they got it."

Dozens of our best farm papers come to this office and as far as I know not one of them has ever endorsed this seedless apple except as a novelty. The apple has no standing with the Department of Pomology at Washington, or with our leading pomologists in the United States. But notwithstanding this lack of endorsement, the promoters of this seedless apple seem to persevere. I have lying before me a marked copy of a paper—not a farm paper—published in an apple-growing section of the Northwest, with a glowing account of this seedless novelty. It would appear from this account that a man by the name of John Dryden journeyed all the way from Canada to see and examine this apple in the orchard of John F. Spencer at Grand Junction, Colo. Among other things he reports as follows: "Here I saw altogether twenty-seven trees in full bearing. I was informed that the oldest trees were twelve years old and the youngest in the orchard six years old." This is a remarkable statement, if true, and I have no reason to doubt its correctness. Here is a man, according to Dryden's report, who originated a very valuable apple that is destined to revolutionize the apple trade and yet after twelve years has "altogether" twenty-seven trees and has not planted in his orchard another tree for six years! It seems to me that if I had in some way got hold of a very valuable variety of the apple, and had been trying it for twelve years, during six of which it was in full bearing, I would have done much in increasing my getting of such a valuable fruit. A man must be a pretty slow coach who has such a wonderfully valuable apple and did not have but twenty-seven trees at

THE NEW CYCLOPEDIA OF AMERICAN HORTICULTURE

By PROFESSOR LIBERTY H. BAILEY

Over 4,357 articles in all by 450 expert writers, including practically all the best botanists, nurserymen, seedmen, florists, market gardeners and experimental station horticulturists. Occupying 2,100 pages and covering 24,434 plant names, 2,800 detailed illustrations, enormously increasing the ease of identification, and 146 beautiful full page illustrations.

Every reader of this paper who is interested in farming, in gardening, in trees, in shrubs, and all out of door matters, absolutely needs this set. It takes the place of all others combined on American gardening.

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Descriptions alphabetically arranged of all—over a thousand—of the native trees, plants and flowers worth cultivating, with keys enabling you to name any species, as well as to find all information regarding it. Practical articles by leading experts of the country on all phases of commercial plant production and greenhouse management—cut flowers, vegetables, etc.

Fullest cultural instructions of every flower, fruit and vegetable, tree and ornamental plant you may wish to grow.

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The regular price is \$30. For a few weeks we are able to offer this new and revised edition with the new material added at \$22.80 cash. If after receiving the books you are not perfectly satisfied in every way, you may return them at the publisher's expense and we will refund your money in full. This offer will be withdrawn January 1st and price increased.

Gentlemen:

Enclosed please find \$22.80 in { M. O. } for which
Chk. } please send one set of The New Cyclopaedia of
American Horticulture, all charges paid.

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Secure your tickets and sleeping car berths at

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H. C. SHIELDS,
T. P. A. Kansas City

J. J. SHINE,
W. P. A. Kansas City

the end of twelve years. My opinion is that the people who buy these trees will be as slow as Mr. Spencer in increasing their holdings, after they have tried the apple.

It looks very much to me as if some men who have put their money into trees of this seedless variety had sent Mr. Dryden there to do a certain thing—and he did it. Why didn't he tell us how Mr. Spencer's neighbors, seeing this valuable fruit, had been almost falling over each other to get trees or cuttings so they could plant the trees by the thousands? Surely the enterprising fruit-growers who live all around Mr. Spencer do not have to wait till some one comes all the way from Canada to tell them what is a good thing. Somehow these neighbors have been very slow to learn what a great thing this seedless apple is or the promoters have been very slow to publish their reports. I have seen reports from apple-growers in Colorado who had examined into the merits of this apple, but somehow these promoters do not publish them. Why? I will let the readers solve that conundrum.

This man Dryden claims to have examined this apple and yet he states in his report that this apple, "being solid all through, produces more meat than a larger apple with the obnoxious seeds and core." Now, I have examined a number of these "seedless, bloomless, coreless, wormless apples" and never saw one yet without the core and have never heard of any one else who did, except this "great light" from Canada. When a man sets out to do a certain thing he may become like

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Deal with the Owner direct. Save Commissions. We have the finest wheat and corn land in central and western Kansas. One price for everybody. You can buy a farm with small cash payment, balance in eight annual payments. Our farms are bargains, in the best counties in northern Kansas, raising from 25 to 40 bushels of winter wheat per acre. Smooth, no sand, no stone, no swamp, good neighbors, schools, churches, towns, railroads. If interested in your family and yourself write for particulars today. Don't put it off. Do it now. THE GRAIN BELT REALTY CO., Colby, Kans.

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The hub of corn, cattle, hogs and alfalfa country, where crop failures are unknown, and land is worth from \$12.50 to \$35 per acre. For booklet of farms and prices, write

P. D. STOUGHTON,
Madison, - - - Kansas

some of whom we hear, "having eyes, see not and having ears, hear not." I have before me some other silly stuff about this apple, but this is enough.—F. Walden, in The Ranch.

Lime-sulfur and kerosene-lime mixtures have been found effective by Prof. L. R. Taft, of the Michigan Agricultural College, in eradicating the San Jose scale. The tests were made at the State Experiment Station. The trees were sprayed last April, 50 gallons of the lime-sulfur mixture being applied to 18 trees. The trees examined this week had bright bark, comparatively free from scale.

The Grange

"For the good of our Order
our Country and Mankind."
Conducted by Geo. Black, Olathe, Secretary
Kansas State Grange, to whom all correspondence
for this department should be addressed.
News from Kansas Granges is especially solicited.

NATIONAL GRANGE.

Master.....N. J. Bachelder, Concord, N. H.
Lecturer.....Geo. W. G. Gaunt, Mullica Hill, N. J.
Secretary.....C. M. Freeman, Tippecanoe City, Ohio

KANSAS STATE GRANGE.

Master.....E. W. Westgate, Manhattan
Overseer.....A. P. Beardon, McLouth
Lecturer.....Ole Elbner, Olathe
Assistant Secretary.....B. C. Post, Spring Hill
Chaplain.....Frank Wiswell, Ochiltree
Treasurer.....Mrs. M. J. Ramage, Arkansas City
Secretary.....Wm. Henry, Olathe
Gatekeeper.....George Black, Olathe
Ceres.....J. H. Smith, Lone Elm
Pomona.....Mrs. M. L. Allison, Lyndon
Flora.....Mrs. S. J. Lovett, McLouth
L. A. S.....Mrs. Lola Radcliffe, Overbrook

EXECUTIVE COMMITTEE.

O. F. Whitney, Chairman.....Topeka, Station A
E. W. Westgate.....Manhattan
George Black, Secretary.....Olathe
Henry Rhoades.....Gardner
J. C. Lovett.....Bucyrus

STATE ORGANIZER.

W. B. Obryhim.....Overbrook

Master Westgate's Address at the An-
nual Meeting of Kansas State
Grange.

Again, and for the sixth time, I
bring you greetings and words of good
cheer.

A year of prosperity for our State
and for our order has passed since
last we met at Madison.

Our orchards, our meadows, and our
grain-fields have brought forth an
abundance for man and beast and mil-
lions of bushels of fruit and grain to
spare for the tenants of less favored
States and countries.

Other industries have prospered, and
the combined results of all the pro-
ductive agencies of Kansas place her
among the foremost of the sovereign
States that, together, make the most
prosperous, most wealthy, and most in-
fluential nation in the world to-day,
and whose people are better fed, bet-
ter clothed, and better housed than
those of any other nation 'neath the
sun.

NATIONAL GRANGE.

The fortieth annual session of the
National Grange, held at Denver, Colo.,
marked the close of one of the most
successful year's work in the history
of our order.

Most of the States represented re-
ported substantial additions to their
numbers and advanced work along
legislative lines for the benefit of the
many rather than for the favored few.
The influence of our legislative com-
mittee at Washington was never more
efficient than during the last session of
Congress, and we have all rejoiced at
seeing three of the important objects
for which we have been earnestly
striving accomplished by the enacting
into laws of the railroad rate bill, the
pure food bill, and the denatured alco-
hol bill. The last one was first brought
to the favorable notice of the President
by our committee.

Hence these three important objects
are stricken from the list of objects
for which we are at work. With our
motto of "Equal rights for all and spe-
cial privileges to none" we have been
successful in preventing thus far the
passage of the ship subsidy bill, but
continued effort will be necessary upon
this subject at the present session of
Congress.

BILLS TO BE PRESSED.

We shall press the bill for parcels
post and for good roads, built in part
by appropriation from the public
treasury.

In this latter we are not working
for the farmer alone, but also for the
benefit of the consumer of farm-
products—the vast majority of our
population.

Good roads benefit the farmer,
primarily, and more, perhaps, than any
other class and he will have the greater
part of the burden to bear while the
consumer will reap the benefit of re-
duced cost of transportation.

The parcels post bill proposes to re-
duce the postage on small parcels of
merchandise sent through the mails. In
this subject the United States is behind
other civilized nations.

Lower postal rates mean lower ex-
press charges, and hence the express
companies have their agents and their
officers on the floor of Congress and
have thus far prevented any change in
our postal laws.

But even United States Senators are
sometimes compelled to resign and
sometimes die, and we shall take up
the work with renewed zeal with this
or the coming Congress.

Under our present law a small pack-
age will be carried by mail from the
extremities of Alaska to London, Ber-
lin, New Zealand, or Hongkong at 25
per cent less cost than from one neigh-
bor to another at a usual rate. We all
know why this is so, but can any one
tell why it should be so?

Another reason for demanding the
parcels post is that there is now a de-
ficit in the Post-office Department of
several millions of dollars, a part of
which, no doubt, is caused by the ex-
pense of the rural routes, but the part
of the deficit due to this branch of the
service could be wiped out and the
rural routes more than pay their cost
if small packages could be transmitted
by mail at the same rates at which
they are carried in England, where a
4-pound package is carried to any
point in the United Kingdom of Great
Britain and Ireland for 3 cents, just
one-eighth as much as from your house
to your nearest neighbor.

We are aware that the express com-
panies are not the only source of op-
position to this change. The merchants
in the smaller cities and towns fear
the competition of the larger cities;
not appreciating the fact that their ex-
press and postage bills would be de-
creased more than those of their cus-
tomers, inasmuch as their expenses in
those lines are the greater.

Advance in civilization demands
changes in modes of business. The
sickle and cradle give place to the
reaper and binder, the stage coach to
the express train, and in many cases
the man to the machine; arms of flesh
to arms of steel, every advance bring-
ing ill to some, but good to the many.
These changes may be delayed, but
they will surely come. The engine of
progress is coming down the track
and will clear its path of all obstruc-
tions. If the bull persists in standing
between the rails, so much the worse
for the bull.

The National Grange earnestly op-
poses the proposed increase in postage
on newspaper and magazines as a
means of lessening the deficit in the
Post-office Department. The press is
one of the most powerful elements of
progress and education and should not
be crippled in this way. Why should
the Post-office Department be com-
pelled to carry for nothing all the busi-
ness correspondence of all the de-
partments and all the mail of Senators
and Congressmen and not receive credit
therefor?

Charging me more for bringing my
newspapers so that the mail of Mr.
Calderhead can be carried free is like
the custom of the railroads in exacting
a higher rate of fare from you that
the favorites of the managers of the
road may ride for nothing.

The parcels post, the annihilation of
the franking privilege, and some ap-
proach to economy in cost of transpor-
tation of mail would soon change the
balance to the other side of the Post-
office account and render penny post-
age on letters possible.

LIFE INSURANCE.

The subject of grange life insurance
was again brought before the National
Grange and it was thought to be a good
time for the launching of a life insur-
ance company upon a plan which shall
unite the safety of the old-line com-
panies with the economy of the fraternal
organizations. The recent searching
examination of some of the old-line
companies has proved their soundness,
but it has also shown inexcusable ex-
travagance in their management and
hence an unnecessary cost to their
policy-holders. At the same time the
necessary readjusting and increase of
rates by some of the fraternal com-
panies, the failure of others, and the ap-
proaching demise of all the rest, unless
an increase of rates is ordered, reveals
the fact that these rates were too low
for a company expecting to last for a
hundred years.

A committee was appointed to re-
port at the next meeting of the National
Grange some plan for a National or-
ganization, limited to members of our
order and having a legal reserve fund.

THE PRESS.

Realizing the need of some reliable
official organ of our order, the execu-
tive committee was instructed, as soon
as suitable arrangements could be
made, to publish a first-class weekly
farm and grange paper.

When this paper shall appear, I be-
speak for it the hearty cooperation of
all the members of our subordinate
granges and in the meantime make
every possible use of the publications
at our command to extend the influ-
ence and usefulness of our order.

INITIATIVE AND REFERENDUM.

The subject of the initiative and

IF YOU WANT WHAT YOU WANT WHEN
YOU WANT IT
ALWAYS KEEP A BOTTLE OF

ST. JACOBS OIL

IN THE HOUSE AND YOU WILL HAVE A
QUICK, SAFE AND SURE REMEDY FOR PAIN
WHERE YOU CAN GET AT IT WHEN NEEDED.

PRICE 25c AND 50c

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35--HEREFORDS--35

To be held in Judging Pavilion
Agricultural College

MANHATTAN, KANS., SAT., JAN. 5, '07

In connection with and on last day of

Farmers Short Course

The lot includes my entire herd and several head
selected from the college herd. There are 21 cows
and heifers, all but three of them of breeding age and
in calf or with calves at side. The bull offerings in-
clude my herd bull, General Gordon (by Governor),
4 yearlings and 9 bull calves. Lord Wilton, Anxiety
4th, Columbus 17th, and other such sires represented
in the breeding. A useful lot of cattle. Be at the
institute and attend the sale. Send for catalog to

J. G. ARBUTHNOT,

Haworth,

Kansas

referendum, together with that of di-
rect election and recall, was earnestly
advocated by those of the National
Grange who had experienced the ad-
vantages of it in their own States, but
it being the policy of the National
Grange to recommend no measure
which does not command a nearly
unanimous vote, it was referred to the
several State granges for such action
as might to them seem best in their
respective States. I recommend that
this grange and the subordinate
granges seriously consider this matter.
It is commanding the attention of men
of all parties and, to a greater or less
degree, is being adopted in several
States. It is a long step in advance
towards securing government of the
people, for the people, by the people.

THE LEGISLATURE.

Subjects of great importance to all
the people of Kansas will come before
the next Legislature for its considera-
tion. Other interests will be repre-
sented by paid attorneys, but the greatest
interest of Kansas—that of agricul-
ture—is liable to be unrepresented by
those who can speak with authority
for all the farmers of the State, with
the result that those who do not speak
for themselves will not be considered
and will be left to bear an unjust pro-
portion of the burdens incurred for the
maintenance of our roads, our schools,
our charitable and penal institutions,
and the making and enforcing of our
laws.

We respectfully demand some relief
from the present unjust, illegal,

chaotic mode of assessment of proper-
ty for taxation.

If our present law is to remain, the
assessors should be compelled, under
penalty of fine or imprisonment, or
both, to assess all property according
to law and their official oaths.

Disregard for the truth and for the
sanctity of the oath, on the part of the
assessor and assessed, is invited by our
loose system of levying taxes, and to
such a degree has this evil influence
extended that the man who conscien-
tiously renders his property for taxa-
tion according to law and his oath is
by this generally considered wanting in
common sense and business ability.

Were the Grange as strong in Kan-
sas as in some of the Eastern States,
we could command the consideration of
our requests. As it is, we are the only
purely agricultural organization and
will do what we can through our
legislative committee for the interests
of the farmers of the State.

CONDITION OF THE ORDER AT HOME.

I am glad to report that Kansas
shared in the advance of the Grange
standard during the year. Only five
States have shown a greater increase
in number of granges. No State has
shown a greater per cent of increase
in the last six years than Kansas. We
have nearly doubled our membership in
that time and our fire insurance com-
pany, which is dependent upon the
Grange for its existence, has more than
doubled its risks in the same time.

This increase is not due to the ef-
forts of any one member, but rather to

the loyalty of its membership, its avoiding all entangling alliances with political parties or other organizations, and the conceded justice of our cause and the necessity of organization for the accomplishment of our objects. The growth in Kansas has been steady and the promise for the future is bright. Our greatest need is that of suitable organizers who will take the field. More calls for help are received than can be answered as desired.

COOPERATION.

The Patrons' Cooperative Association at Olathe still maintains its position as the most successful of its kind in the land.

The Patrons' Bank at Olathe, with its \$50,000 capital and an equal surplus, is among the first of the State.

The Patrons' Fire and Tornado Association closes its seventh successive year without an assessment and an increase in risks of nearly a million dollars.

The stores at Cadmus, Spring Hill, and New Lancaster are sources of strength to their respective granges.

CONCLUSION.

This session closes my sixth year as master and tenth year of official connection with this grange. When I entered the State Grange at Spring Hill fourteen years ago I did not even dream of assuming the responsibility that I have borne for the past three terms. Mistakes have been made and regretted. I have tried to be faithful and impartial in my duties. Much of the work and many of the privileges connected with the position I have highly appreciated, and I thank you for the privilege of contributing, even in a small degree, to the promotion of the interests of our order, both at home and abroad. Upon the installation of my successor I shall with pleasure, and a sense of relief, surrender all insignia of office and all property of the Grange in my possession and bid him God speed in his mission.

Brothers and Sisters, relying upon your appreciation of the responsibility resting upon you in this very important session, upon your ability and earnestness of purpose, upon your strong desire to advance the interests and extend the influence of the order toward the betterment of our homes, our country, and of mankind, I commit the work of the session to your hands and may you so act as to meet the approval of your own conscience and the sanction of Him who doeth all things well.

Notice to Granges.

The secretaries of subordinate granges are earnestly requested to send to the secretary of the Kansas State Grange, Mr. A. L. Hunt, Olathe, the names and post-office addresses of the master, lecturer, and secretary of their subordinate granges as soon as the annual election occurs. Don't postpone this matter "to a more convenient season."—Geo. Black, Master Kansas State Grange.

Kansas State Grange.

The 35th annual meeting of the Kansas State Grange was held at Garnett, Kans., Dec. 11, 12, 13, 1906. All the officers were present, and seventeen counties were represented by fifty-four delegates, elected on a basis of one delegate for every 300 members.

The report of the worthy master shows an increase during the year of twelve new granges and 700 members. The worthy treasurer's report shows a very healthy condition of the treasury. The receipts of 1906 were several hundred dollars in excess of 1895.

The citizens of Garnett gave the State Grange a warm reception in the opera house Tuesday evening. The meeting was presided over by the mayor of the city. The address of welcome was delivered by Hon. Manfred Schoonover, of Garnett. The address was responded to by Hon. I. D. Hibner, of Olathe, and Hon. A. P. Reardon, of McLouth. A very pleasing musical program was also rendered.

The work done at this meeting of the Kansas State Grange was very satisfactory, and the outlook for the Grange in Kansas is promising.

The election of officers was held in the afternoon of the last day, and resulted in the following corps of officers being elected:

Master, Geo. Black, Olathe; overseer, Albert Radcliff, Overbrook; lecturer, A. P. Reardon, McLouth; steward, R. C. Post, Spring Hill; asst. steward, C. T. Minor, Selma; chaplain, Mrs. Alice Munger, Manhattan; treasurer, Henry Rhoades, Gardner; secretary, A. L. Hunt, Olathe; gate keeper, J. H. Smith,

Lone Elm; cere, Mrs. Joella Beach, Winfield; Pomona, S. M. Phinney, McLouth; Flora, Helen Cady, La Cygne; L. A. S., Effie Cline, Larned.

Executive committee—Geo. Black, Olathe; A. L. Hunt, Olathe; O. F. Whitney, chairman, Topeka; J. C. Lovett, Bucyrus; E. W. Westgate, Manhattan.

The State Fair Circuits.

At Chicago, during the International Live Stock Exposition, the secretaries of State fairs held a meeting and, among other important matters of business, adopted a schedule of dates for State fairs in the Western circuits. The schedule follows:

August 26, Iowa; September 2, Nebraska, Minnesota, Michigan, and Ohio; September 9, South Dakota, Sioux City, Wisconsin, Indiana, and Colorado; September 16, Hutchinson, Kansas, and Kentucky; September 23, St. Joseph and Tennessee; September 30, Illinois; October 7, Missouri; October 14, The American Royal; December 1, the International.

Kansas City Live-Stock Market.

Kansas City, Mo., December 17, 1906.

Last week's cattle market closed in good shape, and the moderate supply of 13,000 head to-day is selling steadily generally, cows and stockers and feeders stronger. Sales of Christmas cattle were the feature last week, at \$6.50 @ \$7.50, and the rather heavy proportion of fair to good fed steers included in the total last week sold mainly at \$4.75 @ \$5.75. Range cattle are still coming pretty freely, especially from Colorado, but after this week there will be only scattering shipments of these. Fed steers now make up the bulk of the supply, while there is beginning to be signs of the usual winter and spring shortage of good cows and butcher stuff, and a corresponding strength in that kind of cattle. Full loads of cows sold up to \$4.50 last week, and while the assortment of heifers has not been large, sales were frequently made at \$4.50 @ \$5.15, bulk of the fed cows and heifers \$3 @ \$4.25, canners \$2 @ \$2.35, bulls \$2.25 @ \$4, calves up to \$6.50. Offerings from Colorado have contained an extra large share of stockers and feeders lately, and they have shown high breeding and desirable colors, bulk of the feeders selling at \$3.70 @ \$4.40, stockers \$3.50 @ \$4.25, while the full range on stockers and feeders and the general market is \$2.75 @ \$4.50. Stock and feeding cattle are at the season's highest point now, as the total number of cattle on feed in Kansas, Nebraska, and Missouri is believed to be short of a year ago, and prospects for higher prices favorable.

The hog market holds up strong, although receipts last week exceeded 61,000 head, largest supply in any week for several months. The run to-day is 8,000 head, market 5c higher, top \$6.32½, bulk of sales \$6.20 @ \$6.27½. Although the supply is fairly liberal, it is still considerably less than at this time a year ago, and stocks of pork product in the hands of packers are much smaller than a year ago at this time, and are diminishing each month. New prices were paid for all kinds of fed sheep and lambs last week, as the assortment was better than we have been getting. The market broke Thursday, because of continued liberal supply, but it is stronger to-day. Run is 4,000 head, best fed Western lambs selling at \$7 @ \$7.60, fed yearlings at \$5.75 @ \$6.50, wethers up to \$5.75, ewes \$5.35, although some choice native ewes sold last week at \$5.75.

J. A. RICKART.

South St. Joseph Live-Stock Market.

South St. Joseph, Mo., Dec. 17, 1906.

While the receipts of cattle at all points to-day totaled out quite large, the local contingent was below a Monday average, and for this reason buyers were content to concede steady prices for all useful styles of offerings. No strictly choice steers arrived but there was a fair proportion of the decent kinds that have been selling at \$5.25 @ \$5.65, although the larger share of the steers were of the light, unfinished grades that sell between \$4.60 @ \$5. There was good, active demand for all grades of cows and heifers and prices were full steady to strong with a good early clearance being made. Not more than a normal number of stock cattle were carried over from last week, and buyers were out on the hunt for fresh supplies to-day and willing to pay full, strong prices for attractive styles of feeders, while good yearlings were about steady.

Hog supplies were somewhat disappointing to the buying interests to-day and sellers had rather easy times of it forcing an advance of 7½ @ 10c. Hogs sold largely at \$6.27½ @ \$6.32½, with smooth lots on the fat back order making \$6.35, big weights of 300 pounds now being favorites where quality is not lacking. The market movement of hogs continues to indicate that it will not be possible to get supplies up to the standard expected by packers at least until well along in the new year, if indeed the whole winter season does not run short on supplies. The market appears to be on a good, healthy footing at around present prices.

A breaking tendency developed in the sheep market during the latter days of last week and it seems destined to continue unless receipts drop off sharply. Lambs sold to-day 35 @ 40c lower than the high time last week, while sheep and yearlings show declines of 25 @ 35c.

WARRICK.

REAL ESTATE.

SMITH COUNTY FARM FOR SALE

330 acres 10 miles from Smith Center, 68 acres alfalfa, 160 acres pasture, 2 acres orchard, 4 acres thifty forest trees, 5 miles of fence, 3 miles of fence hog tight, large new barn, house built in 1900, wagon scales, granary, cattle shed and other buildings. Enquire of W. E. Ross, owner, R. F. D. No. 3, Smith Center, Kans.

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.

ADVERTISING RATES.

Display advertising, 20 cents per line, agate (fourteen lines to the inch). Continuous orders, run by the paper, \$1.52 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. Electrotype must have metal base.

Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.

To insure prompt publication of an advertisement, send cash with the order; however, monthly or quarterly payments may be arranged by parties who are well known to the publishers, or when acceptable references are given.

All new advertising orders intended for the current week should reach this office not later than Monday.

Change of copy for regular advertisement should reach this office not later than Saturday previous to publication.

Every advertiser will receive a copy of the paper free, during the publication of the advertisement. Address all communications to

KANSAS FARMER CO.,

625 Jackson St., Topeka, Kans.

Special Want Column

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

CATTLE.

TWO DOUBLE STANDARD POLLED DURHAM BULLS. Extra good quality, well bred and good color. Also a good 120-acre farm for sale or rent. C. M. Albright, Overbrook, Kans.

FOR SALE—5 registered Holstein heifers and bulls, 6 registered Jersey cows and heifers and bull, 10 grade Jersey-Holstein heifers. Burton & Burton, Topeka, Kans.

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

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

SPECIAL SALE—5 straight (ruickshank Short-horn) bulls for sale at bargain prices for quality. H. W. McAfee, Topeka, Kans.

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

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

HORSES AND MULES.

FOR SALE—Three good, black jacks, 5 years old, sound and first-class breeders. Your choice \$550. One registered Cleveland bay \$400. Will sell a good young 1750 pound horse and jack for \$750. A sure bargain. Good guarantee given. L. Cox, Concordia, Kans.

FOR SALE OR EXCHANGE FOR STOCK—One 8-year-old steel gray jack, 15½ tall. Sure colts to show. H. N. Hodges, Gardner, Kans.

FOR SALE—2 Kentucky Gaited Saddle yearlings. Both registered stallions. Burton & Burton, Topeka, Kans.

TWO JACKS FOR SALE—3 and 4 years old. Missouri bred. Address S. C. Hedrick, Tecumseh, Kans.

FOR SALE OR EXCHANGE for clear land, seven head of Standard bred race horses, mares, geldings, stallions, several cows, Shorthorn bull, also a good homestead 160 in Kansas, Wallace County. Will sell furniture and fixtures and give a lease for a term of years on the best Hotel in Nebraska. Miller Hotel Co., Wymore, Neb.

FOR SALE—At reasonable prices, Black Imported Percheron stallions. E. N. Woodbury, Cawker City, Kans.

FOR SALE—One black team, 6 and 7 years old, weight 2600 pounds. Mr. and Mrs. Henry Schrader, Wauneta, Kans.

SWINE.

CHOICE BERKSHIRES for sale, from 75 to 240 pounds in weight, of the best breeding in the land. Eleven years a breeder of this beautiful breed. G. D. Willems, Inman, Kans.

FOR SALE—Duroc-Jersey boars sired by Parker Boy, a son of the great Parker Mac, winner of first prize at Kansas State Fair 1905. White & Tomson, Route 8, Topeka, Kans.

FOR SALE—Harmonizer and Hot Shot Poland-China gilts. Bred to a son of Leon Calhoun's great herd boar. Also an April boar by Hot Shot out of a Harmonizer gilt. Good enough to head any herd. James B. Zinn, Box 348, Topeka, Kans.

WE NOW HAVE forty choice bred gilts to pick from, bred to Crimmon Challenger, he by Crimmon Wonder 38755; Missouri's Wonder King, he by Missouri's Pride; Oom Paul 3d, he by Takoma Paul Have males by Crimmon Wonder for sale. Mr. and Mrs. Henry Schrader, Wauneta, Kans.

FOR SALE—Duroc-Jerseys. Good color, fine blood, low prices. Burton & Burton, Topeka, Kans.

FOR SALE—Thoroughbred Duroc-Jersey pigs, boars large enough for service. Prices right. I. W. Poulton, Medora, Kans.

POULTRY.

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

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

FOR SALE—30 Blue Ribbon Black! Langshan cockerels. They are as good as the best. Satisfaction guaranteed. P. B. Speelman, Beloit, Kans.

SEEDS AND PLANTS.

JUST OUT—Our New Seed Catalogue for 1907. Complete from cover to cover. Latest and best novelties in vegetables and flowers. Free copy for the asking. Send for it now and tell your neighbors also. The Barteldes Seed Co., Lawrence, Kans.

WANTED—Alfalfa, Red Clover, Timothy, Millet, Cane seed and other field and grass seeds; also popcorn. If any to offer please correspond with us, The Barteldes Seed Co., 804 Mass. St., Lawrence, Kans.

SCOTCH COLLIES.

COLLIES—More of those richly bred pups, ready to ship; sired by a grandson of Ormskirk Galopin. From \$4 to \$7. A. F. Chacey, North Topeka, Kans.

MISCELLANEOUS.

WANTED TO SELL—Old established weekly newspaper and job office in one of the best South-east Kansas gas towns; cheap at \$1500. Address E. E. W. care Kansas Farmer.

WANTED—Energetic man to sell rubber boots and shoes on commission to country merchants in January, February, March and April. Will give as many counties around your home as you can visit in this time. A man with horse and buggy can make good pay. Samples furnished free. Address, giving particulars, Shoe Salesman, care Kansas Farmer.

PURE KANSAS SORGHUM—A good grade at following prices: 10 gallon kegs, \$4.20; 5 gallon kegs, \$2.20. F. O. B. cars at Tyro, Kans., G. R. Wheeler.

WANTED—Gentleman or lady with good reference, to travel by rail or with 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.

WANTED—Men to learn barber trade. Few weeks completes. Many advantages only obtainable here. Wages Saturday, tools given. Positions waiting our diploma holders. Shops furnished new on easy payments. Write today for free catalogue. Moler System of Barber Colleges, Kansas City, Mo.

FOR SALE OR TRADE—Choice alfalfa farms, Clydesdale Horses, Shorthorn and Jersey Cattle, Poland-China, Duroc-Jersey and O. I. C. Hogs. 40 varieties of poultry and pet stock. Pure seeds and nursery stocks. Full particulars in catalogue. 10c brings it. Merchandise wanted; what have you to trade. A. Madsen & Sons, Atwood, Kans.

WANTED—Ladies to work on piece work, \$3 per dozen. All material furnished. No canvassing; steady work. Stamped envelope. Best Mfg. Co., Champlain Bldg., Chicago, Ill.

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

HONEY—8 cents per pound. Write A. S. Parson, 614 S. Main St., Rocky Ford, Colo.

WANTED—Non-union moulders. Call or write Topeka Foundry, 318 Jackson St., Topeka, Kans.

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

Stray List

Week Ending December 6.

Cloud County—E. J. Alexander, County Clerk. HORSE—Taken up by Joe Thoman in Aurora tp., November 18, 1906, one chestnut sorrel horse, 5 feet high, "26" on left shoulder, white star in forehead, foretop shingled, wire cut on left fore foot.

Week Ending December 13.

Sherman County—Wilson Peters, Clerk. HORSE—Taken up November 24, 1906, by V. B. McClure, in McPherson tp., one black horse, no marks or brands; valued at \$80.

HORSE—Taken up, April 21, 1905, by I. N. Goings in Smoky tp., one brown horse, right front foot cricked and ear cropped, valued at \$25.

MULE—Taken up, September 1, 1905, by S. D. Still in Washington tp., one brown mule, wire cut on right hind foot, valued at \$40.

Comanche County—Jay T. Botta, County Clerk. SOW AND PIGS—Taken up, October 18, 1906, by Oliver Guss in Avilla tp., one black sow and five pigs; sow weighs about 175 lbs., pigs weigh about 20 lbs., about one month old; sow has legs white and white spot on shoulders; one of the pigs same color as sow, others black; v. lued at \$20.

Pottawatomie County. HEIFER—Taken up, in August, 1906, by Carl A. Peterson, in Blue Valley tp., one white-face 2 year-old heifer, "2" cut in left ear.

Week Ending December 20.

Ness County—J. H. Elting, County Clerk. MARE—Taken up, November 28, 1906, by Albert Johannes, in Nevada tp., one sorrel mare, with blaze face, valued at \$50.

Douglas County—A. Frank Kerns, County Clerk. HEIFER—Taken up, November 3, 1906, by W. C. Howard, in Palmyra tp., one dark heifer 18 months old, white face, valued at \$12.

LEGAL.

FRED C. SLATER, Lawyer,

Topeka, Kansas.

Collections made in all parts of the country. Advice given on matters by mail. Inheritances collected and estates investigated in all parts of the world.

PUBLICATION NOTICE.

In the District Court of Shawnee County, Kans.

George Wind, Plaintiff, vs. Victoria Gonvil Smith, Mrs. Rufus Maxon, C. J. Richards, Geo. W. Ludington, R. E. Conwell, Enoch Chase, and Joseph Mid-
daugh, Defendants.

If the above named defendants are alive they will take notice that they have been sued in said court by said plaintiff in the above entitled action. And if they are dead their heirs, devisees, administrators, executors, and trustees will take notice that they have been sued in said court in said action by said plaintiff to quiet his title to the following described land in Shawnee County, Kansas, to-wit:

Beginning 29 13-100 chains south of the northwest corner of Reserve No. Six (6) of the Kaw Half Breed Indian Lands; thence East to Tick Creek; thence Southeast along the center of Tick Creek to the center of Indian Creek; thence West to the center of Indian Creek to the west line of said Reserve and thence north 8 77-100 chains to the place of beginning. And Lot One (1) in Hillyer's subdivision of a part of said Reserve, as against them and to bar them from ever setting up any claim or title to said land and they are further notified that they must answer the petition filed by plaintiff in said action on or before the 19th day of January, 1907, or the said petition will be taken as true and judgment will be rendered against them accordingly.

[Seal] M. T. CAMPBELL,
Attorney for Plaintiff.
Attest: I. S. CURTIS, Clerk.

DUROC-JERSEYS

Woodlawn

We have just 10 head of spring boars left for sale and we are going to make very LOW price for the next 30 days to close them out. They are sired by Fancy Chief 24923 the great show boar FANCY TOPNOTCHER 49339, first in class at Kansas State Fair and by PRINCE WONDER 42455. They have the size and are sure to suit you.

JNO. W. JONES & SON,

DUROC-JERSEYS

Home of The Famous Fancy Herd
Registered
DUROC-JERSEY SWINE

Concordia, Kansas

Nemaha Valley Herd Durocs and Polled Durhams

70 good strong pigs by such boars as Valley Chief 15211, Kant-Be-Beat, Wont Be Beat Again, Lewiston Top Notcher and others. If you need a boar write me. I also offer my herd bull GLOSTER CHIEF 4th, got by Gloster Chief 2d, for sale. This is a deep red fellow with plenty of size and finish. Young stock for sale at all time. Bred sow sale February 6, 1907.

WM. BRANDOW, Humboldt, Neb.

D. M. TROTT, Abilene, Kans., famous Duroc

Jerseys and Poland-Chinas.

COUNTY SEAT HERD DUROC-JERSEY SWINE

Geo. Briggs & Son, Clay Center, Neb.

Young stock for sale.

DUROC-JERSEYS—Large-bodied and long-bodied kind. Spring pigs either sex. Prices reasonable.

E. S. COWEE, Route 2, Scranton, Kans.

SUNFLOWER HERD OF DUROC-JERSEYS—Fall and spring pigs for sale, of both sexes, sired by Klondyke Prince, an 800 pound hog. Samuel Boston, Prop., Smith Center, Kans.

Gold Standard Herd. 75 head of pedigree Duroc-Jersey spring pigs for sale cheap. (has. Dorr, Route 6, Osage City, Kas. Mention this paper.

10 Duroc-Jersey Boars for Sale

The best of breeding. Fine and large pigs farrowed in March and early April. I can please you. Write me now. Geo. F. Dorsch, Cook, Neb.

Pigs Shipped on Approval.

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

T. L. LIVINGSTON, Burchard, Neb.

Ireland's Durocs

Herd headed by Young Model 33111, a son of Higgins 2251. Pigs for sale from such sows as Antelope 97668, a granddaughter of Ohio Chief, Fancy Xenia 47490 and Lela H. 87038. Z. Ireland, Chester, Neb.

Registered Duroc-Jersey Swine

Up-to-date breeding, choice individuals. Farrowed from February 27 up to October 1. Either sex, pairs or trios, not a kin, at \$12.50, \$15, \$20 and \$25 per head, for 60 days only. G. E. NEWTON, Whiting, Kans., (Successor to Newton Bros.)

Orchard Hill Herd of Duroc-Jerseys

Fall and spring males, and the gilts bred and to be bred, for sale. Blood lines: Top Notcher, Ohio Chief, Improver 2d and the Wonder family.

E. F. NORTON & SON, Clay Center, Kans.

Duroc-Jerseys

Big, blocky, handsome boars of March and April farrow. Write Buchanan Stock Farm, Sedalia, Mo.

Egypt Valley Durocs.

Herd headed by Egypt Lad 34023. Stock always for sale. Choice fall boars and gilts, reasonable. Also six fine gilts, bred to Lora's Lad, to farrow in April; will also sell some tried sows. Write for prices and particulars. H. W. STEINMEYER, Volland, Kans.

STAADT'S DUROCS

FOR SALE—Orion 49173 by the great Orion 5298, dam Maude's Choice 98178 by Young John 22875, guaranteed a sure breeder and all right. Also good spring boars of the choicest breeding, and individuality at reasonable prices. J. F. Staadt, Ottawa, Kas.

Peerless Stock Farm

DUROC-JERSEY HOGS

Correspondence solicited. Inspection invited.

R. G. Sollenbarger, Prop., Woodston, Kans.

Fairview Herds Durocs and Red Polled

My herd bull, Expansion, for sale. No swine for sale now. Spring sale, February 13, 1907.

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

Eureka Manor Herd Duroc-Jerseys

Choice breeding stock for all. Boars, and sows and gilts, bred or open. Prices the lowest, quality and breeding the best. Herd headed by Eureka Tip-Top 43641, sired by the great World's Fair grand champion, Tip-Top Notcher 20729; and PERICLES 27247, by Josephus 19125, the Kansas State Fair grand champion. Write your wants or call and inspect my herd. Address J. F. ENSOR, Olathe, Kans.

Oak Grove Herd of Durocs

Herd headed by Choice Goods H. 36471 by Hunt's Model, and Corrector's Model 34581. Forty fine spring pigs for sale from such sows as Lahaugh's Choice 46832, Oak Grove Queen 12004 and Miss May 11206, a granddaughter of Improver II. If you want good ones write me.

SHERMAN REEDY, Hanover, Kans.

WILSONS' DUROCS

I have for sale a few gilts and boars sired by Ohio Chief. I also have a number of fine boars carrying the leading blood of the Duroc breed. Can please you in something good.

R. L. Wilson, Chester, Nebraska

DUROC-JERSEYS

Home of The Famous Fancy Herd
Registered
DUROC-JERSEY SWINE

Concordia, Kansas

RIVERSIDE HERD DUROC-JERSEYS

Hogs for sale. Yearling sows and gilts and young boars. Address Crow Bros., 200 East Osborn St., Hutchinson, Kans.

PIONEER HERD OF DUROC-JERSEY SWINE

Herd headed by Red Chief, 1st prize winner at Hutchinson, assisted by Chief Grand by Ohio Chief. Sows of equal merit. 15 large growing males and 25 sows, some bred. To these males I breed big boned, quick feeding females. Describe what you want and write for prices.

N. B. SAWYER, Cherryvale, Kans.

Lone Star Durocs

We will have over 50 fine boars for sale this fall, representing the best blood lines in the country. Orders booked after July 1, and shipments will be made to responsible parties on approval.

J. L. WILLIAMS,

Bellaire, Kansas

Ward Brothers Republic, Kans.

Spring Durocs for sale sired by Model H 37967, the best son of the great Higgins Model; also Shake-speare 3d, and other noted sires; also some fall boars that will be a credit to any herd. Write for prices.

O-Ta-Top-Farm Durocs

Herd composed of best blood in the west. Headed by O-Ta-Top Notcher, out of Tip-Top Notcher who sold for \$5,000. Spring pigs for sale price \$15 to \$25.

John W. Taylor,

Edwardsville, Kansas

Vick's DUROCS are bred for usefulness. Two yearling herd headers for sale, sired by Improver II, dams Kansas Belle, by Morton's Prince 16797, two yearlings sired by Meddock, dams Prairie Queen 106772, also spring pigs by Vick's Improver 47885, Red Top 32241, Fancy Chief 24923 and other noted sires. Correspondence invited. Visitors coming to Junction City and phoning me will be called for.

W. L. Vick,

Junction City, Kansas

COUNTY LINE HERD OF DUROCS.

Herd headed by Smith Wonder 46985. A fine lot of boars and gilts for sale, carrying the blood of Kansas Wonder 20753, Jumbo Jr. 28015, Orion 5298, 2d Climax 23361, Joe 29271, Com Paul 2d 17679 and Second Surprise 20289. Phone from Silver Lake.

O. N. Wilson, Silver Lake, Kans.

Duroc's from the Highland Herd carry the blood of the leading strains of the country. 31 head of fine spring males sired by Ohio Major 36357, Red Raven 47607, pricing it right. Grant Chapin, Greene, Kans.

POLAND-CHINAS

ELM GLEN FARM POLAND-CHINAS.

Size, breed, character and fashionable breeding. Stock all ages for sale.

WM. KNOX, South Haven, Kans.

CEDAR GROVE HERD

Of pure-bred POLAND-CHINA HOGS.

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

A. J. Hinckley, Milo, Kan.

Breeder of fashionable Poland-Chinas

Will have some fine boars for sale this fall. Write for breeding and prices. Mention Kansas Farmer when you write.

Dawley's

Poland Chinas are a distinct type of their own. Herd headers for sale sired by E. L. 2d, Splendid, Grand Chief, Sunflower Perfection, On and On. Keep on. Nonpareil and other noted sires. Prices moderate and satisfaction guaranteed.

Frank Dawley, Waldo, Kansas

POLAND-CHINAS

UNGLES' HOGGETTE

The great preventive and cure for HOG CHOLERA. Indorsed by more good breeders than any other remedy. We also put out a Dip at \$1 per gallon, in 5 and 10 gallon cans. Freight prepaid. Guaranteed as good as any Dip on the market or money refunded. Address

UNGLES HOGGETT CO.

Lincoln, Nebraska

Stalder's Poland-Chinas

I have pigs for sale from the leading strains of the country. Prices reasonable. Write for full particulars. O. W. Stalder, Salem, Neb.

The Useful Type of Poland-Chinas

Herd headed by Model King 34390, by Mischief Maker. Growthy spring pigs for sale.

E. D. Morris, Bern, Kansas

Square Deal Herd--Poland-Chinas

Herd boars: Calder's Chief by Garver's Choice, and Calder's Grand Chip by Grand Perfection 37480 out of Mo. Chip dam. Address

Wm. D. Calder, Prop., Bancroft, Kans.

John Black, Barnard, Kas

MY POLAND-CHINAS

are the big prolific kind that the farmer likes to raise. Will have some fine boars for sale this fall. Write for prices. Mention the Kansas Farmer.

Elerbeck's POLAND-CHINAS

are from the leading strains of the heavy type. Good boars and gilts for sale. Write for information.

J. T. ELERBECK, Beatrice, Neb.

Cedar Lawn Stock Farm

My herd is headed by the Great MAJOR M. 31527, by Blaine Tecumseh 29338. We breed the big fellows with plenty of finish. Our sows are all heavy boned animals and producers of large litters. If you want to breed the large type, write us for prices on boars and gilts.

J. R. Triggs, Dawson, Neb.

Yukon Polands

Spring pigs for sale sired by the great boar Perfect Tecumseh 27889 8, and out of sows of equal breeding. Also a few choice ones by a son of Meddler. Write me for full particulars.

J. B. Myers

Canton, Kansas

.. Axline's .. POLAND-CHINAS

Best Breeding and Individuality.

E. E. AXLINE, Oak Grove, Missouri.

JOHN BOLLIN,

Route 5, Leavenworth, Kans.

Breeds and Sells Poland-Chinas Popular

The State and World's Fair winning boars Nemo L's Dude and The Picket in service. Bred sows and serviceable boars for sale.

Maple Valley Stock Farm

The grand breeder Mo. Chip 2d is at the head of my Poland-China herd. My foundation stock is the best that money can buy and I guarantee my stock. Have a few more sows and gilts bred for spring farrow at reasonable prices. Correspondence solicited and visitors always welcome.

C. P. BROWN, Route 2, Whiting, Kans.

Popular Poland-Chinas

Chief Perfection 2d and other fashionable blood lines. The Champion American Royal 1906 is our type, this sire is a half brother to a number we offer. Some excellent spring boars and gilts ready for buyers.

P. L. WARE & SON

Paola, Kansas

ON AND ON BOARS

Several choice boars for sale. One spring boar by On and On 61733, dam b. Chief Perfection 2d 42555. One fall yearling grandson of Mo's Black Perfection. Dam 50 per cent Chief Perfection 2d, and others extra good. Also a few young Galloway bulls and several young Holstein bulls.

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