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TOPEKA, KANSAS, SEPTEMBER 29, 1904

Established 1863. \$1 a Year

KANSAS FARMER.

Established in 1863.

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I. D. GRA	VGILL HAM			. A880	ciat	e Editor
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ADVERTISING RATES.

ADVERTISING RATES.

Display advertising, 15 cents per line, agate (fourteen lines to the inch). Continuous orders, run of the paper, \$1.54 per inch per week.
Special reading notices, \$2 cents per line.
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Every advertiser will receive a copy of the paper free, during the publication of the advertisement.

Address all communications to

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KANSAS FARMER CO., 116 West Sixth Ave., Topeka, Kans.

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Books-good books-are scientific, educational or entertaining in charac-"How We Are Clothed," by James Franklin Chamberlin, Editor B. Department of Geography, State Normal School, Los Angeles, Cal., is all three, and more. It is intended for the student of geography and to be read with the map before him. In text and

illustration it is a graphic description of the style, material, and manufacture of the garments of all nations, from the fur-clad Esquimo to the brownskinned island dwellers whose tatooing forms a large part of their covering. The style is largely conversational, and the illustrations alone have a teaching power beyond words. The boy or girl at home, as well as the student in school, will find intense interest and instruction in its perusal. It is published by The Macmillan Company, and the price is 40 cents.

This last week of September is Kansas week at the World's Fair, and the Governor with his staff and other State officials are on the grounds to do the honors of the occasion. The program for the week includes a grand parade with a reception to the Governor and his wife at the Kansas Building and plenty of speeches. Wherever a number of Kansans get together there are always plenty of speeches. Whenever a Kansan meets an outsider who does not know about Kansas or does not believe what he has heard, then there are more and hotter speeches. That there will be a goodly crowd of Kansans in St. Louis this week goes without saying, but it must be remembered that this has been true since the opening of the fair. Indeed, Kansas is credited with supplying more visitors to the World's Fair than any other State except Missouri. Another event of more local importance, perhaps, will be Topeka Day, which will occur on October 14, when Topeka will entertain her friends and visitors in a manner befitting the Capitol of the most important State in the Union. We hope our readers will remember these events and we shall be glad to shake hands with them in the greatest exposition the world has ever seen.

The prices of wheat took a sensational flight last Saturday. Red wheat sold as high as \$1.20 in St. Louis for cash. The Chicago speculative market was quoted at \$1.121/2 for September delivery, \$1.141/8 for December; and \$1.151/4 for May. Monday's quotations were about 31/2 cents lower than Saturday's.

TWO AMENDMENTS TO THE KAN-SAS CONSTITUTION PRO-POSED.

Two proposed amendments to the constitution are to be voted upon at the election in November. One of these amendments gives the Governor of the State an opportunity to veto one or more items in the miscellaneous appropriation bill without effecting legally other items in the bill. The miscellaneous appropriation bill, in the past, has been the refuge for practically all questionable appropriations, and as this bill always carries many items of great and necessary importance. rather than kill the entire bill, the unsavory items have, of necessity, been permitted to pass. The amendment, if adopted, as it should be, will relieve the Legislature of the presence of a number of grafters who in the past have prospered at the expense of the tax-payer.

The other amendment is the one

providing for the nomination and election of the State Printer just as other State officers are nominated and elected, thus removing from the Senate and House a troublesome problem which has taken considerable of the time (fifty days) allotted to the Legislature, and which should be devoted to such legislation as will be of benefit and service to the people of the State. The Amendments are good.

TO SELL OR TO HOLD WHEAT?

EDITOR KANSAS FARMER:-Will you kindly give your opinion on future price of wheat? Is it near the top now, or do you think it will go still higher? I have about two car-loads of good milling wheat and would like to know whether it would be advisable to sell new or to hold. ABE HERTJE.

Kay County, Oklahoma. The role of the prophet is a dangerous one to his reputation for wisdom, especially dangerous if he essays to prophesy at short range. We give in this number of the Kansas Farmer a summary of statistics of agricultural products compiled from the reports of the United States Department of Agriculture. This summary makes it clear that the present statistical position of wheat is exceedingly strong. Countries which are unable to produce as much breadstuff as their people consume have depended upon the United States for very large supplies. Should the other exporting countries, this year, have no more than their usual surplus the world's supply of wheat will be considerably short of the usual demand. There is no indication of abatement of demand. On the contrary, the bread-eaters of the world have increased marvelously during the last few decades, both on account of natural excess of births over deaths and by reason of the recognition by rice-eaters of the superiority of wheat over rice as a staff of life. Again, there is now in progress a great war, with its wastefulness and destruction of resources and supplies. Appreciation of current facts caused a great advance in the price of wheat. This advance was followed by a decline as is usual under such conditions. Fluctuations of varying magnitudes may be expected and are promoted by the traders.

As showing what influences affect the speculative grain markets we quote the following from the Chicago report of September 23:

"In a whirl of excitement wheat for December delivery to-day advanced to a point 31/2 cents above yesterday's closing quotation. Intimations of a big export demand were the main factors in causing the advance. The market closed almost at the highest point. Corn is up 1/4 to 3/8 cents. Oats are off ½ to % cents. Provisions are unchanged.

"The excitement in the wheat market came toward the close of the day. Notwithstanding heavy receipts in the Northwest the market opened firm, December being up 1/8 cent to 1/4 cent at \$1.05% to \$1.10%. Initial quotations on May were 1/8 cent lower to 1/4 cent higher at \$1.121/2 to \$1.121/2. The improved tone at the start was due to higher cables, wet weather in Mani-

toba and Minnesota and decreased shipments from Argentine. Several prominent operators were active buyers of the December option, the demand being so pronounced as to induce general covering by shorts. From \$1.10%, at which price December sold soon after the opening, an advance to \$1.11% was made, May in the meantime selling up to \$1.12%. The market then broke under fair realizing sales, the impression being that some of the big holders were quietly disposing of their lines while ostensibly supporting the bull movement. Around \$1.11 for December the market again received fair support, resulting in a comparative steady tone. The bears were given encouragement about this time by a report of a St. Louis trade journal stating that weather conditions in the Southwest continued favorable for the germination of newly sown crops. Increased primary receipts were another bear factor. The market, however, was drifting rather aimlessly when suddenly trading became wildly active. News from abroad was considered extremely bullish. Shorts, alarmed at the prospects, were instantly anxious buyers. With light offerings prices rose rapidly. One of the main features in the foreign situation was a rumor that the French Government was contemplating the removal of the import duty on wheat. Another factor was the announcement made by a well-known foreign crop statistician to the effect that the requirements of importing countries this year would be the heaviest on record. These advices, combined with reports from St. Louis of a good demand for flour, were the principal influences that contributed to the late bullishness. Just before the close the December option sold at \$1.14. May advanced to \$1.141/2. Final quotations on December were \$1.13% to \$1.13%. May closed at \$1.14% to \$1.141/2. Clearances of wheat and flour were equal to 123,900 bushels. Primary receipts were 1,244,000 bushels, compared with 951,400 bushels a year ago. Exports of wheat and flour for the week as shown by Bradstreet were 856,500 bushels. Minneapolis, Duluth, and Chicago reported receipts of 997 cars against 514 cars last week and 635 cars a year ago." The question of the permanent

trend of prices between the present can not be answered by referring to the quotations of other years because the present season presents a condition vastly different from its predecessors; that is, the cessation of American exports. Of this cessation Beerbohm, the English crop statistician, says:

"In all probability the effects will be greater in the latter part of the season, because operators very naturally wish to become better acquainted with the probably result of the next Argentina crop before committing themselves to large forward contracts. One feature stands out, however, pretty clearly, and that is that the requirements of the importing countries this season will be the largest on record. Last season, as we showed a week ago, over 63 milion quarters were imported, and this season the requirements are

(Continued on page 968.)

Hgriculture

COMING EVENTS.

Will secretaries and those having the management of coming events, oblige the Kansas Farmer by sending dates?

October 17-22, 1904—American Royal Live-Stock Show and Sales, Kansas City, Mo. November 26-December 3, 1904—Interna-tional Live-Stock Exposition, Chicago, Ill.

Farmers' Institutes.

October 7 and 8. Farmers' Institute, Girard, Kans., T. T. Perry, secretary. Professors A. M. TenEyck and J. T. Willard will be present. In connection with this will be a display of agricultural products and a colt show with premiums for exhibition.

October 29, First District Federation of Women's Clubs, Leavenworth, Kans. Mrs. W. H. Smith, Seneca, Kans. Prof. Henrietta W. Calvin.

Mrs. W. H. Shittin.

Henrietta W. Calvin.

November 15, Farmers' Institute, Tampa, Marion County. D. D. Socolofsky.

Profs. J. D. Walters and A. M. TenEyck.

November 18 and 19, Farmers' Institute,
Altamont, Labette County, C. E. Hildreth, secretary.

Varieties of Seed Wheat.

Please send me prices and reports of the different kinds of fall wheat raised at the Kansas Experiment Station this year. Especially I would like to have you explain whether this new Turkish fall wheat called "Red Winter" would be adapted to this vicinity.

F. J. WELECK. Marion County. The best yielding varieties of winter wheats which we grew in the trial last season were follows:

regard to the grain-tester which the millers and grain merchants use. I would like to know just how many ounces of grain they are supposed to hold to represent sixty pounds of wheat. My opinion is that when they are used for a long time and as the handle or way-bar is rubbed across the bucket about a thousand times every day, the bucket will gradually wear down from the top and will not hold quite as much wheat as when One ounce short on the test bucket would mean one cent per bushel on the whole load. And sometimes the bottom of the tester is gummed up, thereby making the bucket short on weight. I notice some of our grainmen get new testers but use the old bucket and the new bar, thereby getting all of the gain in the wear of the bucket and a new way-bar at full

What I would like to know is just how many ounces of wheat the tester should hold to represent one bushel of sixty pounds of wheat. I think every farmer should have a tester of his own. I would be pleased to have your views on the subject.

We have good average crops in Stafford County this year. Wheat is good, corn is fine, and hay is immense. The farmers have got their plowing well done, and ground is in fine shape for J. G. McComb.

Stafford County.

This inquiry was referred to a former member of the Kansas FARMER

380 Turkey 366 Bearded Fife 381 Imported Turkey 382 Kharkov 368 Ratikin 377 Zimmerman 378 Red Winter 369 Minnesota No. 529 384 Theiss	Seed received from. Arce, but
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We have no seed of these varieties for sale except a small quantity of the Red Winter wheat. You will observe that the Red Winter variety did not yield as well as some of the other varieties tested in last season's trial. All of the varieties named are of the hard red Turkey bearded type of wheat except No. 377, the Zimmerman variety, which is a beardless, smooth chaff wheat of the soft red type. Doubtless the hard red Turkey type of wheat is best adapted for growing in your part of the State. You can secure seed wheat of the Turkey, Kharkov and Ulta varieties from Superintendent J. G. Haney, of the Fort Hays Branch Experiment Station. His price is \$1.50 per bushel for the Turkey and Ulta and \$1.75 for the Kharkov. He also offers for sale at \$1.50 per bushel the Beloglina and Crimean varieties. These are both bearded wheats of the Turkey type and proved to be among the best yielders at the Hays Branch Experiment Station. At this station the Beloglina did not yield very well last season and the Crimean was not tried here. You can also secure some of these varieties of wheat, including the Crimean, from the McPherson Station, by writing L. A. Fitz, superintendent. I think the prices are the same as quoted above. The Red Winter and others of the Turkey variety, will be adapted for growing in your locality on almost any wheat land.

A. M. TENEYCK.

Grain-Testers.

EDITOR KANSAS FARMER:-I would like to ask for a little information in



force who is thoroughlyy familiar with grain-testers and is both competent and honest. He says:

"A grain-tester must be taken care of and handled just like any other scales; that is, the bearings must be kept clean and sharp and in good order so there will be no binding in any part. If there is undue wear on either the beam or the bucket, the tester will be out of balance, and this must be looked after closely. In the end of the beam, under the small piece of brass screwed onto it to keep the slide from falling off, is a small hole or slot in which can be placed one or more small shot if necessary, but if the bucket is too light and there is no extra weight in the beam, the slide will probably have to be filed a little. Any indentation which would reduce the amount of grain in the bucket would make the tester unreliable without throwing it out of balance. A tester should at all times be handled with care and should be kept perfectly clean. If this is done it will last a great many years. If the wheat test 60 pounds, there should be 3 pounds and 12 ounces in the tester."

Alfalfa Dying.

EDITOR KANSAS FARMER:-I have just read the article in the Kansas FARMER from M. T. Williams, of Barber County, about the little green bug that stopped the growth of the alfalfa and caused it to turn yellow. I had spots the same as he described, but on close examination found worms resembling common cutworms except they were green. I disked the spot about two inches deep and a good healthy looking growth sprung up and the alfalfa is now growing nicely.

W. S. RANDLE. Reno County.

Fertilizer for Top-Dressing.

Please advise me as to what kind of fertilizer should be used for topdressing for alfalfa. I want to get a good growth this fall before the ground freezes. I want to use something that can be sown broadcast.

S. D. PRICE. Morris County.

There is perhaps no fertilizer that can be applied to alfalfa at this late date which will show much effect on

the crop the present season. Wherever it has been used, a top-dressing of barnyard manure has proven to be an excellent fertilizer for alfalfa. Applied at this time of the year the beneficial effects would hardly appear until next season, although if the alfalfais not thrifty, the manure will tend to protect the roots to some extent and give some benefit as a mulch and winter-cover. Although we have not tried it at this station and have no report of the use of lime as a fertilizer on alfalfa, yet I think that lime may be profitably applied to some of the alfalfa lands in Kansas. I would not recommend to use it on a large scale but rather to experiment with it in a small way at first. The lime should be thoroughly slaked to a fine dry powder and spread evenly over the alfalfafield, preferably early in the spring. It is possible also that some alfalfafields may be benefited by the application of phosphorates or potash fertilizers, but I would not recommend the use of these fertilizers in a large way. Usually the soils in Kansas are well supplied with mineral plant-food. Alfalfa takes its nitrogen from the air and tends to supply humus and increase the amount of nitrogen in the soil. You should not attempt to grow alfalfa continuously on the same ground because it may be possible for the crop to exhaust the available mineral elements of the soil. Rotating alfalfa with other crops, however, maintains the supply of mineral plant food and the soil is increased in soil fertility so far as the humus and nitrogen are concerned and larger crops of grain and corn can be secured by growing these crops in rotation with alfalfa than by keeping the land continuously in one crop.

A. M. TENEYCK.

Grasses for Stony Land.

I have just finished reading a bulletin on smooth brome-grass, issued in 1899 by the Department of Agriculture, and I notice in this bulletin reference to the fact that out of seven or eight hundred varieties tried at the Kansas Station, this smooth bromegrass proved to be the best.

I have a farm in Linn County, Kansas, which has a considerable body of land that is too stony to cultivate successfully. I presume a harrow run over it would loosen up the ground to a considerable extent, so as to enable any kind of grass-seed to be pretty well covered. It has been a problem with me what to sow on this land for pasture.

There has been a considerable growth of underbrush and buckbrush, especially the latter. I wonder whether it would be possible to do anything with smooth brome-grass on this tract of ground, if I were to go to the pains of getting and keeping the buckbrush and weeds cleaned off. If not, is there any other kind of grass which you could suggest as probably suitable for developing this kind of land into pasture? What I want to solve if possible, is the problem of reducing the level gravelly and stony ground to some kind of pasture, also the hillside timber land and the bottom timber. I presume each is a problem by itself. I have been cutting out the timber on the bottom land and find that any grass grows well there as the soil is rich and deep. Have been successful with ordinary blue-grass, and expect to try English blue-grass in the same soil. But this side-hill, stony-ground problem and the upland level, gravelly and stony ground, have so far been a puzzle to me.

Can you tell me what I ought to pay for smooth brome-grass seed in this section? Will you also advise me as to whether it is probable that the avage seed-dealer will furnish what I ask for if I order brome grass? C. H. KIRSHNER.

Jackson County, Missouri.

The statement to which you refer in Circular No. 18, issued by the U.S. Department of Agriculture, December 1, 1899, is without doubt very much overdrawn. Probably seven or eight hundred varieties of grasses have never been tried at this station. None of the publications of this station make

It is torture to use cheap shaving soap. Insist on Williams' Shaving Soap.

Sold everywhere. Write for booklet "How to Shave." The J B. Williams Co., Glastonbury, Ct.

THE EUREKA INDESTRUCTIBLE FENCE POSTS.

venience and durability. Costs very little more than oak for locust, and will last for all time. Reliable county agents wanted. Address with stamp.

ZEIGLER BROS., Hutchinson, Kan

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PAGE FENCE CHARACTERISTICS Read them on pages 18 and 19 of our free catalog. Page Woven Wire Fence Co., Box 47, Adrian, Mich.



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the statement referred to. However, the Bromus inermis has proven to be one of the best grasses which we have grown. The grass is especially hardy, a good drouth-resister, makes a firm tough sod, is fairly productive, early to start in the spring, grows late in the fall, and is probably altogether the best grass for general growing, both for pasture and hay, throughout Central and Western Kansas, and it is well adapted for growing on welldrained lands and uplands in Eastern

The land which you describe will not be easy to seed down to grass. If you can succeed is loosening the soil of the stony land with the harrow sufficiently, so that the grass may be covered, it will be possible to get the grass started, provided the weather conditions remain favorable for a considerable time after seeding. Probably the best time to seed will be early in the spring. I know of no domestic grass which will be more likely to make a catch and thrive under the conditions named than the Bromus inermis. Probably the best grasses you could grow on such land would be the native prairie grasses which commonly grow on the hillsides and uplands of Linn County, and if it were possible to get the seed of these grasses I would recommend to seed them even in preference to the Bromus inermis on such land.

On the side-hill timber land to which you refer, if the timber is removed or sufficiently thinned out, it would be possible to seed such land with Bromus inermis, provided the seed-bed could be prepared by plowing or disking and harrowing. One of the best grasses to grow in the shade is the orchard-grass (Dactylis glomerata), also the English blue-grass may succeed fairly well on the hill-side land. It would be advisable to mix with the Bromus inermis a little orchard-grass and English blue-grass, and I would also recommend to seed about a pound of white clover per acre if your purpose is to keep the land permanently in pasture. When the Bromus inermis is seeded alone, on a good seedbed, it is usual to sow about 18 pounds of seed per acre. It is likely also that the Kentucky blue-grass will succeed on the land described when it has once become established, and in case a combination of grasses is seeded, two or three pounds of Kentucky bluegrass per acre might be sown with the

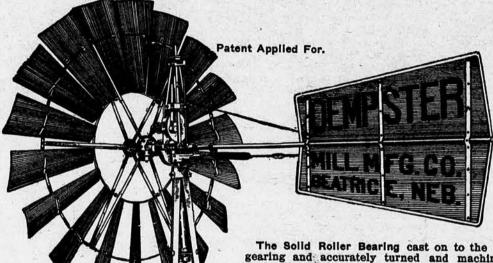
On the bottom timber land, as you have learned, the Kentucky blue-grass and English blue-grass will doubtless succeed well when a start has been established. Also if the land is not too wet, the Bromus inermis will succeed well on the bottom land. For a permaneut pasture I would recommend to seed a little white clover with the grasses. If the purpose is to use the land as a meadow and break it up after a few years, red or Alsike clover should be used in place of white clover, the Alsike clover being especially adapted for the low, wet lands.

If the level, gravelly and stony upland is clear of timber and grows no native grasses it is not probable that you can get domestic grasses to start and grow on such land. It has been my observation in Kansas and other States that where native grasses do not grow and thrive there is little use of attempting to establish domestic grasses.

Bromus inermis is quoted by the local seedsmen of Manhattan at \$11 per hundred pounds. You should be able to purchase a good quality of seed from the "average seed-dealer" at about this price. There has been a great deal of poor Bromus inermis seed sold to the farmers of Kansas. Probably this has not always been the fault of the seedsmen, as formerly they were not able to secure a good quality of seed of this grass. However, a great deal of seed is now being produced in the United States and the Northwestern-grown seed is usually of good quality, and reliable Kansas seedsmen will furnish you with seed of first quality if you buy first grade seed. Usually the seedsmen sell several different grades of seed and farmers often voluntarily purchase the cheapDempster Improved Steel Windmill

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In addition to making the best Steel Windmill on earth, we also make

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Reservoir Oil Boxes, with wick feed; the best and most reliable kind known.

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The Upper Part of Pitman bar is square and works through a long babbitted sleeve which is substantially connected to main frame and strongly The New Roller Bearing Gears Which Stop the Noise and add connected to main frame and strongly

braced to main frame and strongly life New Ruller Dearling braced to prevent weaving.

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Pitman with Hard Maple Box for wrist pin, boiled in oil.

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Wrist Pin can not get loose. Operation of mill tends to keep it tight.

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er seed which means, as a rule, that they get a poor grade of seed.

A. M. TENEYCK.

Harvesting and Storing Cow-Pea Seed. PRESS BULLETIN OKLAHOMA AGRICULTU-RAL EXPERIMENT STATION.

The successful outcome of the cowpea crop in Oklahoma this season will probably encourage a more liberal planting of this valuable crop in Oklahoma in the future. From all appearances there is a larger acreage this season than usual and the growth of the plants has been fine. Considerable of the acreage is catch crop, following wheat, or oats, and many such fields were seeded as late as the middle of July and on September 15 covered completely with a two- to threefoot growth of vines, in many cases bearing a good crop of seed.

It gives somewhat of an idea of the high value placed upon this crop by many Oklahoma farmers when we consider the fact that the seed used to plant the greater part of the acreage in cow-peas in this territory this season was purchased at \$2 to \$2.50 per bushel. There is no question but what the ruling high price of seed kept many more from growing the crop. This should not be the case when it is possible for the seed to be produced by the farmer at half the above price. It is true, some little ingenuity and trouble are required to harvest and store cow-pea seed but in the majority of cases it will be found much more advisable for the farmer to save what cow-pea seed he will require for his own use rather than to depend upon buying it.

One of two methods is generally used in harvesting cow-pea seed. The pods are either picked off by hand as they ripen, or the vines are gathered when the greater part of the pods are ripe and then the peas are flailed or thrashed out.

The fact that the pods do not all ripen at the same time and shatter after being ripe a few days makes it necessary to gather them as they ripen if some seed is not to be lost in the field. In order to gather in a crop of cow-pea seed without waste, from two to three pickings must be made. The first one or two gatherings must be made by hand but the last pods to ripen may be harvested with the vine and flailed out. One great drawback to the hand-picking method is the hand-labor required and consequently the cost. A fairly active boy can, in a patch where the crop of pods is fair, pick from 50 to 75 pounds of pods in ten hours. The pods will yield about 70 pounds of seed to the hundred. As a rule it will not cost far from seventy-five cents to one dollar a bushel to get cow-peas picked by hand. In some localities it is a common practice to give half of the seed for the labor of picking. It is but a small matter to separate the grain from the pods after they have been picked. This can be rapidly done with a flail but if a bean huller is available. that will be found much better for the purpose.

The method of allowing the pods to remain on the vines until all or a greater part of them are ripe and then cutting the vines and curing them and then flailing or thrashing out the peas, will be found the most practicable method of gathering the seed in many cases, although with this method more or less of the seed will be lost on the ground by some of the riper pods popping open before the cutting and during the harvest. But the expense saved by doing away with the hand labor in picking will more than balance this loss and if it can be arranged so that hogs can be turned on the patch after the crop is removed the greater part of the peas that have shattered out will be picked up. In harvesting cow-pea vines to save the seed they may be cut with a scythe, mower, an improvised horizontal knife fastened to the shank of a cultivator, or a regular bean-harvester. In order to use the last two methods the plants must be in rows and at least two feet

Very little need be said on the methods of cutting with a scythe. It is a very laborious way and horse-power can in most cases be used to better advantage and with less expense. Cutting with the scythe will not shatter as much of the grain as the other methods but when the growth is very rank and the vines matted together, it is the only method that can be used. The mower can be used in the majority of cases instead of the scythe but a considerable amount of the grain is shattered, particularly if the vines have settled down to the ground. In order that the larger part of the grain is not tramped out each succeeding swath should be put to one side with forks before cutting the next swath.

A very good way to harvest cow-pea vines, especially those bearing seed, is to cut off the plants just below the surface of the ground as the ordinary bean is harvested in the North. This is very readily done with such a machine as the Miller Bean-Harvester. The machine is mounted on two wheels and consists of dividers to part the vines in front of the knives. There are two of the knives, that when in

operation run just below the surface of the ground, and they slant back so that as the vines are cut they are pulled into a long windrow by the iron fingers situated above the knives. This machine works very nicely unless the ground is very foul with weeds and grass or the vines are very badly tangled and then a little trouble will be experienced, but with perseverance the work can be accomplished with the machine. Where much cow-pea seed is to be raised and in the most economical way, the machine will be found indispensable. Such a machine may not be available to the farmer growing a small patch. He can use practically the same method by making a knife about eighteen inches long with a shank on one end of it about ten inches long for attaching it to the shank of a cultivator. The knife should be made out of good spring steel and when it is placed it should slope backward at an angle of a little less than forty-five degrees and slightly down at the free end. The blade should be at least two inches wide and a fourth of an inch thick and reinforced at the heel, as good sized plants will give it quite a strain. After a little experience in adjusting, the operator will find it a very useful implement for the purpose and quite inexpensive. The advantage in cutting the plants below the ground is that not nearly as much seed is shattered in cutting. In this, as well as with the other methods the vines bearing seed should not be run over by horses or implements. If they are in the way put them to one side with forks. After cow-pea vines bearing seed have been cut, it is desirable to get them stored or thrashed as soon as possible, as the sun causes the pods to shed the seed. Usually the vines are so green and contain enough green leaves that they can not be put in a stack or mow without some curing in the field. The vines should be put in cocks at once after cutting and after a day or so curing in the field be put in small loose stacks or in mows where the beans that shatter out may be saved. Many times half of the seed is allowed to shatter out after the vines have been shocked by leaving them in the field too long. The greater part of the drying and curing should be done in the stock or the

The vines that have ripened seed are not near as sappy and hard to cure as when they are cut early for hay. If the grain is to be flailed out it can be done with more ease if the vines are pretty well dried out. If the grain is wanted for seed it is not practicable to thrash the crop with a common thrasher as the grains crack so readily. Some report that by putting in blank concaves and removing some of the teeth from the cylinder and reducing the speed, the work is satisfactory, but our experience, after taking all these precautions, is that too many peas are cracked to make the operation practicable when the peas are selling at the present high prices. Flailing out the seed will be found the best for the average farmer. When the pods are well dried, the operation is not expensive or laborious.

Much good seed that has been well harvested is greatly damaged by not protecting it from the weevil. This insect causes much loss in stored cow-It is the same insect which nea seed. infests the garden bean. While the pods are in the field the insect lays her eggs on them. In this country these hatch out in the fall shortly after harvest as well as in the spring and summer. So the seed should be closely watched for the first appearance of the little beetles and the seed treated at once in some way to destroy them. This can be most effectually and economically done by putting the seed in air-tight vessels or bins and applying carbon bisulfide to the seed. This is done by putting the liquid in a dish and setting on top the seed and covering the vessels or bins tightly. The carbon bisulfide evaporates very readily. It is a heavy gas and penetrates the mass of seed and destroys the insects. This operation will have to be repeated several times during a

season if the seed is to be kept free from the weevil. In small quantities the carbon bisulfide costs fifteen to twenty-five cents per pound. As a rule, one pound of the liquid will treat thirty bushels of the seed. The liquid and the gas are very inflammable and poisonous and all fire should be kept away from it. If the weevils are kept out and the seed is stored in a dry place it will retain its vitality two or three years.

The average yield of cow-pea seed per acre at the Oklahoma Experiment Station varies from eight to fourteen bushels.

A City Farmer Tells His Experience.

The "city farmer" usually thinks he can give the real farmer abundance of pointers on successful farming. The following from a Massachusetts paper, gives what is probably a liberally colored account of what purports to be a big or real experience by a city

"My hay is nearly all in the barn. It takes the city farmer to make the boys keep on the jump in haying. Country farmers are too slow. If there is a cloud in the sky or the wind don't blow from the right direction, they stay under cover and let their crop spoil. From the moment the first swath is cut until the last scatterings are tucked away in the mow, I never rest until the last spear is in out of the wet. I allow no grass to grow under the boys' feet."

Standing in his commodious barn, yesterday, which was sweet with newmown hay, W. F. Pond, veteran farmer, said this to the Telegram reporter. He pointed with pride to the great mows of fodder which surrounded him on three sides, and with satisfaction stamped on his face talked entertainingly of haying, past and present.

Four tons an acre seems like a lot," he went on, "but my boys tell me that several acres of my best meadow yielded that. There is now in this barn somewhere between 180 and 200 tons of hay. I place it at 150, but my boys only laugh at me and say that when I get it bailed there will be quite

'Go and look for yourself. Don't take my word for it. Joe, bring that ladder here. There, climb up and see for yourself."

The reporter was born on a farm and spent many weeks of his unhappy boyhood stowing away the grass in the old mow on the banks of the Wabash, but the vista of cured stalks spread out before him quite astounded him.

The 80-foot mows on either side of the driveways were packed to the roof with the sweet-smelling timothy. Ascending to the top of the great pile, one could get an adequate idea of what 200 tons of fodder meant. The hay was not loosely stowed away, but was stowed compactly by six stalwart men. Rain had not discolored it, and its freshness perfumed the air. When the exploring party reached the floor, it was impressed with the richness of a great Massachusetts hay mow.

People don't have to go to the Klondike to understand that sometimes other things besides gold glisten. Hay is now selling at about \$23 a ton. At this figure, Mr. Pond's crop would be approximately worth \$4,600. This is a large return for 40 acres of land. Labor is cheap and the cost of harvesting the crop, Mr. Pond says, will not exceed a few hundred dollars.

As an expeditious hay farmer, Mr. Pond throws down the gauntlet to all agriculturists. He has been digging away on the old farm for 55 years now. He is bright and chipper at 77, and directs his men about their various duties with precision.

Mr. Pond manages to keep the men busy, but the men manage to keep Mr. Pond still busier finding something for them to do. The Pond system works like a charm, and Mr. Pond has harvested his crop in a remarkably short space of time.

Mr. Pond planned to have the crop in the barn in two weeks. Yesterday the fortnight was up, and the fields were bare. Mr. Pond is a strong believer in the efficacy of lemonade as a drink. He says:

"In the old days, we used to think that we couldn't do anything at harvest time unless we had plenty of grog in the cellar. The boys would always drink too much, and they could not always do a good day's work. I find that lemonade is very bracing and leaves none of the bad after effects of liquor. Lemonade has been my favorite drink this summer, and I tell you that I have pretty nearly lived on it. The boys like it, too, so it keeps the women busy making the stuff. Without plenty of good, cool lemonade, it might not have been possible to have harvested my crop on time."

Having mowed every spear of timothy of his own 40 acres, Mr. Pond looked around for more farms to mow. He has purchased the Crompton meadow, which joins his land on the east.

The man behind the mower was busy leveling the pasture yesterday afternoon. Mr. Pond will mow this hay on top of that already in his barn. Early this fall he will install a haypress on the place, and bail the cured hay and sell it. The men say that Mr. Pond will be surprised at the number of tons he has when the last bundle is

Mr. Pond has several characters working for him on the place. He is kind to his men, and they look forward with pleasure to having time, when they are always given jobs. Mr. Pond is a mere boy as compared with one of his men. Old Joe, who presides over the hay racks, owns to 92, and he may be several years older. Joe's stories don't always jibe.

He says that he is just past 92, yet he declares that he remembers the war of 1812. He has worked for Mr. Pond off and on for a great many years. He disappears for months at a time, and no one but Joe knows where he is. When haying time rolls around Joe reports for duty, and he remains until the last load is in the mow.

Joe's experience in the hay-field extends over a period of 80 years. He sniffs at modern methods, and declares that the scythe produced just as good results as the mowing-machine and hay-tedder.

Joe says: "So, young feller, you want to know what my tother name is. Just say Joe. That's good enough for me, and it might avoid complications. It makes me chuckle when I see these kid-gloved city chaps come up here to the Colonel and ask for a job in the hay-field. Why, they don't know the first rudiments about pitching hay.

"Why, them greenhorns grasp the handle close up to the tines, and struggle away as if they were trying to lift an elephant. It's easy enough to hay it when you know how, but I notice that most of you biled-shirt gents are lyin' under a shade tree with the stomach ache after the first day, while we fellers that were in the business before the war are mowing away the fodder as though nothing had happened.

"Fathers don't bring up their boys right now. Letting them lie in bed until 7 or 8 o'clock isn't healthy for them. Four o'clock is better. Sunup to sunset is the old rule, and folks would be better off if they lived up to it. Work will keep the boys out of mischief.

"We didn't have any such thing as a reformatory or an insane asylum in the '30's and the '40's. There weren't many prisoners in the jails or penitentiaries, either.

"To what do you attribute your longevity, Joe?"

"To bed with the chickens and up with the chickadees; plenty of good hard work. Any man that follows this ought to live to be a hundred."

At 92 Joe is without a blemish, and is as spry as the ordinary man of 50. It's "Come on boys," with him from morning to night, and he has been one of Mr. Pond's best hustlers this hay-

The boys say that they are the first to finish having in the vicinity of Worcester. They say that a few scattering farmers who did not have much to cut harvested the crop before they got through, but no one who has more than 100 tons of hay in the barn finished the season before them. Mr. Pond's hay is very heavy and of splendid quality, and he expects to get the top of the market for it.



Miss Whittaker, a prominent club woman of Savannah, Ga., tells how she was entirely cured of ovarian troubles by the use of Lydia E. Pinkham's Vegetable Compound.

DEAR MRS. PINKHAM:—I heartily recommend Lydia E. Pinkham's Vegetable Compound as a Uterine Tonic and Regulator. I suffered for the compound the regularities and the compound four years with irregularities and Uterine troubles. No one but those who have experienced this dreadful agony can form any idea of the physical and mental misery those endure who are thus afflicted. Your Vegetable Compound cured me within three months. I was fully restored to health and strength, and now my periods are regular and painless. What a blessing it is to be able to obtain such a remedy when so many doctors fail to help you. Lydia E. Pinkham's Vegetable Compound is better than any doctor or medicine I ever had. Very truly yours, Miss EASY WHITTAKER, 604 39th St., W. Savannah, Ga." — \$5000 forfelt if original of above letter proving genuineness cannot be produced.

The testimonials which we are constantly publishing from

grateful women prove beyond a doubt the power of Lydia E. Pinkham's Vegetable Compound to conquer female diseases.



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"I have tried all kinds of waterproof clothing and have never found anything at any price to compare with your Fish Brand for protection from all kinds of weather."

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The Stock Interest

THUROUGHBRED STOCK SALES.

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

October 1, 1904—Poland-Chinas, J. Clarence Norton, Moran, Kans.
October 6, 1904—Poland-Chinas, William Plummer, Barciay, Kans.
October 18, 1904—Percherons, Clydes, Standardbred, Shetlands and mules, C. D. MoPherson, Fairdield, 10wa.
October 13, 1904—C. O. Hoag, Mound City, Kans., Poland, Chinas.

October 17, 1904—Poland-Chinas, E. E. Axline, October 17, 1904—American Royal Show and Sale by American Aberdeen-Angus Breeders Association, Kansas City, Mo., W. C. McGavock, Manager. October 19, 1904—R. F. Norton, Clay Center Kans., Duroo-Jerseys.

October 20, 1904—Poland-Chinas, L. P. Fuller, Morawville, Kans. ovville, Kans. October 20, 1904—American Galloway Breeders' ssociation, Kansas City, Mo. October 22, 1904—Poland-Obinas, Republic County greeders' Combination sale at Belleville, H. B. Wal-

Breeders' Combination ter, Manager. October 25, 1904—Duroo-Jerseys, J. B. Davis, Fair-October 25, 1904—Duroc-Jerseys, J. B. Davis, Fairview, Kans.
October 25, 1904—J. W. Myers, Galva, Kans., Poland-Chinas and Shorthorns.
October 26, 1904—Sabetha Combination Sale, Jas.
P. Lahr, Manager, Sabetha, Kans.
October 28, 1904—Leon Calboun, Potter, Kans.,
Poland-Chinas.

P. Lanr, Manages, October 28, 1804—Leon Calhoun, Potter, Kans., Poland-Chinas. October 28, 1904—Combination sale Poland-Chinas at Clay Center, J. B. Johnson, Manager.
November 1, 1904—Jonn W. Jones & Co., Delphos, Kans., Duroc-Jersey swine.
November 3, 1804—H. E. Lunt, Burden, Kans., Poland-Chinas.
November 4, 1904—Shorthorns and Duroc-Jerseys, Burden, J. F. Stouder, Manager.
November 5, 1904—Breeders' Combination sale, Poland-Chinas, Dubols, Neb., Christ Huber, Mgr.
November 11, 1904—Combination sale of Poland-Chinas, Girard, Kans.
November 17, 1904—Central Missouri Shorthorn Breeders Association Sale al Moberly, Mo. E. H. Hut, Secy., Clifton Hill, Mo.
November 22, 1904—Herefords, at Hope, Kans., Dickinson and Martion 'County breeders' will H. Rhodes, Tampa, Kans., Manager.
November 23, 1904—Dickinson County Shorthorn Breeders' annual sale, Hope, Kans.; C. W. Taylor, Manager.
November 29, 1904—Holdeman's Holsteins at To-

lanager. November 29, 1904—Holdeman's Holsteins at To-

November 29, 1904—Holdeman's Holsteins at Topeks.

November 29, 1904—American Galloway Breeders'
Association, Chicago.

December 1, 1904—International Show and Sale by American Aberdeen-Angus Breeders Association, Chicago, Ill., W. C., McGayook, Manager.

December 6 and 7, 1904—Chas. W. Armour, Kansas City, and Jas. A. Funkhauser, Plattsburg, Mo., Herefords at Kansas City.

January 20, 1855—Poland-Chinas at Girard, H. N. Holdeman.

January 24, 1905—S. H. Lenhert, Höpe, Kansas, Poland-China bred sow sale.

January 24, 1905—G. A. Munson, Maxwell, Iowa, Duroc-Jerseys.

January 31, 1905—J. B. Davis, Falrview, Kansas, Duroc-Jerseys.

January 31, 1905—J. B. Davis, Falrview, Kansas, Duroc-Jerseys.

Jeonad-Chinas, Wichita, Kaus.; J. C. Robison, Towanda, Kans., Manager.

February 1, 176.—C. R. Pratt. Eventfiret, Kansas, February 1, 1766.—C. R. Pratt. Eventfiret, Kansas, Febr

Percheron Honors at the World's Fair.

EDITOR KANSAS FARMER: - We notice in your issue of recent date you say that the Kansas exhibitors at the World's Fair won more money in the Percheron classes than all the other States combined. This, as you are well aware, is not so. We have been asked several times relative to this statement in your paper, and have had several clippings sent to us. If you will note the records carefully you will see that our concern won twice as much money at St. Louis as all the other exhibitors, with the exception, even, of "Casino."

We won the following money prizes:

Stallions 4 years old and over, second, third, fourth, fifth, aggregate of. \$195\$
Stallions 3 years old and under 4, aggregate of. 295
Stallions 2 years old and under 3, aggregate of. 295
Stallions 1 year old and under 2, aggregate 3 years old and under 3 years old and years old and under 3 years old and years old years ol Stallions 1 year old and under 2, ag-Grand championship stallion, any age,
"Fronton" 250 Fronton 250
Four animals of either sex, any age,
get of one sire, total of 230
Two animals of either sex, any age,
produce of one mare. 175

In addition to the above prizes for Percheron horses, we won \$500 in medals given by the Percheron Horse Association of France, and \$1,120 given by the Percheron Registry Company; also we won about \$2,600 special prizes given by the State of Mis-Souri on Percheron horses. The prizes offered by the American Percheron Horse-Breeders' Association withdrawn, and only medals and ribbons given, so that anybody who entered these classes could not count the money. In the list we have enumerated above we do not take into consideration even the \$100 first prize for

best stallion 4 years old and over, which was won by "Casino."

We are interested, in quite a measure, in having Kansas at the top of the list at St. Louis, but we do not want our own record handicapped by any statement that is not the truth. We would suggest to you, however, that you make the proper notice in your next issue, relative to these Per-cheron prizes. You can take all the cash prizes won by all the Kansas exhibitors in all the Percheron classes, and it will fall below one-half the money won by our concern.

Of course, we only showed one mare in the Percheron classes, but in the stallion classes we won every possible prize competed for.

McLAUGHLIN BROS. Kansas City, Mo., September 20.

Note.—In regard to the foregoing communication the winnings of the McLaughlin Bros. are as stated. But the fact remains that Kansas breeders outclassed the breeders of other States at the World's Fair. The statements in the Kansas Farmer referred only to breeders and not to importers. McLaughlin Bros. are strictly importers and do not make a business of breeding Percherons. They have confounded exhibitors with breeders. In addition, their tremendous patronage in Kansas makes McLaughlin Bros. as much "of Kansas" as of any other State. But, being importers, they were not considered in the statements to which they refer.-EDITOR.

Breeding and Feeding Fine Stock. C. D. M'PHERSON, FAIRFIELD, IOWA.

Twelve years ago I quit teaching school, and began breeding pure-bred horses, cattle, and hogs. For a few years I experimented (at the expense of my purse) with the different breeds. Finally I arrived at this conclusion: To select one favorite breed and stick to it, as there are several good breeds of each. We all have our favorites and should choose the one that we can stay contented with during depressions as well as booms.

My favorite cattle are the shaggy coats, as they are good rustlers, hearty, thrifty, and very prolific breed-

My favorite draft-horse is the Norman. They are quick to mature, easily fleshed and possess good disposition. As regards the favorite trotting horse, that depends upon the speed, conformation, size, style, and action. And to the average breeder the firstmentioned is of the least importance, notwithstanding that speed is the foundation of the trotting- and pacingregister record. Few men are so adapted to the business as to develop the speed of horses and make the most of the business.

My favorite breed of hogs is the Poland-China. They are easily fatted, quick to mature, have been tried and have proved to be stayers. I think there is no other breed that has held the leadership better.

With regard to ponies, I prefer the full-blood Shetland to all others. They are a luxury for children and I think they are the best adapted to them. The foundation for a breeder's herd should be the best that is available for the least money. How can it be secured? After much experimenting with dollars, breeders, and hard study. I arrived at this conclusion: Let the other fellow experiment, I buy his experience, viz: Buy a herd-header that has been tried and proved, both in breeding and showing. There are always men wanting to experiment on something new that looks pretty. Let them do it. I decided to choose my herd-headers from the mothers and fathers that have been thoroughly tried, and then stand by them.

With due courtesy to a good many very successful business men, I must say that when I arrived at that conclusion, after a number of years' experience, and was asking their opinion, they shook their heads and said, "No, buy something young that has its life before it." I used my own judgment and am highly pleased with the result. Although I must confess that when I go into the show ring and we are ex-



hibiting "produce of sire or dam," I am perfectly pleased when rules read, "The sire or dam need not be shown." There are a great many people in this world who do not show due respect to old age, either in stock or human beings, but I have learned to go to old heads for counsel and wisdom, and to old proven sires and dams for foundation breeding stock.

A few years ago I went over into Illinois and bought of O. H. Swigart King Hensol, bred by S. P. Clark, Dover, Ill., sire Crusader King 7663 (4506), dam, Imported Clara of Hensol 4865 (10135), Columbian and State Fair winner and senior champion at International Live Stock Exposition, Chicago, 1900, an 8-year-old bull and a number of old breeding cows that had proved to be breeders of beef and show types, at a price that would embarrass me to make public; but it was one of the best investments I ever made in Galloways. One year before I bought old breeding Galloways of Mr. Swigart, I made a similar investment in road-horses of A. A. Kitzmiller, an old Kentuckian, who has spent the best part of his life and a fortune breeding and experimenting on trotting horses. I bought a car-load of his registered trotting mares; several of them had lost their youthful beauty in appearance, but were good breeders. To use on these mares, I purchased an Electioneer stallion, J. W. E., a grandson of Electioneer 125, sired by Hambletonian 10, the most famous breeder of speed and high-selling horses the world has ever known. Two years ago the record gave him credit of 165 standard performers, all trotters but two. Soon after this purchase, I bought some old registered Norman mares, a part of them imported by Thos. Snigenmaster. All of these investments have proved very satisfactory to me.

CARE AND FEEDING OF PURE-BRED STOCK.

The simplest, and I must say the cheapest, have given me the best satisfaction, viz., let them run out in open pasture as nearly all the year round as possible, have plenty of good bluegrass and pure water. Patent foods and patent grinders are all right for the men who sell them, but all wrong for the breeders as a rule, although there is no rule without an exception. There are times when both are needed, viz., use patent foods when God's

best food can not be had, and use patent grinders when nature's grinders are played out. But so long as breeding animals have teeth, I believe in letting them do their grinding, for they possess an automatic grinder that grinds and oils and mixes the natural digesting juices that the food requires to properly digest.

Patent foods fed extensively and grinding feed necessarily adds to the loss list, and in order to balance, the profit must be added to the selling price of breeding stock sold. I do not believe in selling unreasonably high, for all men are not so constituted that they can make money out of highpriced stock, and when they fail to be profitable the buyer becomes dissatisfied and does not return for the second purchase, nor send his friends. 'Quick sales and small profits" is my motto.

BREEDING STOCK IN THE SHOW-RING.

I believe in exhibiting all breeding stock in the very best breeding condition possible. I am firmly opposed to loading them down with fat. Why? Because it is very injurious to their breeding qualities. If they have any weak or defective points, the fat may cover it up, but it may crop out in the offspring and bring to light the deception which fat is responsible for. And in moving from one fair to another, the over-fat breeding animal is a great deal more liable to accident and death. And when they are put in the sale-ring I know by experience, and dear experience at that, how to sympathize with the innocent purchaser. I have heard breeders argue like this: "I am able to turn out some of my best breeding stock in order to win in the show-ring and advertise my herd!" I believe 90 out of every hundred will unload these ruined breeders on innocent purchasers. I mean this on general principles and hope that it may be accepted as such, for I am not casting stones at any breeder. It is true that the butcher's block is the final test, but the tatstock show and the breeding show should be altogether different. The fat-stock test in cattle should by all means be made with the steers. In horses, with geldings. In hogs, with barrows. For educational experience in fat stock, I exhibited a pen of five barrows at the International at Chicago last December, and was awarded second place, Mr. Goodwin, of Illinois,

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first, and agricultural colleges came next. Mr. Goodwin and I never fed anything but corn, grass and water. The hogs had run in large pasture-fields after fattening cattle. Each pen of barrows was slaughtered after premiums were awarded. Each pen of barrows was weighed, then killed and the carcass weighed. They dressed out just as the judge had awarded premiums, and I was more thoroughly convinced that God was superior to man in providing food and grinders for his dumb brutes. I wish all patent-food and patent-grinder agents and proprietors success, but not at the expense of my purse, and stock, when not needed. In some cases they are very necessary and helpful. I have exhibited to a limited extent for a few years. I have never stall-fed anything for the showring. Heavy growing breeding stock is no advantage, and adds to loss balance, and the buyer must pay for it if the breeder's account balances right side up.

I always let my breeding stock run out in pasture both day and night. I never grain in summer, only a short time before starting to get them used to grain and hay, and used to being handled. Records show our winnings.

This year we did not take any horses or cattle off the grass nor out of the hot sun until the day we started to the State Fair, but it is better to take them off about two days before start-

Our secretary, Mr. R. W. Park, remarked to me at the close of the Chicago Galloway combination sale: "You are a pretty useful man to have at these sales; you bought more Galloways at the Royal cattle sale, Kansas City and Chicago, than any other one man." I only bought one fat Galloway and I lost him. The others all made money for me; they more than covered the loss of the one. I used to buy the fat ones, but now I let the other fellow pay for them. Fat costs too much for breeders.

International Live Stock Exposition.

EDITOR KANSAS FARMER:-Now that the atmosphere at the stock yards has cleared of labor troubles, all hands will turn their attention to promoting and insuring the success of the 1904 International. The railroads have granted the same rates as heretofore for visitors to attend this great annual event. Prices of live stock have been somewhat maintained throughout the trouble and holding their own now, livestock people should see it to their interest to make this year's Exposition a grand event, so as to more firmly establish their permanent industry.

Entries for cattle, hogs, and sheep will close October 15, as usual; for horses, November 1. It is advisable in the interest of having everything classified properly that entries be made as soon as possible before these dates, for with the tremendous entry that is made for this event, it is hard to get the matter in shape for the catalogue on time, unless some advance preparation is made.

That this year's International will be the greatest of the series up to date will be demonstrated. The breeders. feeders, and ranchmen are thoroughly in earnest in their efforts to make the International Exposition an outstanding exponent of their industry.

W. E. SKINNER, General Manager Chicago, Sept. 25, 1904.

Color in Shorthorns .- XXIII.

EDITOR KANSAS FARMER:-I wish to relate a personal experience some years ago with a white Shorthorn bull, for the benefit of your readers who are stockmen that can see nothing good in any but a red bull, and the darker the better. I bought a bunch of Shorthorn bull calves from another breeder, for my trade, soon after weaning time, among which was a pure white, of excellent breeding, and a first-class individual. A finer coat of hair was never seen on a bovine. It was fully four inches long, and parted along his back and laid down his sides. It was very thick and soft to the feel, like a cushion. The most of your readers who are stockmen, will not need to be told that such a coat of hair is the

very best indication of good feeding qualities in its possessor.

None of my customers seemed to want him on account of his color. At length a particular friend of mine came to see the stock and I showed him the white calf and recommended him as the best animal we had for his herd of red cows. He seemed surprised, but said if I was in earnest he would take him. I assured him it was my honest opinion, and he took him home. When his neighbors saw him they all gave him "the horse laugh." He took it very coolly, and the result was a demonstration of the truth of the old proverb, that "He laughs best who laughs last." He simply told them they had been bringing their cows heretofore to breed to his Shorthorn bull, and he had got the white bull expressly to stand them off. This was a new deal entirely, and not conducive to laughter. The final result is all that need be stated further. His owner used the white bull as long as he could without inbreeding, and his progeny acquired such a reputation in the feed-lots that he was used in the neighborhood until old age limited his usefulness, and the red craze in Shorthorns received a very severe shock in that locality. D. P. NOBTON.

Condimental Stock Foods.

Morris County.

There is no use disputing the fact that condimental stock foods are coming more and more into use by the stock feeders of this country. Notwithstanding the opposition to them from certain high quarters, stock foods are meeting with a larger sale every year. This being true, it is well that we should look into the matter and discover if we can why they are increasing in popularity. We dare not assume that the hundreds of thousands of farmers and stockmen who are using stock foods are fools who are being "worked" by a lot of swindlers. We have no reason in the world for not thinking that a large number of these farmers are intelligent, progressive, careful and observing and we must assume that they feed stock foods because they are convinced of the usefulness and of the profitableness of using

In the first place, the name given these preparations is an unfortunate one. We do not know why they are called stock foods, because no manufacturer of them claims them to be foods in the common meaning of the term. All of them have a base which is composed of some regular foodproducer. Some manufacturers use one thing and some another. It does not matter what the base is. It may be corn-meal, oilmeal, bran or any other similar material. The manufacturers frankly admit that the base they use is simply a diluent or carrier for the more valuable portion of their products. In England they call similar products "stock spices" or "condimental powders" and these names describe with accuracy the character of the compounds we call "stock foods" in this country. The name is not important except as it leads the uninformed in the wrong direction.

It seems to me, after looking into the matter with considerable care, that stock foods may serve a useful purpose. I have come to the concluheir most valuable n is in their capacity to make feed palatable. It is conceded by all our best authorities that live stock does better when supplied with palatable feed than when it is obliged to live on feed that does not tickle the palate. Of all the condiments and seasoning materials used in the human dietary not one is absolutely necessary to health. from the chemists' point of view, except salt alone. Why, then, do we use pepper, allspice, nutmeg, cinnamon, cardamon seeds, sage, mustard, Worcestershire sauce, vinegar and all the long array of sauces, flavoring extracts, preserves, jams, jellies, fruit butters, anything, in fact, but plain unleavened bread, meat and vegetables cooked in their natural condition and eaten without flavoring or mixing with anything except salt?

We use all of these things because

they make our food more palatable, and cause us to eat more. In the last analysis this is exactly why we use condiments. We began doing this because they made our food taste better and give us greater delight in sitting at the table. It was done when men had very vague notions concerning things scientific. Later along comes the scientist and begins to inquire why the desire for condiments is almost universal among the nations of the earth. He knows they make food more palatable, but that is not a very good reason for using condiments. It is the reason of the unthinking, the savage, the barbarian and we civilized people are not content to line ourselves up with the benighted and unscientific. We want a good and substantial reason for the faith that is in us before we admit that we spice and flavor our food merely because it tasts better and induces us to eat more.

Some careful experiments were made. We began to make progress along lines heretofore untraveled. We eat bacon and eggs because the one balances the other. Eggs have only a trace of carbohydrates and bacon but a trace of protein. Combine the two and they taste better, are more wholesome and make a "balanced ration." Blindly we have been following our appetites, ever since bacon and eggs were first used. Nature has guided us and has not led us astray. Then came an important discovery. Palatable food excites the organs that secrete saliva and the digestive juices. It stimulates the secretion of the juices absolutely necessary to the most perfect digestion. Feed a man on dry bread alone and soon he must drink water, in order that it may be moistened enough to allow it to be swallowed. Spread the dry bread with honey, jam, jelly, or fruit butter, and his mouth literally waters at sight of it. Before he has had a chance to taste it the salivary glands begin their work and his stomach begins to fill with digestive juices and he will not only eat more of it, but digest it more completely and thereby get more nutrition from it. It is the same with all our food. Without knowing it mankind has been for ages using condimental foods because they gave him better powers of digestion. Instinctively he has been scientifically preparing his food so as to make it more nutritious.

The same reason why men should use condimental foods and flavors of various kinds apply with equal force to feeding live stock. These foods make feed more palatable, stimulate digestion and add to the quantity of nutritive elements that is extracted from the feed.

Thirty men were asked in succession why they fed a certain stock food and their replies were practically identical. As one man they said, in effect: "Because it makes our stock eat better, fattens better, finish in better shape, and makes our feed go far The writer in every case farther." stood by the side of these men when these statements were made, saw the stock to which stock food was being fed, had an opportunity to gauge the intelligence of the men and note their surroundings. In every case the farmers making these statements were intelligent men who read, think and keep posted on agricultural progress.

Can we believe that all these men, some of whom had used the scales to confirm their belief in the value of stock foods, have been deceived and deluded, have been persuaded to waste money on something that is unprofitable and of no use? Considering the men, their surroundings and seeing their stock, I am compelled to believe condimental stock foods have a place in the dietry of live stock where they may be of use and add to the value of feed.-Miller Purvis, inCook County, Ill., in Breeder's Gazette.

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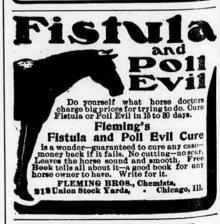
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HANDY HERD REGISTER—The improved handy Herd Book for swine breeders is a record book that every breeder should have. It is perfect, simple, practical and convenient and contains in pages or about one cent a litter for keeping the record, the regular price of this handy herd book is it, but we furnish it in connection with the Kansa Farmer one year for only \$1.50.

Kansas State Fair at Hutchinson.

Last week was a gala time for Hutchinson, Kans. In spite of the rain and chilly winds of the early part of the week which served to diminish the attendance, and in spite of the attractions of a large circus which the city authorities permitted to exhibit on Friday, the State Fair at Hutchinson was a decided success. The grounds here are well equipped for the accommodation of large crowds and large exhibits and they had both during the week. Hutchinson lies in the center of what is known as the wheat belt of Kansas and it is also the center of a group of pure-bred herds of cattle, swine, and horses. It is the capital of a territory inhabited by wealthy and progressive farmers. All of these facts combined to make the fair a success. This has been a fruit year in the Arkansas Valley and vicinity and the display of horticultural exhibits at Hutchinson was a remarkable one, even for Kansas, which boasts the largest appleorchard in the world. Included in this exhibit was shown all the fruits that are known to this section, and the writer has never seen a finer display at any fair. The agricultural exhibit was not behind in any way. The section from which it was drawn has had a good small-grain crop, though not as good as last year, and has had a remarkable yield of grasses and forage plants, including alfalfa. It is now possessed of the best prospect for corn that the writer has seen in the State this season, and the corn exhibit was remarkably fine, although of course much of it was not entirely hardened. Central Kansas is the home of the

chicken and the poultry exhibit at the fair was large and good. The building was well filled and the birds in fine condition considering the time of year.

The agricultural implement display is always good at Hutchinson and this year was no exception. It included about all the forms of machinery used in cultivating and harvesting crops on the great central plains of Kansas as well as gasoline engines, windmills, and other machines necessary to the progressive farmer. This section of the State is also recognized as a dairy district and the representatives of the hand-separator manufacturers were present with very handsome displays. We are always glad to note the interest taken by the farmers in such exhibits. It means progress to such an extent that a neighboring farmer, in whose house the writer was entertained, says that it has paid him to buy a cream-separator although at present he is milking but five common cows.

The strength of this fair lay in the live-stock exhibit which was unusually good. The four great beef breeds of cattle were well represented by good herds, which afforded each exhibitor plenty of competition. The German Coach horses were shown by an exhibitor recently from the World's Fair, where he had been a very successful competitor. The Percherons were exhibited by several well-known breeders, among them being the Averys, of Wakefield, Kans., who were present with their magnificent herd of prizewinning World's Fair animals.

The swine exhibit was smaller than usual for Hutchinson, but the exhibiters who have shown here in former years were present with better stock than before.

Hutchinson is deficient in hotel commodations for the care of a large crowd. The hotels are good but not capacious enough for an overwhelming influx of visitors. This city also lacks seriously in public transportation fa-Her street-car service is abominable and is composed of old horse-cars which have long since passed their usefulness.

Being in the center of the great salt industry of the United States and being a progressive and well-to-do city, Hutchinson should not tolerate such a street-car system.

It seemed to be the policy of both the city authorities and the fair association to cater to the tastes of all comers and the result was that in the city the wide-open policy was adopted, while on the fair grounds a very large

and attractive pike was furnished for the entertainment of those who find amusement in that sort of thing. Many of the places of entertainment in the city were said to be of very questionable reputation, while the joints appeared to do a land-office business.

Contrary to the announced program and because of the adverse weather conditions in the early part of the week, the fair was kept open until Saturday evening to the satisfaction of many visitors, but to the apparent dissatisfaction of exhibitors of live-stock who had expected to be relieved the preceding evening in order that they might load out for other fairs.

The crowd seemed to sanction the management in this matter and attended in numbers, although it is possible that the races may have been the principal attraction on Saturday.

The exhibits and awards in live stock follow:

SHORTHORNS.

Exhibitors—Sponsler & Longshore, Hutchinson; Ed. Green, Morrison, Colo.; Cecil McArthur, Walton; C. S. Nevius, Chiles; C. D. Stratton & Son, Walton; W. E. Vincent, Hutchinson; W. A. Ransom, North Wichita.

Judges—Prof. R. J. Kinzer, State Agricultural College, and Ed. Patterson, Bell Air, Mo.
Bull 3 years or over—First to Green on Best of All; second to Green on Sittyton Hero 3d.

Two-year-olds—First to Sponsler &

Best of All; second to Green on Sittyton Hero 3d.

Two-year-olds—First to Sponsler & Longshore on Grand Count; second to Stratton on Count of Elm Park.

Yearlings—First to Green on Imp. Ardlethen Mystery; second to Nevius on Pavonia's Prince; third to Nevius on calf of Scotland's Charm; fourth to Vincent; fifth to Sponsler & Longshore on Second Duke of Hilleroft.

Calves—First to Nevius on Forest Knight; second to Sponsler & Longshore on Ed Patterson; third to Nevius on Elsie's Victor; fourth and fifth to Green.

Cow 3 years or over—First to Nevius on Agaserial 4th; second to Green on Scottish Bell 5th; third to Sponsler on Glen Rosabelle; fourth to Ransom on Dudess 2d; fifth to Stratton on Nellie Bly 29th.

Two-year-olds—First to Green on Pattie Napier 14th; second to Nevius on 2d Lady Phyllis; third to Ransom on Queen of Evergreen Ridge; fourth to Green on Glenwythan 11th; fifth to Green on Pattie Napier 13th.

Yearlings—First to Nevius on Glen-

wythan lith; fifth to Green on Pattie Napier 13th.

Yearlings—First to Nevius on Glenwood's Violet; second to Green on Greendale Mary; third to Green on Pattie Napier 15th; fourth to Nevius on Glenwood Blondine; fifth to Ransom on Matilda 3d. Calf—First to Nevius on Knight's Josephine; second to Sponsler & Longshore on Lavender Phyllis; third to Sponsler & Longshore on Primrose Countess; fourth to Green on Louan Cambria 25th; fifth to Nevius on Glenwood Violet 2d.

Aged herd—First to Green on herd headed by Best of All; second to Sponsler & Longshore on herd headed by Grand Count.

Breeders' young herd—First to Nevius

Longshore on herd headed by Grand Count.

Breeders' young herd—First to Nevius on herd headed by Forest Knight; second to Green on herd headed by Imp. Ardlethan Mystery; third to Ransom on herd headed by General Stone.

Get of sire—First to Nevius on get of Gallant Knight; second to Sponsler & Longshore on get of Grand Count; third to Green on get of Imp. Aberdeen; fourth to Nevius on get of Victor of Wildwood; fifth to Green on get of Imp. Aberdeen.

Produce of cow—First to Nevius on produce of Lillle Forest 8th; second to Green on produce of Pattle Napler 6th; third to Nevius on produce of Violet of Elerslie; fourth to Ransom and fifth to Stratton on produce of Mabel Whiting.

Champion bull—Forest Knight, C. S. Nevius, owner.

Champion cow—Agaserial 4th, C. S. Nevius, owner.

HEREFORDS.

HEREFORDS.

Exhibitors—C. A. Stannard, Emporia;
J. P. Sands, Walton; and W. N. Rogers,
McCook, Neb.

Judges—Prof. R. J. Kinzer, Manhattan,
and Ed. Patterson, Bell Alr. Mo.
Bull 3 years or over—First to Rogers on
Beau Donald 28th; second to Rogers on
Monarch of Shadeland 3d; third to Stannard on Lord Saxon.

Yearlings—First to Rogers on Beau of
Shadeland 5th; second to Stannard on
Adrian; third to Sands on Commodore.

Calves—First to Rogers on Beau of
Shadeland 11th; second to Stannard on
Julienne 2d; third to Stannard on Lord
Saxon 6th.

Cow 3 years or over—First to Rogers on
Shadeland Maid 1st; second to Rogers on
Monarch Girl; third to Stannard on
Blanche.

Two-year-olds—First to Rogers on Dol-

Blanche.
Two-year-olds—First to Rogers on Dol-lie Rogers 3d; second to Rogers on Dollie Rogers; third to Stannard on Manselleta

lie Rogers 3d; second to Rogers on Dollie Rogers; third to Stannard on Manselleta 16th.

Yearlings—First to Rogers on Shadeland Maid; second to Stannard on Mary J.; third to Rogers on Monarch's Maid 2d; fourth to Rogers on Western Lass.

Calf—First to Rogers on Shadeland Maid 28th; second to Rogers on Shadeland Maid 30th; third to Stannard on Duchess Real.

Aged herd—First to Rogers on herd headed by Beau Donald 28th; second to Rogers on herd headed by Monarch of Shadeland; third to Stannard on herd headed by Lord Saxon.

Breeders' young herd—First to Rogers on herd headed by Beau of Shadeland 11th; second to Stannard on herd headed by Adrian.

Get of sire—First to Rogers on get of Beau Donald 28th; second to Stannard on get of Keep On.

Produce of cow—First to Rogers on produce of Anxiety Maid; third to Stannard on produce of Monarch Girl.

GALLOWAYS.

GALLOWAYS.

Exhibitors—S. M. Croft & Sons, Bluff City: W. G. McCandless, Cottonwood Falls; Gabrielson Bros., Hutchinson. Judges—Kinzer and Patterson.

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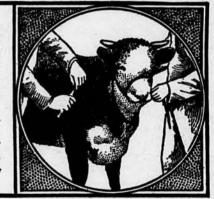
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Bull 3 years or over—First to Croft on Randolph of Thornyhill.

Two-year-olds—First to Croft on Twilight of Castlemilk; second to McCandless on Bassanio.

Yearlings—First to McCandless on Arthur.
Calf—First to Croft on Randolph Duke; second to Croft on Randolph Chief.

second to Croft on Randolph Chief.

Cow 3 years or over—First to Croft on Black Princess.

Two-year-olds—First to Croft on Lady May; second to McCandless on Graceful. Yearlings—First to Croft on Miss Midget; second to Gabrielson Bros.

Aged herd—First to Croft on herd headed by Randolph of Thornyhill.

Breeders' young herd—First to Croft on herd headed by Randolph Duke.

Get of sire—First to Croft on get of Randolph of Thornyhill.

Produce of cow—First to Croft on produce of Viola of Wavertree.

ABERDEEN-ANGUS.

Parrish & Miller, of Hudson, Kans., were the only exhibitors. They showed in all the classes and won first ribbons in each and also second in aged cow, 2-year-old helfer, yearling helfer and helfer calf. They won first in aged herd and breeders' young herd on animals all of whom were the get of Hale Lad 2d. Their first and second prizes on get of sire were given on the calves sired by this same bull.

DUROC-JERSEYS.

Exhibitors—Mr. and Mrs. W. R. Crow, Hutchinson; F. W. Gillespie, Burden. Judge—C. S. Snodgrass, Lyons, Kans. Mr. Gillespie won first and second on boar under 6 months. Mr. and Mrs. Crow had twenty head and they were in good shape. They won first prize in all the boar classes, except boar under 6 months and second on aged boar and yearling boar. They also won first in all the sow classes and first on herds and groups.

POLAND-CHINAS.

Exhibitors-C. S. Nevius, Chiles; W. R. Peacock, Sedgwick City; John D. Mar-

shall, Walton; F. P. Maguire, Hutchinson; W. H. Messick, Piedmont; C. E. Durand, Hutchinson.
Judge—C. S. Snodgrass, Lyons, Kans.
Aged boar—First to Marshall on Faultless Junior; second to Nevius on Chief Ideal 2d.
Yearlings—First to Peacock on Sasnak; second to Durand.
Senier boar pig—First to Peacock on Klever's Perfection 2d; second to Marshall.
Junior boar pig—First to Messick; second to Peacock.
Aged sow—First to Marshall on Fingers Off 2d; second to Marshall on K's Fingers Off.

Yearlings-First to Messick; second to

Senior sow pig—First to Peacock; second to Messick. Junior sow pig—First to Messick; second to Maguire.

Exhibitors—G. W. Bummell, Hutchinson; James P. Sands, Walton.
Judge—C. S. Snodgrass.
Aged boar—First to Sands on Baron
Beauty; second to Bummell.
Yearlings—First to Bummell on Highclere Improver; second to Bummell on
Black Robin Hood 2d.
Senior boar pig—First and second to
Sands.

Senior Boar pig—First to Bummell; second to Sands.

Aged sow—First and second to Sands.

Yearling sow—First to Sands; second to

Bummell.
Senior sow pig—First to Sands.
Junior sow pig—First and second to

SWINE SWEEPSTAKES.

All breeds competing.
All breeds of hogs are considered in the sweepstakes, sow and pigs, sire and get, exhibitors' herd and breeders' young herd. But one prize being offered in each case mentioned.

Senior champion boar—Faultless Junior (Poland-China) John D. Marshall, owner. (Continued on page \$74.)

The Houng Folks

CONDUCTED BY RUTH COWGILL.

The Wishing Bridge.

Among the legends sung or said Along our rocky shore, The Wishing Bridge of Marblehead May well be sung once more.

An hundred years ago (so ran The old-time story) all Good wishes said above its span Would, soon or late, befall.

If pure and earnest, never failed
The prayers of man or maid
For him who on the deep sea sailed,
For her at home who stayed.

Once thither came two girls from school, And wished in childish glee: And one would be a queen and rule, And one the world would see.

Time passed; with change of hopes and fears, And in the self-same place, wo women, gray with middle years, Stood, wondering, face to face.

With wakened memories, as they met,
They queried what had been:
"A poor man's wife am I, and yet,"
Said one, "I am a queen.

"My realm a little homestead is, Where, lacking crown and throne, I rule by loving services And patient toll alone."

The other said: "The great world lies Beyond me as it lay; O'er love's and duty's boundaries My feet may never stray.

"I see but common sights of home, Its common sounds I hear, My widowed mother's sick-bed room Sufficeth for my sphere.

"I read to her some pleasant page Of travel far and wide, And in a dreamy pilgrimage We wander side by side.

"And when at last she falls asleep, My book becomes to me A magic glass; my watch I keep, But all the world I see.

"A farm-wife queen your place you fill, While fancy's privilege Is mine to walk the earth at will, Thanks to the Wishing Bridge."

"Nay, leave the legend for the truth,"
The other cried, "and say
God gives the wishes of our youth,
But in His own best way!"

A Letter from the Short-Grass Country.

[The editor of the Young Folks Department has gone to sojourn for several weeks in the "short-grass country." She will set down her impressions and her observations, which will appear in the Kansas Farmer from time to time, for this part of the country is not well known, and is not justly rated among the people in other parts. We hope that our friends in the short-grass country will forgive us the liberty we take in writing of them, for whatever is said will be said in kindness and truly. We trust there will be nothing to displease them, and if we make mistakes, we shall be the first to offer them thanks for being set right.]

Just now I truly believe that I have reached the most beautiful spot in the world! All around me so far as the eye can reach, are the great brown rolling billows of the prairie. Under us is the brown, curly buffalo-grass, and overhead-ah, the wonderful blue of the infinite sky and the marvelous softness of the white and gray clouds. Not a sound do I hear but the song of a passing bird and the hum and flutter and dip of the insects. For this is "short-grass country." "Some folks hates it and some folks loves it," I am told. For me-I love it. But it has not starved me. It has not lured me on to sweat and toil, to costly and unrewarded expenditure; it has not tempted me with promises unfulfilled and hopes unrealized; it has not yet beaten me with its restless winds, nor choked me with its dust, nor prostrated me with its heat, nor frozen me with its bitter cold! Yet if it had, I think I should love it still.

Wherever I have been in Kansas heretofore, the weather has been a chief topic of conversation. There were so many changes, so we said, that there was always something new to say about it. Here, I am the only one who mentions the weather. The changes and idiosyncracies and extremes are so common they have become monotonous and no one thinks they are worth noticing. The air is wonderfully clear. To breathe it

makes you glad you are alive. Sounds reach you from any distances, and you can see miles and miles. The dome of the sky is vastly high, and the distance of the horizon is limited only by the strength of your eyes. If I could only show you what I see! Whichever way I turn, miles and miles and miles of rolling prairie-soft and brown, with great splashes of a darker brown, with here and there a little frame or sod house with its inevitable windmill. The colors on the uplands and lowlands grow softer and tenderer, till they fade away in the blue distance. From where I sit, I can see one tree, the only one in sight. A few plucky little weeds grow close to the ground, a tiny, half-dried flower. But there is a beauty in these soft colors. a dignity in the simplicity of the landscape. And there is a freedom everywhere that is superb. Did you ever lie and look up, deep into the sky? How wonderful is the vastness of it! You think you know something of the meaning of that big adjective, "infinite." Well, here you have that feeling wherever you look. You do not believe that the earth is round-you know that it stretches straight out forever and ever.

When I first came, everything seemed strange to me. Many things were different from my part of the State, and the differences were what I noticed. It seemed strange to hear people speak of Shawnee County as back east;" the extreme friendliness and unconventionality of the people on the trains was bewildering; the sod houses were matters of curiosity, and the tales I was told of local phenomenon I utterly refused to believe. Now I have been here just five days and all these things are the natural and to-be-expected things. I believe that you can see from nine to twelve miles; I believe that the Russian thistle will pile up against a fence until it sweeps across the field. I believe that they sometimes go nine months without rain. It seems natural and right that there should be no trees, and that evcrything should be dry so that the leaves of the weeds and the stunted shrubs should crackle at every touch. Already it is hard to think of things as being different, for differences only on the surface. same old mother earth is under us, and the same human life is lived, and the same great longings and eager reaching out for better things stir the heart, and these are the real things. The differences are too trivial to be worth noticing. For in every home, though it be built of sod, is refinement and cheerfulness, books and papers and music; and though fortune is even somewhat more fickle than in other places, there is a calm philosophy that is thankful for success yet is little cast down by failure.

Ways of Tiny Japs.

At present every one is interested in the Japanese, because of the brave fight they are making against the great Bear. Every one who goes to the World's Fair is delighted with them and longs to know more about them. The Massachusetts Ploughman has an article about the children which is very entertaining. It says:

"In Japan there are a lot of babies. In the daytime the streets, lined with the paper-sided houses, are full of them. The street is their only playground. There are so many in the streets that if you want to ride on a horse through them you have to send a fast-running 'Jap' ahead to clear the way. A funny thing about a little 'Jap' is that when he is pushed over he does not cry. He falls down hard enough, you think, to make a hole in the street, and you listen to hear a 'boohoo.' For a moment you think there is to be one, but there isn't. The youngster is still a moment to collect himself, and then he jumps up on his awkward little wooden shoes and runs off to play. Oddly, although the porches do not have rails around them, the babies never tumble from them.

"A birthday in Japan does not mean a real birthday. Everybody has the same birthday. It is New Year's Day,

and the boys and girls each have another birthday besides. The girls' is the third day of the third month, which would be March 3, and the boys, the fifth day of the fifth month, which, of course, would be May 5. The moment a blinking, almond-eyed 'Jap' baby is born, he, or she, is a year old. When New Year's Day comes he is two years old. Even if he was born as the bell in the temple was ringing the last stroke before midnight of New Year's Eve, he would be two years old when the first stroke of New Year's Day rang out on the air. Everybody has a good time on this great birthday. The fun is supposed to last two weeks.

"The girls on their birthday get out their dolls. You have seen Japanese dolls with pink cheeks, queer flat eyes and a little circle of bristly, black hair glued on the back of their heads. Well, they have big and little dolls like that. Some of the dolls look so much like real babies that you have to look twice to see whether they are real or makebelieve. The girls carry their dolls fastened on their backs, just as their mothers once carried them. Little girls and boys the world over, when they can have half a chance, like to do just as 'grown-ups' do.

"On the boys' birthday the air is full of strange fish, which look as if they were trying to swim against the wind. They are on top of poles and every boy is holding one of these up. The fish are of paper. The wind blows through them, making them wriggle back and forth, as if they were actually swimming.

"The Japanese mother delights to shave the head of the little 'Jap,' or at least she acts as if she did. She begins to shave his head as soon as there is enough hair there to shave off. And then what a funny way she shaves him! Perhaps she will go all over his head except one spot, at the back of the neck. Here she will leave a little tuft of hair, like a small Uncle Sam's chin whisker. A little later she does with his hair what is done with some dogs and what gardeners do with some shrubs on the lawn; she tries to cut it in queer shapes, in order to see which is the most becoming. Sometimes she shaves the top and leaves the hair growing around the edge in a ring, like a little monk. Sometimes she shaves the rim and leaves a circle on the knob of his head at the back, just as you see hair on the small Japanese dolls. And again, sometimes she will leave only a scalplock and two lovelocks. In these different ways, just as an American mother twists the hair of her little girl or boy into curls, she fusses with his hair until he goes to schools, which he does when he is five or six years old.

"The little girls, just as soon as they are able to do so, carry their baby brothers and sisters about on their backs. It looks funny enough to see a little girl carrying a baby almost as large as herself on her back and playing hopscotch at the same time. You wonder how the baby stays on, if he is not heavy for the little girl to carry, and how she can bounce about so with that plump little shaver on her back. And more than all, you wonder why he does not make a fuss about it, for he seems to pay no attention to what his nurse is doing. He seems to be staring up at the sun and in danger of becoming blind, but you look more closely and you see that not only are his eyes covered by his thick eyelids, but he is actually asleep. His head rolls around, but he does not wake up as his nurse takes a hop.

"It is surprising how many games like ours the 'Japs' have. Besides hopscotch there are battledore and shuttlecock, archery, bouncing balls, tops, kites, prisoner's base, puss-in-corner, pease-pudding hot, fencing, and many forfeit games. One game is quite like 'Simon says thumbs up.' It is called hana hana, which in English means nose, nose. The leader puts his first finger on his nose and says, 'nose, nose, nose, eyes,' at the same time clapping his finger on his chin. The others who are looking at him hard probably will find their fingers on their chins, too, unless they have remem-

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bered to do what the leader said instead of what he did.

"The boys have kite battles. The strings are gummed with powdered glass. Two boys will try to cut the strings of each other's kite with powdered glass. Of course, the kite attached to the string which is first cut flies away, to the owner's sorrow and the joy of his opponent. That is a much better way of fighting than some boys indulge in.

Then there is thumb wrestling. Two boys sit down opposite each other and take hold of hands with their thumbs in the air. Then they press their thumbs together hard, each trying to push the other down. They also build snow forts and have snow battles in the winter time.

"Every boy and girl who has seen the circus has seen the Japanese jugglers. If you could go to Japan you would know why Japanese jugglers are so clever, for the Japanese boys and girls can do very clever juggling with bouncing balls and tops. They throw them up in the air and while they are going up they dance, clap their hands, pass a fan over and under the ball, catch it on the backs of their hands and guide it around the room or along the road at will.

"With tops they do wonderful tricks. They send the top up one arm, around the shoulder and down the other one into the hand. From the hand they make it jump to the edge of a sword, where it goes on spinning. They can even throw it into the air in such a way that it will come back to them again like a boomerang."

When It Was Empty.

Little Flora was complaining that her stomach felt badly.

"Perhaps it's because it's empty," said her mother. "It might feel better if you had something in it."

Not long afterward the minister called. In reply to a question as to his health, he said that he was well, but that his head felt rather badly that day.

"Perhaps it's because it's empty," spoke up Flora. "It might feel better if you had something in it."-Ex.

Wanted to Know.

"Gwan'pa," said three-year-old Elsie, whose mamma had been reading Bible stories to her, "was 'oo in ze ark?"

"Certainly not, my dear," replied the old gentleman.

"Zen," continued the small inquisitor, "why didn't 'oo det dwownded?"--Chicago News.

Little Henry was taken along one day when his older brothers went in bathing in the river not far from where they lived. He went out very cautiously into the shallow part of the water, but finally stepped into a little depression in the bottom, which brought the water up to his shoulders, whereupon he cried out, quite lustily, "Take me out! Take me out! This water don't fit me!"-Woman's Home Companion.

A Sunday-school teacher told her class about the cruelty of docking horses. "Can any little girl tell me," she said, "of an appropriate verse of Scripture referring to such treatment?" A small girl rose and said solemnly, "What God hath joined together, let no man put asunder."-Our Dumb Animals.

Teacher-Now, Tommy, suppose you had two apples, and you gave another boy his choice of them, you would tell him to take the best one, wouldn't you?

Tommy-No, mum.

Teacher-Why?

Tommy-'Cos 'twouldn't be necessary .-- Tit-Bits.

Uncle (trotting Harry on his knee) -Do you like this, my boy?

Harry-Pretty well; but I rode on a real donkey the other day at the zoo .-

I hav known men to be squelched bi a single word, and even bi a single look, but never knu a tirade ov 30 minnitts to do it .- Billings.

\$600000000000000000000000000000000000 For the Little Ones &

Selfish and Lend-a-Hand.

Little Miss Selfish and Lend-a-Hand Went journeying up and down the land. On Lend-a-Hand the sunshine smiled; The wild flowers bloomed for the happy

child; Birds greeted her from many a tree; But Selfish said, "No one loves me." Little Miss Selfish and Lend-a-Hand Went journeying home across the land, Miss Selfish met with trouble and loss; The weather was bad, the folks were Lend-a-Hand said when the journey was

o'er,
"I never had such a good time before."
—Anon.

How's Any One to Know?

Two little blue jean overalls, Two stray hats, 'mazing wide. Two rakes, two hoes, two shovels, Two gardens side by side.

Two little strangers, coy at first, At last quite friendly wise. A little conversation, And a pretty big surprise.

"What's your name, little boy" they ask
Each of the other, shy.
"Me.. Why I'm just a little girl!"
"You are? Why, so am I!"
—Albany Argus.

When Mama Was a Little Girl.

Little Mildred really could not think of another thing to do. She had washed and dressed her dolls, taught them their daily lessons and placed them in the Morris chair to await further commands. She had watered the plants, dusted the dining-room chairs and given kitty his regular ride around the flat in Arabella Louise's go-cart. Then she had read her picture books all through, conducted Sunday-school services with blocks and nine-pins, and written eleven articles for the papers. Finally she had drawn her little chair close to the window to watch the children play "hopscotch" out on the sidewalk. If only she were large enough to play with them, if only mama did not have to go to town all day, but could stay home to amuse her, what a happy little girl she would be, she thought.

Grandma was embroidering some beautiful anchors on a new dress for Mildred, but when she saw two big tears rolling down the child's face, she quickly put her arms around her, exclaiming, "Why, what is the matter with Sunshine?'

"Oh, grandma, I am so lonesome I don't know what to do. It isn't any fun living alone. I mean just with big folks. I wish I had forty-nine little brothers and sisters to play with."

Grandma stopped rocking a moment. "Ahem! I thought I heard a certain girlie say a few days ago that if she had only one little sister she would never make another wish as long as she lived. Now, I don't see why you can't pretend to have a little sister, just the way your mama used to."

"Oh, grandma, dear, dear grandma, please tell me what mama did wnen she was a little girl," and Mildred sat up very straight in grandma's lap, her eyes dancing with sweet anticipation. A story about her own mama! What could be nicer!

"Well," said grandma, beginning to rock again, "when your mama was a little girl the desire of her heart was a pink silk dress and a little sister. One happy, never-to-be-forgotte Christmas, Santa Claus brought her the coveted dress, but, alas and alack, he always seemed to forget about the little sister. Your mama, however, decided to imagine that she had one, and after a while we all realized that a little stranger named 'Niddy-Noddy' had

come to live with us "Wherever your mama went Niddy-Noddy would follow along. In the summer-time the two little girls would sit on the beach together making delicious sand pies or digging deep caves. Sometimes Niddy would hide in corners and what a time your mama would have finding her! In the winter your mama taught the little fairy sister the letters of the alphabet, how to make pretty pictures with sewing cards, in fact, she taught Niddy everything she learned. I am very sorry to say that Niddy was not always a good little girl. One day when she was told the patchwork she had been making

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was for a crazy-quilt, she angrily stamped her foot and said she would not have her pretty sewing put in a 'crazy' quilt. She acted so naughty about it that we had to put her in a closet until she promised to be good. Your mama's face was read and tearful for some time over Niddy's actions."

"Grandma," began Mildred, in halfashamed, trembling voice, "was my mama ever a naughty girl?" Grandma's eyes twinkled, but she replied solemnly, "Your mama, deary, was not any different from the little girl who has a little curl right in the middle of her forehead. Listen to what happened to her one day when she did not obey grandma. She had been swinging in the hammock and grandma was upstairs sewing, when she announced to Niddy-Noddy that she was going across the street to play with some children grandma did not like. Grandma called down to her not to leave the yard, but she did not want to mind. She thought if she crept close to the house that no one would see her dash out of the yard. However, she must have been seen, because suddenly, just when she was opening the front gate, quarts of water came falling down on her head and she stopped her naughty flight in a hurry. A judgment had been sent to her from heaven, she thought, and it was a very sorrowful little girl who stayed in bed that afternoon while her clothes were drying. She never asked for any explanation of the shower, so grandma never gave her one."

"Oh, dear," said Mildred, after a pause, "I wish I had a little sister like Niddy-Noddy." "Why, you could have one, Precious," answered thoughtful grandma. "Suppose you go over there to that corner and look real, real hard to see what you can find. Surely the bright-eyed girl who tells such beautiful stories to her dollies and kitty can imagine a little sister is awaiting her there.'

Breathless and beaming with pleasure at this happy suggestion, Mildred ran across the room, pretending to seize the looked-for sister and hurried her back to grandma. "Now," commenced grandma, "you must believe that you have a really and truly little sister, who, although you can not see her, will always be with you ready to

njoy your play, sympathize with your croubles and be your sweet comrade. You can tell her all your little stories and secrets, and at bedtime she will go with you to Drowsy-land. And now don't you want to give this little Niddy-Noddy some luncheon and then introduce her to the Dolly family and kitty?"

Before nodding a joyous assent, Mildred threw her arms around her grandma's neck, crying:

"Oh, grandma, you are the nicest, loveliest grandma in the whole world to teach me how to play the new way mama did when she was a little girl.' -Helen Hale, in Advance.

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Laus Deo!

It is done!
Clang of bell and roar of gun
Send the tidings up and down.
How the belfries rock and ree!
How the great guns, peal on peal,
Fling the joy from town to town!

Ring, O bells!
Every stroke exulting tells
Of the burial hour of crime.
Loud and long, that all may hear,
Ring for every listening ear
Of Eternity and Time!

Let us kneel:
God's own voice is in that peal,
And this spot is holy ground.
Lord, forgive us! What are we,
That our eyes this glory see,
That our ears have heard the sound!

For the Lord
On the whirlwind is abroad;
In the earthquake He has spoken;
He has smitten with His thunder
The iron walls asunder,
And the gates of brass are broken!

Loud and long
Lift the old exulting song;
Sing with Miriam by the sea,
He has cast the mighty down:
Horse and rider sink and drown;
"He hath triumphed gloriously!"

Did we dare,
In our agony of prayer,
Ask for more than he has done?
When was ever His right hand
Over any time or land
Stretched as now beneath the sun?

How they pale,
Ancient myth and song and tale,
In this wonder of our days,
When the cruel rod of war
Blossoms white with righteous law,
And the wrath of man is praise!

Blotted out!
All within and all about
Shall a fresher life begin;
Freer breathe the universe
As it rolls its heavy curse
On the dead and buried sin!

It is done!
In the circuit of the sun
Shall the sound thereof go forth.
It shall bid the sad rejoice,
It shall give the dumb a voice,
It shall bell with joy the earth!

Ring and swing,
Bells of joy! On morning's wing
Send the song of praise abroad!
With a sound of broken chains
Tell the nations that He reigns,
Who alone is Lord and God! -John G. Whittier.

The Poet of the Farm.

"The true poet is not he who must go far and seek for themes in foreign lands, on the mountain tops, or in the busy haunts of men." He is one who finds his theme close beside him, who sees the beauty, though it may be hidden and hard to find, in the things about him. Many such a poet lives and dies unknown, never having even attempted to put upon paper the thing that makes life glorious for him. Only those about him know that something rich and beautiful in his soul has touched their lives, and shown them something of the beauty that is in common things. Such poets live their poetry. But he who can send this radiance of his own life out far into the world, and light the lives of many, he has a broader, though it be no nobler, mission.

Such a poet was Whittier. And his vision of the beauty of farm life, and the dignity of toil everywhere, shal' continue to make the world happier and more wholesome as long as there are fields to be tilled and houses to be

Whittier was born in a little New England farm-house, solitary and shut in from the rest of the world by hills. Here he lived his young manhood, with little opportunity for education beyond the district school, and the few often-read books on his father's shelves. His parents were Quakers, gentle, conservative people, who cared to live sober, upright lives, but had no great aspirations for culture. Yet meager and plain as his life would seem to many, to him it was full of pleasure, whether in the homely daily "chores," or in the times of leisure when the whole family sat around the great open fire-place in the kitchen, and told stories.

"What matter how the night behaved?
What matter how the north-wind roared?
Blow high, blow low, not all its snow Could quench our hearth-fire's ruddy glow."

The father, "a prompt, decisive man," loved still to tell of his youth-

ful wanderings, his hunting and trapping and fishing, and of the sights he had seen. His mother told of her early life, of the Indians, and of all the pleasant happenings of a country girl's life. There was the uncle, also, who knew naught of books, but could tell of all the wonders of forest and hill and brook. And so on through the whole family circle, each added his mite to the pleasure of the whole.

"Snow Bound," called one of the classics of American literature, and destined, doubtless, to last, when more pretentious poems have long been forgotten, is the simple story of this simple farm life. Its value lies in its truthfulness, and in that rare power of seeing and showing the inner beauty in the plain and commonplace.

Whittier was not physically strong enough to endure the hard work of the farm, so that his father was the more willing that he should enter the literary field. His inspiration and first awakening came to him through a volume of the poems of that other man. who wrote so truly and so lovingly of the life of the farm. Robert Burns, finding out the beauty of his own rural

the influence of friends and family, he was an abolitionist. And for that great issue, and until it was victorious, he dropped the pen of the dreamer, the preacher and the peace-maker, and with martial fervor, with the swing and fire of passionate imagination, he devoted his art to the waging of the battle of the slave. And he fought well. His verses spoke the feeling of many a chivalrous soul and fired the will of many a brave man. Who cared then for form, for perfection of detail? The soul of a true man spoke to the heart of half a Nation, and that was enough.

It was no non-resistant, quiet Quaker who wrote:

"Sound for the onset! Blast on blast!
Till Slavery's minions cower and quail;
One charge of fire shall drive them fast
Like chaff before our Northern gale!

"Awake! Awake! My Fatherland!
It is thy Northern light that shines;
This stirring march of Freedom's band
The storm-song of thy mountain
pines."

One perfect poem stands to mark the end of that warlike time. It is the "Laus Deo," written "on hearing the bells ring on the passage of the con-

RESIDENCE OF E. D. WATSON, BROWN COUNTY.

Mr. Watson says: "The peculiar features of this place are its fine blue-grass lawn of nearly an acre in extent; the south front to all buildings and the location of the barn and lots to the north so that no unpleasant smells from them are wafted on our southern summer breezes to the house and lawn. The absence of trees in the front lawn is by design; the breeze being preferred on hot days to the shade of numerous trees. To the left of the house is seen a grove, seven acres in extent, of soft maple trees set out years ago in rows like planted corn, eight feet apart both ways. They are now 50 feet high and in size from 6 inches to as large as a man's body. It is admittedly the finest artificial grove in the county and can be seen for miles in any direction."

Scotland, taught John Greenleaf Whittier to find the beauty of his own land.

In all the career of this gentlest of poets, we find no trace of a vulgar ambition, no climbing, no longing for fame and the world's recognition. His sister found some of his verses, one day when he was a young man, and sent them to the village paper, which published them. We can imagine, perhaps, the thrill of astonishment and pleasure, that came when the boy saw his verses in print. It happened that William Lloyd Garrison was editing the paper, himself a young man and unknown. He recognized the true poetry in the unpolished lines that came to his desk from time to time, and at last, he went out to see the farmerpoet. That was the beginning of a life-long friendship, as well as of Whittier's literary career. For Garrison saw the promise of something great in the rustic young poet, and encouraged him to continue. And so the young man left the farm for a few years, and through great difficulties, in frailty of body, and by strictest economy, managed to learn something more of books, to imbibe a somewhat wider culture, and to master to a greater degree, the technicalities of his profession. For, though it is true enough that poets are "born not made," yet their craft, because of its very fineness, requires an accuracy, and a fidelity to correct form, that does not often come intuitively.

We are wont to think and speak of Whittier as the "gentle" poet. Yet there was one period in his life which writes itself fiercely, passionately in his poems. This was at the time of the great National crisis, for by intercourse, by personal conviction, and by

stitutional amendment abolishing slavery." In the stirring verses you can hear the exultant clang of the bells, and feel the thrill that comes to the victor. For though true to the traditions and beliefs of his sect, the poet never took up arms in his beloved cause, yet who can say that any fought better or more effectively?

After this period of excitement and passion, the poet returned to his peaceful strain, and to these later poems we turn for the freshness of the fields, the tranquility of trust, and the childlike faith that refreshes.

His was a long life, bravely lived, for to sing when the body is shaken by pain, and triumphantly to smile in the midst of hardship and when death comes often to one's small circle of friends, is the task that only the brave spirit can compass.

I like to think of the inscription on the sun-dial at Mount Auburn Cemetery, which he wrote so beautifully. Above the long arm of the dial, and its shadow, are the words:

"With warning hand I mark Time's rapid flight,
From life's glad morning to its solemn
night;
Yet, through the dear God's love, I also show There's Light above me by the Shade be-low.

John Greenleaf Whittier." This seems to me the summing up of his philosophy of life. The shadows only serve to show that "there's

Pictures of Country Homes.

Light above."

On this page, we give the first of the pictures of beautiful country homes. We have received several such photographs, and the best of them will be engraved and shown upon the Home

You never tasted finer, whiter, sweeter, allwhiter, sweeter, all-round better bread than that raised with Yeast Foam. The secret is in the yeast. Yeast Foam, which is the te of Bread table ingredients, malt, hops, corn, etc., in the largest and cleanest yeast factory in the world. Try it. All grocers sell it at 5 cents a package—enough for 40 loaves, Keeps fresh all the year round. Send for our book, "How to Make Bread,"—free, NORTHWESTERN YEAST CO. CHICAGO

Circle Page from week to week. There is yet time for others to send in their pictures before the last day of September, which was set as the limit of time for receiving them. The winners of the prizes will be announced in a couple of weeks. We hope these pictures will be useful to those who see them, and that they may suggest ways in which the farm homes may be made more attractive and more comfort-

Six Rules for the Furnace.

For the general, every-day working of a furnace, the following rules are offered by the experienced furnace

1. Close check in chimney pipe and the slide in door.

2. Open the air box a little, then shake the grate till live coals begin to fall. Leave the lower door open. As soon as there is a good draft put on a little fresh coal and open cold air box fully.

3. While waiting for the fire to get a good start remove all the ashes. If mere are any clinkers or bunches of ashes in the bottom of grate they should be broken up and raked out.

4. In about five minutes close the drafts, which can be regulated during the day according to the house temperature.

5. A night shake the fire down more or less, as its condition demands, and put on fresh coal; not so much, however, as in the morning.

6. Close the air box two-thirds or wholly if little heat is required during the night. Open the check and the slide in the door.—Good Housekeeping.

How to Live One Hundred Years.

Be clean.

Be good-natured and companionable. Do not worry.

Be more careful to take exercise as you grow older.

Be comfortable. Keep your feet warm and wear comfortable clothing. Sleep in a comfortable bed in a room that is ventilated and in which sunshine is not a stranger.

Do not eat twice as much as you need, and eat only the food that agrees with you .- Dr. John B. Rich, of New York, ninety-four years old, in Chat.

Dolly was out for a walk and met an old friend of her grandfather. "And how old are you, little one?" asked the old gentleman. But Dolly was indignant. "I'm hardly old at all; I'm nearly new!" she answered, tossing her head.-Ex.

Mi dear boy, remember this, there is nothing that kan kompensate yu for doing a thing that yu will be ashamed ov after it iz done.-Billings.

Club Department

OFFICERS OF STATE FEDERATION OF WOMEN'S CLUBS.

Our Club Roll.

Mutual Improvement Club, Carbondale, Osage County (1896). Give and Get Good Club, Berryton, Shawnee County (1902). Woman's Literary Club, Osborne, Osborne County (1902). Ladies' Reading Club, Darlington Township,

Woman's Literary Club, Casteria, Cas

Ladies' Social Society, No. 3, Minneapolis, Ottawa County (1891).
Ladies' Social Society, No. 4, Minneapolis, Ottawa County (1897).
Chalitso Club, Highland Park, Shawnee County (1902).
Oultus Club, Phillipsburg, Phillips County (1902)
Litertae Club, Ford, Ford County (1903).
Sabean Club, Mission Center, Shawnee County, R. No. 2 (1899).

Litertae Club, Ford, Ford County (1903).
Sabean Club, Mission Center, Shawnee County, R.
R. No. 2 (1899).
Star Valley Woman's Club, Iola, Allen County
(1902).
West Side Forestre Club, Topeka, Shawnee County, R. R. No. 8, (1903).
Formight Club, Grant Township, Reno County

(1903).
Progressive Society, Rosalia, Butler County (1903).
Progressive Society, Rosalia, Butler County (1903).
Pleasant Hour Club, Wakarusa Township, Douglas
County.
The Lady Farmers' Institute, Marysville, Marshall County (1902).
The Woman's Progressive Club, Anthony, Harper
County, Embroidery, Club, Madison, Greenwood

Take Fembroidery Club, Madison, Greenwood County (1902).

[All communications for the Club Department should be directed to Miss Ruth Cowgill, Editor Club Department.]

American Literature Program—October 13.



JOHN G. WHITTIER.

Roll Call—Quotations from the poet.
I. The New England Home, as Pictured in "Snow Bound."

II. Sketch of the poet's personality and life.

III. Sketches of some of the men who influenced him, with reading of the poems, "Burns," and "To W. L. G."

IV. Reading from Burn's poems.

In the study of the poets, and especially of this poet, one should become as familiar as possible with his writings. For the printed words are but the reflection of the life he has lived. Each small event, every new aspect of the landscape, offers him a subject for his verse. So that if there is a volume of Whittier's poems in the possession of any member, or in the library, it should be passed around as much as possible. And five minutes taken now and then to read one of his simple and beautiful poems will not be time wasted, nor will it add to the day's work. It will be a refreshment and a delight.

For the first topic little is needed beside the perusal of "Snow Bound." From this a most fascinating picture of New England home life can be drawn. Of course whatever can be added from personal knowledge or gleaned from books or other sources, will add to the interest and value of the paper.

For the second topic, the article on "The Poet of the Farm," on the Home Circle Page, may be of some help. Much can be gained also from a thoughtful reading of his poems.

Nature was Whittier's most intimate friend, yet there were a few men to whom he gave loyal friendship and deep admiration. His feeling for Robert Burns, a friend never seen, is very sweetly told in the poem "Burns,"

which was written "on receiving a sprig of heather in blossom." He has written more than one tribute to his lifelong friend, William Lloyd Garrison, and his friendship for such men as Bryant, Oliver Wendell Holmes, and the Cary sisters, is attested in many of his verses.

A fitting close to this week's program will be the reading of one of the peoms of that other great poet of rural life, Robert Burns. One of his poems will appear in the Kansas Farmer for next week, which can be used if no other is available.

We hope that each one of our country clubs will write to us, so that we may know their continuance and prosperity. We shall always be glad to know of new ones, also, who wish to avail themselves of our offer to send the Kansas Farmer to them.

Miscellany

Kansas Pavements and Paving Materials.

JAS. F. M'CABE, CITY ENGINEER, TOPEKA, KANS., AT THE KANSAS GOOD BOADS MEETING, TOPEKA, AUGUST 10.

In responding to the request of our secretary that I should prepare a paper upon "Kansas Pavements and Paving Materials," to be read at this meeting of the Kansas Municipal League, I have been actuated by a desire to present briefly for your consideration some thoughts from the view point of what might be termed the practical, rather than the theoretical aspect of the subject; some views which have been derived from the actual construction of pavements, and the studied observation of the relative merits of the different materials; and some statistics, which I promise you shall not be carried to the extent of being wearisome, concerning the extent of the paving operations which have been conducted in the various cities of Kansas, the capital invested in the various enterprises, and the output of the various plants. Such an article must of necessity possess less which would be of interest to the expert, and more that would be of interest to the layman and taxpayer, than an article which would attempt to treat the subject from the technical standpoint. I shall also discuss briefly, as coming properly within the broad scope of my subject, the most expedient and economical means by which propositions to pave city areas may be set on foot and carried to completion.

The first problem that confronts the property-owner along the route over which the conclusion has been reached that it is necessary for the best interests of the community that the same be paved is, of what material shall the pavement consist? This question is of the first importance, and too often it is decided by the material men themselves, and contrary to the best interests of the property-owners concerned, and the citizens generally. In many cases, the material men, their agents and promoters, procure the circulation of petitions designating a certain material to be used, and under our paving law it is necessary for the mayor and council either to let the contract for paving to the lowest responsible bidder on the material specified in the petition, or reject all bids. This law practically takes all voice in the matter of the choice of the material to be used, from the city officials, some of whom at least, by reason of their experience and observation are competent authority in the decision of this important question, and leaves the decision to a great extent in the hands of the material men, who, as experience in some cases has shown, are apt to subsidize property-owners along the streets to be paved either directly, or indirectly, by agreeing that the pavement of such persons shall cost them nothing. In this way there can be created a sentiment in favor of a certain material, which otherwise would be rejected.

The city of Buffalo, N. Y., has a mode of letting paving contracts which

SFAULTLESS STARCH FOR SHIRTS COLLARS CUFFS AND FINE LINEN

in my opinion is a most excellent one. In the first place, the property-owners take the initiative by petitioning for the street improvement over the 'desired route. If, in the opinion of the city authorities, it is deemed advisable that the street be paved, the city engineer is instructed to prepare plans, and submit estimates for the same, designating different kinds of material. The city then advertises for and receives bids for the construction of the work, using the various kinds of paving, curbing, etc., designated in the estimates. After the bids have been opened and tabulated, the propertyowners have twenty days in which to petition the council as to the material which they prefer. As may readily be seen, such a method has the effect of producing lively competition, with the result that the lowest prices may be had, while on the other hand, if the kind of material should be designated in the estimate, or decided upon by the property-owners before the opening of the bids, competition would be stifled and the prices paid would be higher. For instance, in Topeka last spring the people on a certain street petitioned for Lyon County Limestone to be used in curbing their street. On another street, competition was open. My estimate on Lyon County stone was 50 cents per linear foot. There being no competition, the agent for this stone bid the amount of the estimate, and secured the contract. On the other street, competition was warm, and the contract was finally awarded to Colorado Red Sandstone at 53 cents. The price heretofore had been 65 cents per linear foot. Now, the people on the first-mentioned street would have much preferred the sandstone at 53 cents, to the limestone, as it is a much better stone, but the former high price kept them from petitioning for it, and had they specified the Colorado sandstone in their petition, it would have cost them 65 cents instead of 53 cents. The first requisite of a good pave-

ment of any kind is a proper subgrade. Before the preparation of the subgrade, all underground construction, such as sewers, gas- and water-mains and services, should be done. Private corporations or individuals should not be allowed to excavate and refill trenches in a street under contract to be paved, after the subgrade has been rolled. The settlements occurring in our newly paved streets, are nearly all over sewers and gas and water services, where the work was done after the completion of the subgrade, the back filling not having been properly done. After the street has been reduced to subgrade, the earth should be thoroughly rolled and tamped, until the surface of the road bed is firm, hard and compact. If any depressions occur under the roller, they should be properly filled in with suitable materiol and rerolled. In deciding the question of material, the following points should be given consideration: the first cost, cost of maintenance, cost of cleaning, favorableness to travel, and sanitary qualities. The conditions of each streets should be studied, and the kind of pavement selected for that particular street, without reference to those materials selected for other other streets, as no paving material will meet all conditions. If the street to be paved has a very steep grade, or if the traffic over the same is quite heavy, stone blocks should be used for the reason that they afford a better foothold to horses, and stand the abrasion of heavy loads better than other materials. If light or semi-heavy grades or traffic are the conditions presented, asphalt, brick, or some kinds

of wooden blocks will answer the purpose.

pose

The average town and small city lays out its roadways much too wide, and when they are to be paved the question of cost is a serious one. The narrow roadway for wide residence streets is gaining in favor for the following reasons: all pavements, except brick, require a certain amount of compression to keep them in the best condition. The tendency of traffic to follow the crown of the roadway leaves a large space of wide pavements untouched; a narrow pavement forces some of the travel upon all parts of its surface, benefiting the pavement as a whole; it reduces the width to be paved; it costs less to maintain; it presents less surface for the accumulation of dirt and dust, while the wide lawn without its dust is more healthful, and the pavement is far enough away to prevent the dirt and dust from injuring furniture, carpets, etc. Moreover, the wide lawn affords more soil, air and water, to the roots of the trees, thus increasing their growth and beauty. Most of the pavement laid in Kansas has been brick. The following is an abridged report from the cities of Kansas, giving the material used, as well as views as to the satisfaction given. This report is not complete, as I failed to receive replies from letters of inquiry addressed to certain cities:

The only classes of pavement laid in Kansas City, Kansas, during the past few years have been constructed of brick or asphalt. The brick pavements have averaged in cost \$1.35 per square yard, but at present will average \$1.50 per square yard. Asphalt has cost from \$2 to \$2.10 per square yard, and most of this pavement is in fairly good condition. The repair work is done by the street commissioner, consequently the cost of maintenance can not be estimated.

Iola has been paving only about a year, using nothing but brick. The first laid consisted of two courses of brick, the bottom course being building brick laid on a cushion of sand with a foundation of crushed stone. It cost \$1.43 a square yard. This summer they have been laying the same with six inches of cinders substituted for the broken stone, at a cost of \$1.48 per square yard, and have just let a contract for 50,000 square yards, consisting of one course of brick on six inches of concrete at \$1.71 per square ward. As their pavement has been down but a short time, there is no data concerning repairs, etc.

Lawrence has 4,541 square yards of pavement, consisting of two courses of brick on sand, which is in good condition, and which cost from \$1.16 to \$1.25 per square yard, 78,837 square yards consisting of one course of brick on a concrete foundation, which cost \$1 31 to \$1.44 per square and is in good condition, 1,930 square yards consisting of one course of brick on three inches of sand, which cost 85 cents per square yard, and is in bad condition. Some of this pavement needs repairing, but as yet the city has not expended anything on maintenance.

Atchison, in the year 1887, laid the first brick pavement west of the Mississippi River. It consisted of two courses of brick on a cushion of sand, and cost \$2 per square yard. This pavement is still in good condition. Since that time they have paved more or less each year, using mostly brick. A great deal of this pavement consists of one course of brick on three inches of sand. While some of it has given (Continued on page 973.)

Continued from page 957.)

likely to be probably 67 million quarters. That American aid will be necessary in the supplying of this great bulk seems to us to be quite obvious if prices are to remain at the 30s level. Thus the trade is intensely interested in knowing the truth about the American crop this year."

Perhaps our correspondent will feel warranted, from the foregoing considerations, in holding his wheat. The wisdom or unwisdom of this course will, however, be affected by other facts. He must bear in mind that there is some shrinkage in stored grain. There is also liability of loss from depradations of rodents. The writer well remembers a remark dropped in his presence when a boy by a man of mature years and varied experience. He said:

"The shrinkage and ratage amounts to considerable." The danger of loss by fire or of damage from the elements may be very little, yet it is something. If the correspondent needs money and must horrow and pay interest, he will, of course, take this into consideration.

Wisdom is sometimes gained by observing the procedure of others. In this city of Topeka there are several large and wealthy milling companies. These each buy and grind several thousand bushels of wheat a day. The prices of flour and other mill products correspond closely with prices of wheat, that is, if the price of wheat shall continue to advance the price of flour will also advance. These wealthy companies might easily borrow money on stored flour and hold it for a rise. Their practice is to sell their product almost as rapidly as it is made.

Our correspondent may justly say that in all the foregoing information the editor has not yet stated his opinion "whether it would be advisable to sell now or to hold." The editor has no wheat, but if he had two car-loads, stored in a good granary on the farm, he would sell only as he needed the money, using the store of wheat as a bank account to be drawn on as needed, and would expect the better price

THE WORLD'S FAIR CATTLE SHOW.

Never in all history has there been brought together such a showing of pure-bred cattle as appeared in St. Louis during the weeks between September 12 and 24. The enormous prizes offered by the Louisiana Purchase Exposition, by the various purebred record associations, by the States and countries from which the animals came, and by individuals and others, were an incentive such as has never before been offered. The purpose of all these great offerings was to bring together the best animals in the world, each of its kind, and the results accomplished have exceeded expectations. Kansas feels a particular pride in this great show, not only because of the worthy representatives of her different breeds appearing in the show ring, but because of the fact that the show itself was inaugurated and developed by a Kansas man. Should Secretary F. D. Coburn never accomplish any other great work in life, that which he did on the premium lists and in preparing for the great live-stock show at St. Louis will be a fitting monument to a useful life. When necessity compelled him to lay down this great work, no worthier successor could have been found than Col. Charles F. Mills, the present chief of the livestock department. While the burden of preparation was enormous, that of execution is no less so, and while Colonel Mills was hampered at the time of the opening of the live-stock show by illy prepared grounds and buildings, he has brought order out of chaos, and the cattlemen found everything to their liking. The barns are numerous, commodious and comfortable. The exhibition ring is enormous and the provision made for the seating of the spectators is of the best. So large is the show ring that all breeds show at once, and it is an impressive sight to see an array of aged bulls of all known breeds of beef,

TO SELL OR TO HOLD WHEAT? dual-purpose, and dairy cattle appearing in one ring at one time. Here are assembled the world's best, and any individual breeder may well feel proud of being allowed to show in such company, even though he secures no ribbons. When ribbons are tied upon his animals, however, he knows that he has done a great thing for himself, for the State in which he lives, and for the breed he represents.

Kansas feels proud of the cattle show for another reason. In this aggregation of the world's best appeared worthy animals from the rich pastures of Kansas representing the beef, dualpurpose, and the dairy breeds, and in each case recognition of quality was won from the judges and ribbons of various colors will be carried home by their owners. The story of these awards shall be told in fitting manner in these columns, and we hope that the lessons that have been learned in their winning will compel a greater recognition of the value of pure-bred stock in Kansas and of the absolute necessity which exists for a State fair managed by State officials and operated as a home battle ground, where the breeder may test his strength before venturing out into other great exhibitions.

KANSAS POULTRY AT THE WORLD'S FAIR.

The Kansas Improved Stock-Breeders' Association have made a creditable display of horses and cattle at the World's Fair, winning honors for themselves and the great State of Kansas. By reason of their magnificent display of representative animals they have placed Kansas in the very front rank as a State leading in production of the best specimens of the best breeds of improved stock.

Next week some of our enterprising and leading breeders of Berkshire, Poland-China, Duroc-Jersey, Chester White and Tamworth swine will wage a battle royal in behalf of their class of stock, in warm competition with the best breeders on earth.

The exhibition of poultry, pigeons, and pet stock will be held from Monday, October 24, to Saturday, November 5 inclusive. In view of the fact that last winter the Kansas State Poultry Association held one of the largest and best poultry shows held in this country, it would seem that Kansas should be well represented in this show. If entries have not yet been made they should be sent in at once, and the Kansas World's Fair Commission will do their part to encourage a creditable display. In fact they agreed with the World's Fair committee of the Kansas Improved Stock Breeders' Association to defray the shipping expenses of Kansas poultry exhibitors making a creditable display.

The KANSAS FARMER would be pleased to have the names of those who have made entries for the World's Fair poultry show, or if those interested in making a display will address T. E. Orr, Superintendent Poultry, World's Fair, St. Louis, they will receive full information and entry blanks.

L. M. MONSEES AT THE WORLD'S FAIR.

L. M. Monsees & Son, owners of the Limestone Valley Breeding Herd of jacks and jennets, Smithton, Mo., are undoubtedly the greatest breeders of this class of stock in the world. As all exhibitors were restricted to two entries in each section they did not put in as many animals as they might otherwise have done; as it was they won seventy premiums, which is more than all other exhibitors combined. Their winnings were as follows:

JACKS AND JENNETS.

Jack 4 years old or over—First and second prizes.

Jack 3 years old and under 4—Second and fifth.

Jack 2 years and under 3—First and sixth.

Jack 1 year and under 2—Second and third.

nira. Jack under 1 year—First and fourth. Jennet 4 years old or over—First and Jennet 3 years and under 4-First and Jennet 2 years and under 3-Second and Jennet 1 year and under 2-First and

fifth.

Jennet under 1 year—First and fourth.

CHAMPION JACKS AND JENNETS.

Jack 3 years old or over—First. Jack 2 years or under—First. Jennet 3 years or over—First. Jennet 2 years or under—First. GRAND CHAMPIONS.

Jack any age, grand champion, Orphan Boy 696.

Jennet any age, grand champion, Belle of Limestone 513.

GET OF ONE SIRE. Four animals of either sex, any age-First and fifth.

PRODUCE OF ONE JENNET.

Two animals of either sex, any age-First and third.

AGED STUD. Jack and four jennets, 3 years or over-First and second.

YOUNG STUD. Jack and four jennets under 3 years-

STUD BRED BY EXHIBITOR. Jack and four jennets, all 3 years old or ver, bred by exhibitor—First and second. PREMIUM CHAMPIONSHIP FOR BREEDER.

Best showing of jacks and jennets in sections 1 to 10 inclusive, as determined by the largest aggregate amount awarded to animals bred by any one breeder rep-resented—First. PREMIUM CHAMPIONSHIP FOR EXHIBITOR.

Best showing of jacks and jennets in sections 1 to 10 inclusive, as determined by the largest aggregate amount awarded to animals owned by one exhibitor—First.

BLOCKS OF TWO.

The regular subscription price of the Kansas Farmer is one dollar a year. That it is worth the money is attested by the fact that thousands have for many years been paying the price and found it profitable. But the publishers have determined to make it possible to receive the paper at half price. While the subscription price will remain at one dollar per year, every old subscriber is authorized to send his own renewal for one year and one new subscription for one year with one dollar to pay for both. In like manner two new subscribers will be entered, both for one year, for one Address Kansas Farmer Company, Topeka, Kans.

Special to Our Old Subscribers Only.

Any of our old subscribers who will send us two NEW SUBSCRIPTIONS at the introductory rate of fifty cents each, will receive any one of the following publications as the old subscribers may choose, viz., "Woman's Magazine," "Western Swine Breeder," "Vick's Family Magazine," "Blooded Stock," "Poultry Gazette," "Dairy and Creamery," or "Wool Markets and Sheep."

Miscellany

Growth of the Home Demand for Agricultural Products.

The increase in exports of manufactures and decrease in exports of agricultural products are discussed at considerable length in a report of the Chief of the Bureau of Statistics of the Department of Commerce and Labor. During the year ending June 30, 1904, for the first time in the history of the export trade of the United States, manufactures exceeded \$450,-000,000, and agricultural products for the first time fell below 60 per cent of the total domestic exports. The total exports of domestic manufactures were \$452,445,629, against \$407,526,159 in 1903, and \$433,851,756 in 1900, the highest record in earlier years. The total value of agricultural products exported was \$853,685,367, against \$873,322,882 in 1903, and \$943,811,020 in 1901, when the highest total of agricultural exports was recorded.

Comparing conditions in 1904 with those of a decade earlier, it may be said that the exports of agricultural products were \$853,685,367 in 1904, compared with \$628,363,038 in 1894, an increase of 35.86 per cent, and the exports of manufactures in 1904 was \$452,445,629, compared with \$183,718,-484 in 1894, an increase of 146.24 per cent. Agricultural products formed 59.48 per cent of the export in 1904, 72.28 per cent in 1894, and 73.98 per cent in 1884, while manufactures formed 31.52 per cent of the total exports in 1904, 21.14 per cent in 1894, and 18.81 per cent in 1884.

The gain in manufactures over agricultural products in the export trade



of the country is shown in the fact that in 1874 manufactures exported amounted to but about one-fifth as much in value as agricultural products exported; in 1884 their value was about one-fourth as much; in 1894 nearly one-third as much, and in 1904 more than one-half as much as that of the products of agriculture, while in the closing months of the year, May and June, manufactures for the first time in the history of our commerce actually exceeded agricultural products in value of exports.

This decrease in the value of agricultural products exported is the more striking when it is considered that the export price of cotton averaged higher during the year than in any prior year for more than a quarter of a century, and that the value of raw cotton exported was greater than in any preceding year, and formed nearly onehalf of the total value of agricultural products exported. The average price of the cotton exported during the year was over 12 cents per pound, the highest annual average since 1875, and the total value of the cotton exported was \$370,810,246, a sum greater than that representing the value of cotton exported in any preceding year.

An analysis of the exportations of agricultural products shows that they are chiefly composed of three great groups of articles-raw cotton, provisions and live animals, and breadstuffs. During the decade ending with 1903, cotton formed 32 per cent of the agricultural exports and 21 per cent of the total exports; breadstuffs, 29 per cent of the agricultural exports and 19 per cent of the total exports; while provisions and live animals formed 28.5 per cent of the agricultural exports and 18 per cent of the total exports, and agricultural products as a whole formed 65 per cent of the total exports of domestic products. In 1904, however, cotton formed 43 per cent of the exports of agricultural products and 25 per cent of the total domestic exports; provisions and live animals formed 26 per cent of the agricultural and 15 per cent of the total exports; and breadstuffs formed but 17 per cent of the agricultural and 10 per cent of the total domestic exports; while agricultural products as a whole formed 59.48 per cent of the total domestic exports. During the decade ending with 1903 manufactures formed 27 per cent of the total domestic exports; in 1904 they formed 31.5 per

In a word, breadstuffs, which formed 19 per cent of the domestic exports in the decade ending with 1903, formed but 10 per cent in 1904; provisions and live animals, which formed 18 per cent in the decade ending with 1903, formed 15 per cent in 1904; cotton, which former 21 per cent in the decade ending with 1903, formed 25 per cent in 1904; agricultural products as a whole. which formed 65 per cent of the total exports in the decade ending with 1903, formed but 59.5 per cent in 1904; and manufactures, which formed 27 per cent during the decade ending with 1903, formed 31.5 per cent in 1904.

The reduction in quantity of agricultural products exported occurs in all of the three great groups which make up the bulk of the agricultural -breadstuffs, provisions, and live animals, and cotton; but the chief reduction is in breadstuffs. The quantity of cotton exported in 1904 is less than in any year since 1896, and about 500 million pounds below 1902 and 1903, though the high price has made the total value greater than in any preceding year. In provisions and live animals there is also a slight reduction as compared with recent years. The chief decrease, however, is in breadstuffs, which show in 1904 the smallest total since 1896, although the export prices of wheat in 1904 have averaged higher than those of any year since 1892, with the single exception of 1898. and those of corn have also been much above the average of the past decade. The quantity of wheat exported in sup expe

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1904 is less than in any year since 1891, being in round terms 120 million bushels, including flour in terms of wheat; and the quantity of corn exported was less than in any year since 1895, with the exception of the year following the short crop of 1901.

The reduction in the exportation of wheat in the fiscal year 1904 to a point below that of any year since 1891 can not be charged to a shortage in production in the preceding year, since the wheat crop of 1903 was larger than the average of the last five years, and was the largest in the history of the country, with the exception of the crops of 1898, 1901, and 1902. The wheat crop of 1904 was but 33 million bushels below that of 1903, while the exports of the fiscal year 1904 fell 82 millions below those of 1903, the reduction in exports in the fiscal year 1904 being much greater than the crop reduction of the calendar year 1903.

The reduction in exports seems to be due chiefly to the steadily increasing consumption by the home population, while the further fact that the supply of several of the other wheatproducing countries of the world was unusually large in 1903 reduced to some extent the European demand upon the United States and furnished wheat to the European market at prices below those made in the United States by the growing demands upon the home market. A study of the table of wheat production, imports, exports, and amount retained for domestic consumption during the period from 1880 to 1904 seems to fully justify the above conclusion-that the reduction in exportation of wheat is due to the increased home consumption. The crop of 1903 was much above the average of the past decade, or even of the quinquennial period ending with 1903, having been exceeded in only three years in the history of the country. Yet the percentage of this crop which was exported was less than that of any year's production in the period covered by the table, although the erop from which it was drawn was, as already indicated, far above the average and only surpassed in three earlier years in the history of the country.

An examination of the column which shows the consumption of wheat per capita indicates that the total per capita consumption in 1904 was 6.32 bushels, an average larger than that of any earlier years except 1902 and 1883, while the column showing total consumption indicates that the quantity of wheat retained for consumption in the United States in the year just ended exceeded that of any earlier year, being 517,094,322 bushels, against 513,-687.703 bushels in 1902, the first year in which the quantity of wheat retained for domestic consumption had ever reached as much as 500 million bushels.

Among the causes of the increased home consumption of the domestic supply of breadstuffs may be mentioned the growing use of "cereals" of various sorts upon the breakfast table among nearly all classes of citizens. While no accurate measurement of the quantity of grain consumed in this manner is available, the rapid growm in the use of food preparations of this character is so well established that there can be no doubt that considerable quantities of grain are utilized in this manner and probably displace, to some extent, foods of other varities formerly used. The census report of $1900~{
m shows}$ that the value of articles classed as "food preparations" 'produced in the United States was \$38,-457,651 in 1900, against \$14,105,485 in 1890, and \$2,493,229 in 1880, while the value of material used in the manufacture was \$23,675,165 in 1900, against \$8,129,925 in 1890, and \$1,604,660 in

The reductions in the quantity of breadstuffs, provisions, and cotton exported in recent years, and especially in the last year, can not be due either to short crops at home or low prices abroad. The corn, wheat, and cotton crops of last year were not below the average, and, as already shown, the export prices have been far above the average and in most cases exceptionally high. The chief reason for this steady reduction in the share which agricultural products form of the total exports is evidently the increasing demand in the United States.

The quantity of wheat retained for consumption in the United States never reached 275 million bushels prior to 1880. In 1881 it passed the 300-million line and slowly increased with the population; in 1899 it was over 400 million bushels; in 1902 it exceeded 500 millions; and in the fiscal year ending June 30, 1904, was 517 million bushels-a greater total than in any preceding year. These figures assume grave importance when it is remembered that the 1904 wheat crop will scarcely exceed 500,000,000 bushels, i. e., will fall rather short of the quantity consumed in the year ending June 30.

The domestic consumption of cotton also shows a like increase. Prior to 1883 the total number of bales used by the mills of the United States never reached so much as 2 millions. By 1893 it exceeded 3 millions, aid in 1902 the total exceeded 4 millions, and meantime there has been an enormous increase in the importation of Egyptian cotton.

While no figures of the quantity of provisions produced by years are available, the figures of the Department of Agriculture show a marked increase in the number of farm animals utilized for provisions, comparing 1904 with 1900, while the export figures show a smaller exportation of provisions in 1903 and 1904 than in any year since 1899, thus indicating an increased consumption of provisions, as well as of wheat, corn, and cotton.

Other statistics of production and exportation also indicate a large increase in the consuming capacity of the domestic market. The coal production of the country has increased from 152,447,791 tons in 1894 to 319,-068,229 tons in 1903, according to the preliminary figures of the Geological Survey, having thus more than doubled during that period, while the increase in coal exportation during that time was less than 3 milion tons.

The production of pig iron has increased from less than 7 million tons in 1894 to 18 million tons in 1903, yet the exportation of pig iron in 1903 was only about 18,000 tons, indicating that practically all of the enormously increased production was utilized at home for the manufacture of finished products of iron and steel, of which the exportations have grown from \$29,-220,264 in 1894 to \$111,948,586 in 1904.

Irrigation in Northern Italy.

Irrigation has been practiced in this country little more than 50 years, while in Italy it has been practiced for more than 500 years. For the purpose of determining what could be learned in Italy which could be applied to our own problems, Dr. Elwood Mead, Chief of Irrigation and Drainage Investigations of the Office of Experiment Stations, U.S. Department of Agriculture, spent the summer of 1903 in the valley of the Po. A partial report of Dr. Mead's observations has just been issued by the Department of Agriculture as Bulletin 144 of the Office of Experiment Stations. No attempt was made to make this an exhaustive monograph upon irrigation in Northern Italy, but the study was made solely from the standpoint of obtaining suggestions for American irrigation practice.

Contrary to a very common opinion, the valley of the Po is not an arid region. The annual rainfall at Milan, the chief city of Lombardy, is more than 40 inches, greater than that of Cincinnati, Ohio, or Omaha, Neb., both of which are situated in regions where irrigation is seldom considered in connection with agriculture. The climate of Lombardy is not different from that of the Mississippi Valley, and the crops raised, with few exceptions, are the same. Notwithstanding this large rainfall and the fact that crops can be successfully raised without irrigation. the plains of Lombardy are a network of canals and drains. To secure the construction of one of the canals, the city of Milan gave a bonus of \$400,-000. This canal cost \$6,000,000, or \$37.50 for each acre of land that can be served by it, It supplies water to Blue Valley Creamery Company

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Agents for the Celebrated Empire Cream Separator.

8,000 farmers, who pay from one to two dollars per acre per year for wa-Some of this land supports as many as 800 people per square mile, and has increased in value since the building of the canal from 60 to 100 per cent, land which formerly sold for \$100 being worth from \$160 to \$200

Under the Vettabbia Canal which uses the sewage from Milan, meadows yield an annual crop worth \$300 per acre. Some of the fields have been used for meadows continuously for 700 years. Annual rentals for these lands are more than \$25 per acre. Sewage has been used on these fields for centuries without injury to the lands or to the healthfulness of the community. This great rise in land values and increase in productivity of lands, due to irrigation, in a region with a rainfall equal to that of the southern half of the Mississippi Valley and a climate no more favorable to crop production, leads to the conclusion that in irrigation this section has a means of at least doubling the present yield from

In Piedmont, which has an annual rainfall of more than 30 inches, or about the same as Eastern Nebraska and Kansas, the Italian Government has built nearly a thousand miles of canals and expended about \$20,000,000 for irrigation works. The annual income from the Government canals in this Province is nearly \$600,000. Pumping plants have been established to raise the water to lands above the Government canals. One of these was put in at an expense of \$47 per acre for the lands irrigated, in addition to which the farmers are required to pay the annual maintenance expense and \$82 per year for a cubic foot of water per second: Irrigated land supplied by this pumping plant is worth three times as much as unirrigated land ad-Under another pumping plant the annual expense to the farmers is \$5.80 per acre, in addition to \$10 per year for a sinking fund, making an annual charge upon the farmers of nearly \$16 per acre. And this also in a region where crops can be raised successfully without irrigation.

The Italian Government disposes of water directly to farmers at retail in some sections, and in others sells it to cooperative associations of farmers. One such association has 14,000 members, operates 9,600 miles of ditches, has 266 miles of telephone and telegraph lines, supplies water to 141,000 acres, and does an annual business of \$600,000. Eighty water masters are employed by the association to distribute the water to its members. The farmers in this association pay from \$1.60 to \$9 per acre per year for water, according to the distances of their land from the main canal and the crops raised.

In addition to giving information as to the organization of the industry in Italy, the bulletin describes the principal canals of Lombardy and Piedmont, and gives details as to the structures for diverting water and carrying it over or under the streams or canals crossed. Drawings and photographs of a large number of structures are given.

Italian engineers have given more attention to the measurement of water than any other body of men in the world. The bulletin describes the methods of measurement of water in use along the Po, and gives a general discussion of the subject of water measurement.

The most striking points brought out by the report are the large expenditures for irrigation in a region where crops can be raised without it, the enduring and expensive nature of the structures, and the efficient cooperation of irrigators in using water and in canal management. Along each of these lines Italian experience is full of suggestion for those interested in American irrigation.

This bulletin can be secured on application to the Director of the Office of Experiment Stations, or the Chief of the Division of Publications, of the U. S. Department of Agriculture.

A Japanese bride gives her wedding presents to her parents as a slight recompense for the trouble they have taken in bringing her up.

News from Dan Patch.

News from Dan Patch.

Minneapolis, Minn., September 23, 1904.
Editor Kansas Farmer:—Yesterday at my farm I gave Dan Patch five miles of jog work. He has entirely recovered from his illness and is strong and vigorous. Impaction of the bowels does not usually leave any bad effects, and we expect Dan to be at the top of his speed at Springfield, Ill., October 6. He will also fill several other dates after the Illinois State Fair, and we believe he will go some sensational miles before the close of the season. You can imagine that I am extremely happy to report these conditions in view of the fact that Tuesday evening, September 13, Dan was given up as beyond hopes of recovery by three veterinary surgeons at Topeka, Kans. He arrived at my farm Tuesday, September 20, where he has regained his strength very rapdidly.

M. W. SAVAGE.

Plummer's Poland-Chinas.

Plummer's Poland-Chinas.

On Thursday, October 26, commencing at 1:30 p. m., Mr. Wm. Plummer, of Barclay, Kans., will hold his twelfth annual public sale of high-class Poland-China hogs at Shady Nook Farm. Mr. Plummer has been breeding Poland-Chinas for twenty-six years. He has always been a careful buyer and breeder, and he feeis sure that the present offering will be fully equal to anything he has ever sold, and good enough to go in anybody's herd. He has made liberal provision for the entertainment of buyers from a distance and offers equally liberal terms to purchasers either for cash or on time paper. All sums under \$15 will be cash. All sums above that amount will be given six months on bankable paper at 6 per cent with a discount of 3 per cent on time note. His herd is headed by Perfection Lad 3368, by Perfection Style 29990, out of a daughter of One Price Chief 20114. The next herd boar is Chief Ideal 2d 28951, by Chief Perfection 2d, out of a daughter of L's Tecumseh. The third herd boar is American Royal 30783, by Corrector 26466, out of Sally S. 39291. The sale will consist of nine brood sows, thirty-six spring pigs and two fall boars. Barclay is on the main line of the Santa Fe, a short distance from such junction points as Topeka. Osage City, and Emporia, and it is hoped that there may be a large attendance of lovers of this breed to give this sale a good record as to what Poland-Chinas will be worth this season.

In the Dairy

Substituting Grain with Alfalfa in Feeding Dairy Cows.

PROF. A. M. SOULE, DIRECTOR VIRGINIA EX-PERIMENT STATION.

Feeding the dairy cow in the most economical manner hinges on the reduction of the concentrates necessary for maximum yields to the lowest possible point. The reason for this is apparent because the concentrates are by far the most expensive part of the ration. The comparative cheapness of concentrates-the by-products of the many forms of cereal foods manufactured in the United States, has rendered this part of the ration comparatively cheap in years gone by. With an increasing population and a greater demand for animal products in general, the price of concentrates is steadily advancing and food-stuffs that were commonly used a few years ago have now almost reached the prohibitive prices from the dairyman's standpoint. The discovery of some means by which the amount of concentrates required by the dairy cow can be reduced, has become a question of momentous concern to all who are interested in the dairy business. This question is of greater interest to dairy farmers of the South than to those in any other part of the country, because wheat, oats, and barley are not extensively cultivated in the South, hence these grains, or the by-products derived from them, are unusually high, and as cottonseed-meal does not give as good satisfaction when fed alone as in combination with some of these more expensive concentrates, the cost of maintaining the dairy cow has been steadily increasing. For a long time there seemed to be no solution to this difficult question, and the dairyman has blindly pursued the old policy of feeding high-priced concentrates at breakneck prices and endeavoring to cover the increased cost of production through a corresponding rise in the price of milk and butter. This might have gone on indefinitely but for the fact that the buying ability of the people has a final limit, which seems to have been reached in many sections.

Experiment station workers in many parts of the country have endeavored to find some substitute that could be utilized to replace a part of the expensive concentrates in a ration for the dairy cow. Investigations in the field of feeds and feeding have shown that foodstuffs, whether in the form of roughness or concentrates, may be appropriately divided into two classesthose rich in protein and those rich in carbohydrates. In feeding the cow it was long since ascertained that a ration rich in protein gave the best results, because the product of the cow is rich in that substance, and she requires a large amount of it for the proper nourishment of her body, as the best type of dairy cow is practically devoid of fat, her body consisting of a well-nourished set of muscles and a highly organized circulatory and nervous system. Under the circumstances, it was natural to look for a roughness that could take the place of a part of the concentrates among those plants that yield the largest amount of digestible protein. It was found that there were a whole family of these plants, known as legumes, suited to a wide range of culture. Among the number especially adapted for our conditions were the cow-pea, red clover, soy-bean, velvet bean and alfalfa.

Realizing the vital relation of the question at issue to the dairy industry, a systematic series of experiments were commenced at the Tennessee Experiment Station in 1902, for the purpose of ascertaining to what extent the substitutions suggested could be made and which of the several crops rich in protein could be grown and utilized to the best advantage for this purpose. At the present time experiments indicate that the cost of a ration for the dairy cow can be greatly reduced by utilizing one or more of these well-known leguminous crops in place of a

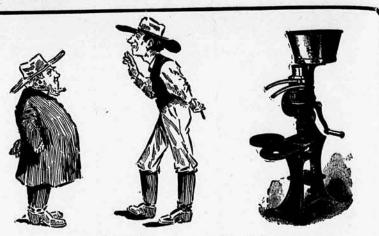
part of the concentrates. Thus, the greatest difficulty in the way of lowering the cost of milk and butter seems to have been solved; for while the South has not grown the leading cereals as freely as the naturally favorable conditions would warrant, the leguminous crops have been freely used and make not only large yields of grain, but a rich quality of hay as well. These crops are not more difficult to cure into hay than red clover where the process is understood. The compensating influences of nature have rendered it possible for the dairyman to substitute these excellent crops for a part of the expensive concentrates which he has hitherto fed and so reduce the cost of production in a gratifying degree. Thus, the most serious problem of the dairyman, namely, cheap grain, bids fair to be solved through the utilization of some of the crops mentioned, which also have the great advantage of improving the soil through the assimilation of atmospheric nitrogen, rendered possible by their association with certain forms of bacteria which thrive in the nodules growing on their roots.

Up to the present time the investigations have been confined entirely to the feeding of these foodstuffs in a dry condition in the form of hay, though provided the crops are fairly well matured when used for soiling purposes, there is no evident reason why they can not be substituted for a portion of the grain, even when fed in a green condition. This question opens up another field of investigation that has been considered to some extent in the past, and will receive more careful consideration in the future, for, of course, the hay is best fed in conjunction with silage during the winter season, and as it frequently becomes necessary to feed soiling crops during a part of the summer, this side of the question is worthy of attention.

CAN ALFALFA BE UTILIZED?

Before passing to the general consideration of the results of the experiments, it will not be inappropriate to say a few words with reference to the cultivation of alfalfa, a crop which promises great things when rationally handled. This crop has been a great success in the Western country, but a large number of failures have been recorded in the Eastern and Southern States. It was believed for a long time that the crop was not suited to our climatic conditions, but recent investigations would seem to indicate that the trouble was not so much due to the climate, but rather to the soil which did not contain the bacteria which live in the nodules on its roots and give it the power of assimilating atmospheric nitrogen, without which it can not grow and thrive for an indefinite period. The soils of the South are, as a rule, deficient in vegetable matter and hence low in available nitrogen. When the alfalfa plant is not inoculated it draws on the nitrogen supply in the soil. When this is exhausted the crop dies out and disappears. Such, at least, has been the experience of many who have endeavored to cultivate it. By inoculating the soil properly, a very simple operation, enriching it with vegetable matter in the form of farmyard manure or cowpeas plowed under, good stands of alfalfa have now been obtained on many upland farms, and the crop succeefully utilized for hay for several years past. Alfalfa likes a rich soil and will give its best results on bottom lands that are not subject to prolonged overflows, but on thoroughly prepared clay uplands, carefully subsoiled, cultivated and enriched, as indicated, there is no reason why it can not be grown under a great variety of conditions. It is more likely to succeed on stock farms because of the abundance of farmyard manure available for the enrichment of the soil and the growing

One of the chief difficulties experienced by alfalfa-growers has been the destruction of the stand while young through the encroachment of crabgrass. This difficulty can be obviated by preparing the land and seeding early in the fall. It is proper to say at



"Joe, what's the best thing on your farm?"

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C. E. STYLES, A. G. P. A., Kansas City, Mo

F. E. NIPPS, Ticket Agent, Topeka, Kans.

WHEN WRITING ADVERTISERS PLEASE MENTION THIS PAPER.

this time that greater care must be exercised in the preparation of the soil and the general management of the crop than has been accorded the lands which grow red clover fairly well, or failure is almost certain to follow; but alfalfa is so rich in digestible protein and such an invaluable food, that every effort should be made to secure a stand of it where live stock growing is a matter of any considerable interest. The soil may be inoculated through the use of 200 pounds of earth from a field where alfalfa has grown successfully for several years. Use twenty pounds of well-cleaned, tested seed per acre, mix with the soil and distribute uniformly over the ground and cover with some light surface-working implement. Do not sow with a nurse crop. The results of trials on the station farm from spring and fall seeding do not show any marked difference in yield, but fall seeding is an advantage because the crop may be cut for hay the following spring and no serious trouble is experienced with crab-grass, whereas, if sown in the spring crabgrass and noxious weeds are likely to destroy the stand and the crop must be simply clipped the first year and not cut for hay. Our investigations have now proceeded far enough to warrant us in making the statement that under the system of treatment outlined, alfalfa can be grown with fair success on upland soils and with satisfactory results on rich first and second bottoms. On the two plats grown on the station farm, No. 1 made a yield of 7,810 pounds of hay and 4,010 pounds of green feed; No. 2 made 6.365 pounds of hay and 15,015 pounds of green feed in the notably dry summer of 1903. The alfalfa looks well at the present time and promises to yield as well, if not better, than last year.

It has been deemed proper to devote space to this subject to show the farmer that he has every reason to give the cultivation of alfalfa serious attention, and that in experimenting we have not been using a crop which could not be rendered available on many dairy farms in the State.

COMPARATIVE VALUE OF COW-PEAS AND ALFALFA.

Alfalfa and cow-peas resemble each other in composition very closely. A ton of alfalfa hay contains 1,832 pounds of dry matter, 211.6 pounds of digestible protein, 746.6 pounds of carbohydrates and 27.6 pounds of fat. A ton of cowpea hay contains 1,786 pounds of dry matter, 215.8 pounds of digestible protein, 768 pounds of carbohydrates and 30.2 pounds of fat. Thus, it is not surprising that the results of substituting these two foods for cottonseed-meal



P. M. Sharples West Chester, Pa.

The Sharples Co.

Chicago, III.

and wheat bran should be practically the same when the composition which is shown in the following statement is considered:

Dry matter.
Cottonseed-meal. 1836
Wheat bran ... 1762
Cow-pea hay ... 1786
Alfalfa hay ... 1832

A ton of wheat bran contains 244 pounds of protein, 784 pounds of carbohydrates, and 54 pounds of fat, which is practically the same amount of carbohydrates and about twice as much fat, and some thirty pounds more protein than a ton of alfalfa. Cow-pea hay is slightly richer in protein and fat than alfalfa, and hence more nearly approaches the composition of wheat bran. A ton of cottonseed-meal, the richest concentrate known, contains 744 pounds of protein, 338 pounds of carbohydrates and . 244 pounds of fat. It is not a well-balanced food as shown by its composition, and though it contains more than three times as much protein and more than eight times as much fat as alfalfa, from 5 to 10 pounds of the latter can be used to replace 3 to 4 pounds of cottonseed-meal in a ration for dairy cows with satisfactory results, due to the appetizing nature of the alfalfa hay and to the variety it gives to the ration. From a purely theoretical consideration of the substitution of alfalfa and cow-pea hav for wheat bran and cottonseed-meal, it would seem reasonable that the substitution can be effected within certain limits. Our practical tests confirm this opinion.

(To be continued.)

Cured Milk Fever.

EDITOR KANSAS FARMER: - I received a sample copy of your paper last week and was very much interested in an article taken from the Ohio Farmer on the "air cure" for milk fever in cows.

I have had a little experience this summer with that disease and what was the original "air cure," a drug then being used in connection with it. My first experience was with a cow of my own which calved about May 1. I was fearful she might take the fever, as she was a copious milker, so kept her in a dry lot the day after calving. I did not notice anything wrong with her through the day more than that she lay down most of the time; but at milking time in the evening she could hardly stand, and after staggering a few steps fell to the ground. I had never had any dealings with the disease, so went to a neighbor who told me of having read in Hoard's Dairyman of a new and very successful treatment that they were using in Wisconsin. The treatment consisted of 15 grains iodide of potassium dissolved in one quart of tepid water and injected into the udder through the teats; then finish by filling the udder with air, After which, thoroughly knead. In about thirty minutes, milk out clean and again fill with air, kneading as before. Repeat the air again for three or four times. By rubbing downward on the sides of the udder, the air can be easily ejected. Only in extreme cases will it be necessary to use a second dose of the drug.

The writer said in case the regular instruments were not obtainable, use a common bicycle pump and a milktube. These I could not procure and be ready for the operation before 11 p. m., and by this time she was so near dead that she could be handled any way without taking the slightest notice, and her eyes took on a glassy appearance as if dead. I can assure you I felt very foolish beginning operations upon a dead cow. However, I began, giving her one treatment of the drug and three only of the air. I retired at 12 o'clock expecting to find her dead in the morning. Imagine my surprise to see her up, eating. I have since tried the remedy more thoroughly.

A neighbor found one of his cows, just fresh, sick one morning at 6 o'clock; she was then so bad she could not get up. I did not get time to treat her till 3 p. m., at which time she seemed barely alive; yet in just two hours and five minutes she got up and walked a quarter of a mile to the barn ready to fight anything in sight. I





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treated her as 'I had my own excent that I worked continuously with the kneading and filled the udder with every few

I had a splendid chance to test the treatment and am gratified beyond measure at the result obtained. The owner of the cow thought it miraculous, as indeed it seemed.

Again-another neighbor had a cow taken with fever a day or two after calving. In this case I got there before she was so had and in one hour and twenty minutes she was on her feet starting for the pasture—a well cow. Another of my neighbors tried this remedy with the same result.

Four cows-three very bad-cured in as many months in a radius of two miles, demonstrate conclusively to my mind that this is indeed a wonderful OSCAR WINSLOW. remedy.

Tonganoxie, Kans.

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First, hardly to sleep a wink all night, second, to lie awake a long time before falling asleep: third, to fall asleep soon. waking up after several hours and then

find it hard to sleep again. They mean that somewhere in the nerve fibres, somewhere in the brain cells, somewhere in the blood vessels that carry blood to the brain, something is radically wrong, and must be righted. or the end may be worse than death.

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They indicate diseases which may lead to Epilepsy, Fits, St. Vitus' Dance, Nervous Prostration, Paralysis, Insanity. Nothing will give such quick and lasting relief as Dr. Miles' Nervine.

"My husband had been sick for weeks, could not sit up to have his bed made. With all the medical help we could get he continued to grow worse. He could neither sleep or eat. Our baby girl was sent away, and all callers barred, because he could not stand a bit of talking. I read of a case of nervous prostration cured by Dr. Miles' Restorative Nervine. We began giving it to him, and in a few days he was able to be dressed. From that time he steadily improved. Nervine saved his life."—MRS. A. G. HASKIN, Freeville, N. Y.

FREE Write to us for Free Trial Package of Dr. Miles' Anti-Pain Pills, the New Scientific Remedy for Pain. Also Symptom Blanis. Our Specialist will diagnose your case, tell you what is wrong, and how to right it, Free. DR. MILES MEDICAL CO. LABORATORIES, ELKHART, IND.

The Poultry Hard

CONDUCTED BY THOMAS OWEN.

Roup.

EDITOR KANSAS FARMER:-In the last issue of the Kansas Farmer a correspondent asks for a remedy for the roup. In the first stages I have always found that a little sulfur blown down their throats would effect a cure. When the heads swell up and they have an offensive odor, carbolic acid and glycerine in equal parts rubbed on the heads and in the nostrils will cure them. Roup is nearly always caused by overcrowding. The chickens get too warm and take cold the same as a human being will by getting too warm and cooling off sud-MRS. ELLA STEWART. denly.

Coffey County.

Poultry Judges for the Universal Exposition.

The names of the following judges have been presented to the exposition to officiate at the World's Fair Poultry Show, October 24, November 5, 1904, and it is expected that these nomina-

tions will be confirmed: Philander Williams, Taunton, Mass.; F. J. Marshall, Atlanta, Ga.; Sharpe Butterfield, Windsor, Ontorio; Thomas F. Rigg, Iowa Falls, Iowa; Charles H. Rhodes, Topeka, Kans.; Henry Berrat, San Jose, Cal.; Charles T. Cornman, Carlisle, Pa.; George Burgott, Lawton Station, N. Y.; Charles McClave, New London, Ohio; W. R. Graves, Springfield, Mass.; W. C. Denny, Rochester, N. Y.; Geo. D. Holden, Owatowna, Minn.; M. F. Delano, Millville, N. J.; C. A. Emry, Carthage, Mo.; James Tucker, Concord, Mich.; Eugene Sites, Elyria, Ohio; D. T. Heimlich, Jacksonville, Ill.; W. S. Russell, Ottumwa, Iowa; S. B. Johnston, Fairland, Ind.; F. H. Shellabarger, West Liberty, Iowa.

Poultry Advice.

EDITOR KANSAS FARMER:-It being the time when many people are thinking of buying thoroughbred fawls for breeding purposes, I think it a very good plan to look over the advertising columns of farm papers. Some breeders want to dispose of their breeding pens and sell them at a bargain to make room for their young stock. This is the way I got my first pen of White Langshans. I had been breeding the Black Langshans for a number of years, and liked them so well I thought I would like to have the white ones also; and seeing them advertised, I bought them. I thought I would not get many eggs from them because they were old hens and some were molting at the time and looked rough. But to my surprise, when they got their new coat of feathers they looked splendid and began to lay and proved to be good layers. From this pen of four hens I have sold a number of eggs and have a good start of fine thoroughbred White Langshans. If there are any among your readers who are thinking of buying breeders, I advise them not to be afraid of buying hens that have been used two or three years. Because some good breeder has bred from them is good evidence that they are good breeding stock. My advice is to select a pen of choice of old hens and mate them to a good strong cock, and you will never regret MRS. JOHN COOKE.

Greeley County.

Overcrowding the Poultry-House.

With the approach of the fall season there is one feature of poultry-keeping that should have the attention of every one, and that is overcrowding. Experience the world over has taught the poultryman that the most profitable way to house his poultry is to have them not exceed twenty-five to thirty hens in one colony and provide not less than four feet of floor space to each hen. When poultry are housed this way and kept within doors all winter there are usually good returns. If they are crowded the poultry will not do well, the egg-yield will be very

limited and the hens will scarcely pay for their keep. The colder the weather is, the more hens you can keep together without harm, but cleanliness and perfectly sanitary conditions are absolutely necessary to keep them in good health. If you keep the poultryhouse perfectly clean and keep the hens busy in scratching for their feed. you can keep a good many more of them in one building and keep them healthy, than you could by letting the poultry-house take care of itself.

Poultry Notes.

The cool nights we have been having recently admonish us that real cold weather will soon be upon us and that it is essential that our poultryhouses be in good condition to winter our chickens. All cracks should be covered with tar-paper and the roof made perfectly tight so that no water or snow may come through it.

The flock should now be thoroughly examined and all poor birds sent to market. Do not keep any but those you wish for breeders next season, for it is but a waste of money to feed non-producers all through the winter. The extra weight that they gain will not pay for their feed. Send all your

culls to market at once.

During our late poultry display at the State Fair, we noticed that many fowls got to feather-pulling, especially among the Leghorn varieties. This is caused by being taken from a free range and cooped up in a small space where they can not get any animal food or much exercise. Hens in idleness learn feather-pulling, egg-eating, and gather an excess of fat which counts very much against the eggyield. If they are always kept busy winter and summer scratching and hunting and digging for their food they will do much better. Where they have free range during the summer months there is not much danger of feather-pulling, but the trouble will come when the change comes from outdoor life to indoor life. theory has been advanced of late that strips of fat pork put in the poultryhouses for the hens to dig at will keep them from feather-pulling. It will undoubtedly help toward that end. A pluck of liver and lights, or a cabbage hung up in the house, where the hens can pick at them, will also help materially, in fact anything that will tend to keep them busy, will turn their heads from evil doing.

Chickens, ducks, and turkeys can be fattened in the fall quicker and better if fed upon well-prepared mash food that is strong in flesh-forming and fatforming qualities, than on whole grains. Ground oats, ground meal, some wheat middlings, boiled potatoes all mixed up with hot water and then allowed to swell and cool, make a fine mixture for preparing these fowls for market in the best condition. Turkeys do best if fed on whole corn or wheat. Chickens, ducks and geese will stand confinement while being fattened but turkeys never do well under the same conditions. They must have a certain amount of freedom on a range or they do not finish well for market.

Entries for the Poultry Show of the Universal Exposition

Started late and came very slowly until near the time for closing, then they came in such numbers as to overwhelm the clerical force and make it impossible to record them in the order of their arrival. Many entries are yet unclassified, but enough is known to announce that this will be the greatest collection of poultry and pigeons the world has ever seen. The time for closing pigeon entries has been extended to September 25, but many entries of pigeons are already here and more are arriving daily from all over the country, also entries of some foreign birds.

Of chickens, turkeys, geese and ducks, more than seven thousand have been recorded as entered and the coop fees paid and the list now ready ahead of the entry clerks warrant the announcement that the number of these, exclusive of the pigeons, will considerably exceed eight thousand.

So far as entries have been booked. forty-one States, Territories and for-

eign countries are represented. Missouri leads in the number of entries with nearly one thousand birds, canada, Illinois, and New York following in the order named, and all three competing closely for second place.

Ohio, Indiana, Wisconsin and Pennsylvania constitute the next group of competitors, and they are closely "bunched." New Jersey, Iowa, Massachusetts, California, Michigan, Nebraska, North Carolina and Connecticut follow closely in the order named and the size of their entries may be estimated by the fact that each of these eight States has paid in from \$100 to \$200 in coop fees.

Kansas, Arkansas, Kentucky, Minnesota, Texas and Georgia constitute the next group of close competitors. New Hampshire, Rhode Island, Tennessee, Alabama, Indian Territory, Louisiana, West Virginia, Maryland, Oklahoma, Mississippi, Maine, Oregon, South Carolina and Colorado, each make good entries, in the order named as to number.

Unclassified entries are still before the entry clerks and it is hoped that among them may be found entries from Vermont, Delaware, Virginia, Florida, the Dakotas, Washington, Montana, Nevada, Utah, Arizona, and New Mexico. This would complete our list of States, but let it be remembered that this is a World's Fair Show, and that birds are entered direct from several foreign countries, and that numerous importations have been made to show here.

It is a source of much satisfaction to this department to note that this will be emphatically a show of the practical and useful varieties. It is regretted that there are not still larger entries in some of the fancier varieties of games, polish, turkeys, geese, and ducks. Some of the lower prizes in these may not be claimed, a condition that may be attributed to the apathy of the fanciers and specialty clubs of these varieties. But the progressive fanciers in these lines who are entering bids from remote points will simply win their larger prizes the easier.

The entries in the leading varieties are simply astounding and the poultry public will have an opportunity here to study these useful and beautiful varieties on a scale never before seen, in the battle of the breeds which will be waged here in October and November, there will be more than sixteen hundred Wyandottes, more than thirteen hundred Plymouth Rocks and more than one thousand Leghorns. Besides these three classes, there will be more than eight hundred Asiatics and enough Orpingtons, Minorcas and Rhode Island Reds to make the show of the American, Mediterranean, Asiatic and English classes alone exceed six thousand birds.

In the variety contests the White Wyandottes are far in the lead, Buff Plymouth Rocks, White Plymouth Rocks, Single Comb White Leghorns, Barred Plymouth Rocks, Single Comb Brown Leghorns, Silver Wyandottes, Light Brahmas, Buff Wyandottes, Single Comb Black Minorcas, Single Comb Buff Orpingtons, Golden Wyandottes, Partridge Wyandottes, Single Buff Leghorns, Rose Comb White Leghorns, and Buff Cochins following in the order named, these sixteen varieties entering from one hundred to eight hundred birds each.

The Wyandottes come from twentynine different States ranging from New Hampshire to Texas, and some from across the seas. The Plymouth Rocks are from twenty-four different States, from Massachusetts to California, from Canada to Texas. The Leghorns are from twenty-four States, the North and South, East and West being all represented. California makes a large entry of Leghorns. The Rhode Island Reds are no longer limited to the State of their origin, they are entered from twelve different States. In Bronze turkeys eight different States are in competition. In Pekin ducks, seven; and in Toulouse geese, six.

Now let all who have entered remember that it will be well worth their trouble and expense to have their birds here and catalogued even though they do not win a prize:

POULTRY BREEDERS' DIRECTORY

FOR SALE—A few Rose Comb White Leghorn cockerels, 50 cents. Mrs. John Hill, Vinland, Kans.

TO GIVE AWAY at farmers' prices, 100 three, and four-months-old 8. C. Brown Leghorn pullets, Write or call on H. C. Short, Leavenworth, Kans.

S. C. BROWN LEGHORNS—Pullets all sold, but some fine cockerels left at reasonable prices; also three cocks. J. A. Kauffman, Abilene, Kans.

NEOSHO POULTRY YARDS—Rose Comb R. I. Reds and Buff Orpingtons; this year's breeders for sale at half price, if taken soon. Also some fine young stock. Prices reasonable. J. W. Swatt,

TO GIVE AWAY-50 Buff Orpingtons and 50 Buff Leghorns to Shawnee county farmers. Will buy the chicks and eggs. Write me. W. H. Max. well, 921 Topeka Ave., Topeka, Kans.

BARRED PLYMOUTH ROCK EGGS, 50 for \$2,25; 100 for \$3.75. Adam A. Weir, Clay Center, Neb

SPECIAL SUMMER PRICES on my Superior Strain Barred Plymouth Rocks: 15 eggs, 60c; 30 eggs, 41; 100 eggs, 43. E. J. Evans, Box 21, For Soots, Kans

ROSE COMB RHODE ISLAND REDS-Superb in colors. Extra fine layers, mated for best results Eggs \$1.50 per 15. L. F. Clarke, Mound City, Kans

WHITE HOLLAND GOBBLERS-From first prize stock, \$4 each. E. W. Melville, Eudora, Kans.

SCOTCH COLLIE PUPS—Four more litters of those high-bred Collies, from 1 to 3 weeks old, for sale. Booking orders now. Walnut Grove Farm H. D. Nutting, Prop., Emporia, Kans.

COLLIE PUPS FOR SALE—Send for circular W. B. Williams, Stella, Neb.

WHITE WYANDOTTES

White ones, pure-bred, and good layers. Eggs, \$1 and \$1.50 per sitting. ALVIN LONG, - - Lyons, Kans

PARK VIEW FARM

I will sell young stock, Mammouth Imperal Pekin ducks, at greatly reduced prices if taken with-in twenty days. The parent stock is from the best flocks in the United States. Address O. E. Walker, Route 8, Topeka, Kans.

GEM POULTRY FARM

Stock and eggs for sale at all times. Buf lymouth Rocks and Bronze Turkeys. Quality the very best.

C. W. PECKHAM,

Haven, Kansas.

White Plymouth Rocks EXCLUSIVELY.

Three Grand Yards of the Best Strains in the Country.

White Plymouth Rocks hold the record for egg laying over any other variety of fowls; eight pullets averaging 289 eggs each in one year. I have some breeding stock for sale at reasonable figures. Eggs in season, \$2 per 15, express prepaid anywhere in the United States. Yards at residence, adjoining Washburn College. Address

THOMAS OWEN, Topeka, Kansas.

POULTRY SUPPLIES

Creo-carbo (lice killer)...... 500 STURTEVANT'S Medicated Nest Eggs..... 50

OWEN & COMPANY

520 Kansas Ave., Topeka, Kans.



All our Fine Breed

ers of this season, also Spring Chicks for sale after the first of June. Barred Rocks, White Rocks, Buff Cochins, Par Rocks, White Rocks, Buff Cochins, Parvidge Cochins, Light Brahmas, Black Langshans, Silver Wyandottes, White Wyandottes, Silver Spangled Hamburgs Black Minorcas, S. C. Brown Legherns, and Belgian Hares. Buy the bestnow at the lowest prices. Write your wants. Circulars free. Choice Breeders and Show Birds.

A. H. DUFF, Larned, Kan ****************

WANTED AN HONEST MAN To manage a branch factory for the manufacture and sale of Poulty Mixture. A big money maker and hones, \$100.00 a month sure and a fortune to shustler. Investigate this. Reference exchanged. E. C. SINGERS, East St. Louis.

POULTRY TOPICS

is the real farmer's wife's poultry journal Issued monthly, 16 to 40 pages, beautifully illustrated, and containing articles by siccessful farm women who make multiples. cessful farm women who raise poultr. Sample free and a whole year's trial trip with us at 10 cents stamps or coin for the

POULTRY TOPICS, Lincoln, Neb.

Kansas Pavements and Paving Mate-

(Continued from page 967.)

satisfaction, a great deal of it has been frequently repaired, and some parts of it have been taken up entirely and two courses of brick substituted. The one course of brick paving cost from 70 to 85 cents per square yard.

The pavements of Chanute are entirely of brick. They have only been down about a year, but have the appearance of being a good and durable pavement. The pavement is mostly laid on six inches of crushed stone, with a cushion of one and one-half inches of sand. On this is laid one course of brick flatwise parallel with the curb, then another inch of sand and a course of brick laid on edge at right angles to the curb. Their first contract cost them \$1.57 a square yard, a later contract \$1.74, and they now have under contract some onecourse work at \$1.34 per square yard.

Pittsburg has nothing but brick, laid on four inches of cinders, the one layer of brick flat, then one inch of cinders followed by a layer of brick on edge. This pavement cost from \$1.25 to \$1.29 per square yard. Some of it has been down since 1890, is still in good condition, and has cost nothing to speak of for repairs.

The Wichita pavements consist of brick and asphalt, mostly asphalt. The brick pavements have had no repairs and, while quite rough, will last some years yet. There is considerable complaint of its noisiness. The asphalt pavement, laid about twelve years without a binder, has cost heavily for repairs. Douglas Avenue, which was paved with asphalt about ten years ago, using a binder course, is beginning to need considerable repairing. All pavement being put down this year in Wichita is under a ten-year guarantee.

Leavenworth has about six miles of paved streets, mostly brick with some sheet asphalt and some rock asphalt. They have been laying brick pavement since 1894 and most of it is in good condition, though on some streets the bricks are disintegrating and will have to be renewed in the near future. The pavement on Cherokee Street was laid in 1896-1897, using an old concrete base, and cost \$1.02 per square yard. This pavement is practically worn out. This condition is due to careless inspection, as the brick used were not completely vitrified. The brick pavements in Leavenworth have cost from 92% cents to \$1.51\% per square yard, according to the foundation used. Sheet asphalt was laid in 1900, and is in bad condition, and cost \$1.88 to \$1.98 per square yard. Two of their streets have been paved during the past season with rock asphalt at a cost of \$1.14 and \$2.10 per square yard, the difference in cost being due to the difference in foundation.

Topeka has 740,000 square yards, or 35.23 miles, of pavement divided as follows:

Natural lake asphaltum, 7.1 miles; brick, 22.58 miles; red cedar block, miles: Colorado standstone blocks, 2.4 miles; native limestone, 1.1 miles; macadam, .6 mile, making a total of 62 blocks. The total cost of pavement, including grading, curbing, etc., was \$1,700,000. The first pavement laid in Topeka was natural lake asphaltum, in 1887, at a cost of \$2.80 per square yard, with a guarantee for five years. Since the expiration of the maintenance bond, the city has paid over \$54,000 for repairs, or 10 per cent of the first cost.

Colorado sandstone blocks on sand Were laid in 1887-1889, at a cost of \$2.23 a square yard, and this pavement has given excellent satisfaction where there is heavy traffic, and has cost practically nothing for repairs. The red cedar block pavement was laid in 1887-1888, and it is in a failing condition and in a short time will have to be replaced. This pavement cost \$2.19 a square yard. Against the advice of the city engineer, the city council in 1890 paved Sixth Avenue, east, with native blue limestone blocks on sand. This pavement has almost entirely disintegrated, and will have to be replaced with other material. It cost \$1.40 per square yard.

The first brick pavement in Topeka was laid in 1890, at a cost of \$1.78 per square yard. This same kind of pavement is now costing the city from \$1.121/2 to \$1.18 a square yard. This pavement, during thirteen years, has cost absolutely nothing for repairs, and is giving general satisfaction. The method used is that of laying one course of brick flat on four inches of sand, roll this first course thoroughly, then a cushion of one inch of sand and a layer of brick on edge, roll this with a self-propelling roller weighing from four to six tons, fill all the interstices with clean, dry sand, and then cover the whole surface with one inch of sand and leave the sand on about thirty days, when it should be swept off.

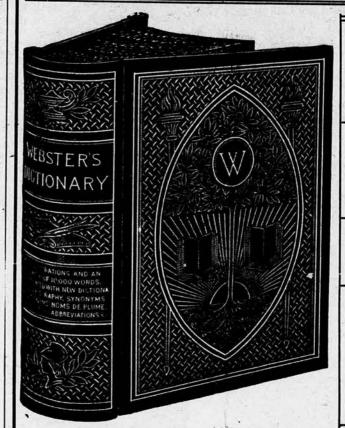
A great many cities pave with one course of brick on concrete, using a cement or tar-pitch filler. In the sections of the State where sand is plenty and paving brick are manufactured in the vicinity, in my opinion, the two courses of brick on sand is preferable, as the cost is considerably less, as well as the noise occasioned by traffic, and the pavement is easily and cheaply taken up and replaced in case of repairs, or alterations being needed as to water, gas or sewer pipes. Topeka has experimented with five

different kinds of pavement. Brick and sandstone blocks have been a success. Asphalt, while very favorable to travel and easily kept clean, has been very expensive to maintain; and red cedar blocks and native blue limestone blocks have been a failure. Taking everything into consideration, I believe the pavement for Kansas towns, where the traffic is not extremely heavy, is brick. It is cheap, the cost of maintenance is light, it is easily kept clean, consequently its sanitary qualities are excellent, and its ease of traction and favorableness to travel are fair. Aside from the merits of the case on the score of utility, durability, and cost, there are other reasons, financial in their nature, which deserve consideration. Shale, capable of making firstclass paving brick, is found in various parts of Kansas, and the making of paving brick is a large and growing industry. In Atchison there is a vitrified brick plant with a capital of \$45,000 invested, which manufactured 4,725,000 bricks this year. The Union Brick Company, of Iola, has a capital invested of \$125,000 and their capacity is 50,000 brick per day. The Law-rence Vitrified Brick and Tile Company has a capital invested of \$80,-000, makes 40,000 brick daily, and pays out for labor and coal alone \$4,500 each month. The Coffeyville Vitrified Brick and Tile Company has plants at Coffeyville, Cherryvale, Independence and Chanute producing paving brick. The combined capacity of the four plants is 20,000,000 brick per annum. The capital invested is \$500,-000 and they pay out for labor each year over \$64,000. Natural gas is used for fuel and costs about \$17,000 per

Two brick plants, the Capital City Vitrified Brick and Paving Company and the Rogers & Earnest Company, of Topeka, have \$110,000 invested in their plants, and spend annually for labor and coal \$85,000. Their capacity is about 70,000 brick per day. Ottawa and Salina have paving brick plants, but I have been unable to secure any information regarding their capacity or capital invested. The combined value of the plants mentioned, with the exception of Ottawa and Salina is \$860,000, and their annual capacity is 30.257.000 brick. The amount paid out annually for labor and fuel by The Coffeyville Vitrified Brick and Tile Company, The Lawrence Vitrified Brick and Tile Company and the two Topeka companies is \$220,000.

The brick made annually by the different brick companies mentioned will cover a surface of 302,570 square yards, using two courses, or 432,250 square yards with one course of brick. Using one course of brick on broken stone or concrete, it will pave a roadway twenty feet wide and 36.8 miles long, or the entire distance between Wichita and Winfield. In paving with brick, therefore, the money used is al-

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Kansas Farmer Co., Topeka, Kans.

most entirely kept within our midst, while the money paid for most other pavements is taken out of the State.

In conclusion, I wish to say that there are few things better calculated to enhance the appearance of a city than well-paved streets, which are kept in good repair and well cleaned. The comfort, convenience, and contentment of the inhabitants are also immeasurably increased thereby. Few subjects are more entitled to consideration by those who are interested in the advocacy of civic improvement, than measures which are designed to widen and increase the scope of street paving in our cities. Scarcely anything is more calculated to retard the growth of a city, or relegate it to a condition of stagnation and decay, than muddy or illy-paved streets. The forces which make for the upbuilding of a city in every material way, and the welfare of its inhabitants, will certainly not only shun such a city, but will inevitably drift into localities where the reverse is the rule.

Cancer-How J. S. Parke, of Iola, Kans., Got Rid of One on His Temple-His Experience with a Combination of Oils.

Iola. Kans., March 7. 1904.

Dr. D. M. Bye Co., Indianapolis, Ind.

Dear Sirs:—Please accept our sincere thanks for the personal interest you have taken in my case. We found your written instructions so plain and easy to understand that it was an easy task to apply your Treatment. And then we found the results just as you said they would be. Altogether it has been a very satisfactory job, and we are all delighted. There was scarcely any pain at all, every particle seems to be removed, and is is nicely healed over: a wonderful cure. While I am not writing this as a testimonial, I feel like I would like to tell all who are afflicted of such a good Treatment. So if you have the opportunity just tell them what a good cure it was, and I will gladly answer any who care to write to me about it. You understand, of course, that yours is not the first treatment I have heard of. There are hundreds of them, but yours is the first one I cared to trust. I have not expressed half of my appreciation of the cure, nor can I, but such work as yours done in a Christian spirit will surely receive a just recompense. With sincere wishes for your future success, allow me to remain, Yours very respectfully,
No 1103 East St. J. D. PARKE.

There is absolutely no need of the knife or burning plaster, no need of pain or dis-

No 1103 East St. J. D. PARKE.
There is absolutely no need of the knife or burning plaster, no need of pain or disfigurement. The Combination Oil Cure for cancers is soothing and balmy, safe and sure. Write for free book to the Home Office, Dr. D. M. Bye Co., Drawer 505, Indianapolis, Ind.

Why Rubber Boots Go to Pieces.

Why Rubber Boots Go to Pieces.

The accompanying illustration has become a familiar sight to readers of magazines and agricultural papers. Yet comparatively few know its significance. By reference to the advertisement of the Banner Rubber Company in these columns the same illustration will be found. It represents a test of the strength of the rubber that is used by this company in making their famous "Buckskin Brand" rubber boots and shoes. The weight of the boy is 110 pounds. A strip of rubber, cut from the sole of the boot, sustains this weight, and, in so doing stretches to more than twice its original length. The test is an actual, not a fancied one. Nothing but absolutely pure rubber could show such strength and elasticity. The illustration is happy and



most forcible. It embodies the whole argument of the manufacturers. Their rubber boots and shoes are pure rubber.

It is a well-known fact that adulterations and substitutes, so often employed to cheapen the cost of manufacture, have much to do with rubber boots and shoes "giving out." There is absolutely no wear in these substitutes. They are used for but one purpose: they make the cost less, the profit greater. Many wearers of rubber boots are painfully aware of the fact of little wear but are ignorant of the cause. The Banner Company employs no substitutes, no adulterations, no old rubber. Their footwear, made in great variety, such as duck boots, duck lumberman's overs, for socks and felt boots, arctics and light rubber shoes, etc., are all pure, new, Para rubber, the best quality to be obtained. The Banner Company is sending out to all asking for it an interesting little book, showing how rubber boots and shoes are made. To introduce their pure rubber goods in localities where they have no dealer, they also make an attractive offer to the first cne writing them. Any one taking advantage of this offer, should write direct to the factory at St. Louis. The advertisement givos correct address. Consult it before writing.

NO MONEY TILL CURED. 27 YEARS ESTABLISHED.
We send FREE and postpaid a 232-page freatise on Piles, Fistule and Diseases of the
Rectum; also 108-page liles, treatise on Diseases of Women. Of the thousands cured by
our mild method, none paid a cost till cored—we furnish their names on application. DRS. THORNTON & MINOR, 3969 Olive Street, St. Louis, Mo.

Kansas State Fair at Hutchinson.

Continued from page 963.)

Junior champion boar-Klever's Perfec-tion 2d (Poland-China), W. R. Peacock,

owner.
Senior champion sow—Fingers Off 2d
(Poland-China), John D. Marshall, owner.
Junior champion sow—Prize (Poland-China), W. R. Peacock, owner.
Best sow and five pigs—First to Sands on Berkshires; second to Maguire on Poland-Chinas; third to Crow on Duroc-Jerseys.

Band-Chinas, that to seek.

Best boar and five of his get—First to Marshall on Poland-Chinas; second to Bummell on Berkshires; third to Maguire on Poland-Chinas.

Exhibitor's herd—First to Marshall on Poland-Chinas.

Breeder's young herd—First to Peacock on Poland-Chinas.

HORSES.

GERMAN COACH.

J. Crouch & Son, Lafayette, Ind., were the only exhibitors. They were present with their magnificent herd of World's Fair prize-winners and were given first and second prizes on aged stallion; 3-year-olds, and 2-year-olds. No mare classes were shown.

FRENCH DRAFT.

Under this head Percheron and French Draft horses were shown together. Exhibitors—Avery & Son, Wakefield; J. Crouch & Son, Lafayette, Ind.; F. H. Schrepel, Ellinwood; J. L. Baughman & Co., Nickerson; J. I. Troyer, Partridge, Judge—Prof. R. J. Kinzer, Kansas State Agricultural College.

Aged stallions—First to Crouch & Son on Conquerant; second to Troyer on Gaffinnie.

on Conquerant; second to Troyer on Gar-finnie.

Two-year-olds—First to Avery & Son on Jubilee; second to Schrepel on Ellinwood King. Yearlings—First to Schrepel; second to

Avery.
Aged mares—First to Avery on Amy.
Three-year-old mares—First to Avery
on Pearl.
Two-year-olds—First to Avery on Lena;
second to Avery on Mina.
Yearlings—First to Avery on Fairy; second to Avery on Ada.
Foal—First to Avery; second to

Schrepel.

Mare and offspring—First to Avery on Amy and Pearl.

Sweepstakes stallion, any age—First to Avery on Jubilee.

Span of draft mares—First to Avery on Lena and Mina.

Single draft mare—First to Avery on Lena: second to Avery on Mina.

—Ard of Percheron stallions—First to Crouch; second to Schrepel.

JACKS AND MULES.

Exhibitors—J. H. Halloway, Hutchinson; A. R. Dudd, Hutchinson; J. H. Baughman, Nickerson.
Aged jack—First to Baughman; second to Dudd.
Halloway was given first prize on both 3-year-old and 2-year-old jack. Baughman was given first on mule and first on mare and mule colt.

SHROPSHIRES.

John D. Marshall, of Walton, Kans., was the only exhibitor, but he had a fine display. Because of the quality of his showing he was given both first and second in all classes for bucks and ewes, and first on get of sire and on pens.

COTSWOLDS.

W. Guy McCandless, of Cottonwood Falls, was the only exhibitor here. He had a small bunch, but they were in good condition and were given first prize in each class filled.

Gossip About Stock.

During the State Fair at Hutchinson, J. Crouch & Son sold their first-prize 4-year-old stallion to Mr. C. F. Cooper, of Nickerson, Kans., for \$3,000. This is a magnificent animal, and we are glad to know that he is to remain in this State. The good that a horse of this kind can do no given community is not easily measured.

Parties wanting to buy good Duroc-Jersey pigs of either sex will do well to correspond with J. W. Ferguson, R. F. D. No. 1, of the Highland Park Farm, Topeka, Kans. He is closing out his entire herd and will make very low prices for quick sales. He guarantees them to be perfectly healthy in every way. Write to-day.

Secretary A. L. Sponsler, of the Hutchinson State Fair, has not only demonstrated his ability to handle a great fair, but also his ability as a breeder of Shorthorn cattle as well. His 2-year-old bull, Grand Count, took first prize in class, and he was a winner in yearlings, calves, and most of the cow classes. The cattle are nicely bred, and are good individuals, though not highly fitted at this time.

Mr. W. Guy McCandless, of Cottonwood Falls, was present at the State Fair at Hutchinson with his herd of Galloway cattle and a small, though good, flock of Cotswold sheep. Mr. McCandless was handicapped in his showing of cattle by the fact that they were not especially prepared for the show-ring. They are nicely bred and show well, but, being just from the pasture, were not in show-ring form, and so he was less able to compete than the quality and breeding of his Galloways warranted.

Last week the writer had the pleasure of meeting Mr. Jose M. Castro, of Concepcion, Chile, South America, at the World's Fair cattle show. Senor Castro is present as the representative of his government in the interests of improved cattle. He is a very enthusiastic admirer of the beef breeds of cattle, and his report to his home government on what he has seen at St. Louis will undoubtedly have a great influence in opening up a market for our pure-bred stock in that country.

One of the features of the State Fair at Hutchinson was the Avery horses. These would have attracted attention anywhere, but as they had just returned from their prize-winning conquest at the World's Fair they were the center of a great deal of interest by visitors of all classes.

The strength of their showing is in the mare classes, just where breeders need to give more attention than they have been doing in the past. The Avery horses are showing at the Colorado State Fair this week, and we shall have more to say about this remarkable herd in the near

During the International Live Stock Show at Chicago there will be offered a great opportunity to purchase high-class Hereford cattle at auction. On Friday, December 2, will be offered a number of bulls, cows, heifers, and calves from the best-known Hereford families and from herds of the best American- and imported-bred animals. The offering will include a number of animals whose sires and dams are renowned on both sides of the water as champion winners. The committee in charge of this sale will insist that all animals consigned to it must be sold outright, and the sale will be placed in the charge of experienced auctioneers, and will be high-class in every respect. Mr. G. H. Hoxle, room 52, Exchange Bidg., Union Stock Yards, Chicago, will have charge of the entries for the sale.

Mr. F. L. Parker, Hutchinson, Kans., is a graduate of the Kansas Agricultural College who applies his knowledge in conducting a dairy and fruit farm. He leans toward the Red Poll as the best breed for the farmer, and uses a hand-separator in preparing his milk for market. He has been remarkably successful in growing Rocky Ford canteloupes, strawberries and peaches, all of which are sold in the home markets at remunerative prices. Some weeks ago he had on exhibition a berry quart box which was entirely filled with sixteen of his home-grown strawberries, and he has a seedling peach of remarkable flavor and size which he has not yet named. Interested parties may possibly secure some of these strawberries and peaches by writing him to that effect.

Down at the Warld's Fair cattle-show the other day the writer had the pleasure of meeting Mr. R. O. Rees, who was born and raised in Herefordshire, England, and who was herdsman for Mr. F. Rockefeller, of Belvidere, at the time he showed Columbus 17th in such great form at Chicago that Hereford cattle judges pronounced him the best bull of his age on the grounds. Mr. Rees is now in charge of the cattle exhibit owned and made by A. R. & G. W. Firkins, Paunton Court, Herefordshire, England. The exhibit consists of the bull, Happy Christmas 191480, by Gold Box 75169, out of Titania 191481, and is a remarkable individual. His heart girth is 9 feet, and the point of his brisket is less than 8 inches from the ground. He is very low in the flank and a great beef carrier. He is a good example of the ability of Mr. Rees as a fitter.

W. R. Peacock. Sedgwick, Kans., begins

the ability of Mr. Rees as a fitter.

W. R. Peacock, Sedgwick, Kans., begins an advertisement this week on page 978. He has been breeding Poland-Chinas for some time, but is an advertiser and exhibitor for the first time the present year. Notwithstanding this, he recently won at Hutchinson a very large portion of the best prizes offered. Mr. Peacock's herd is right up in breeding. His matings have produced hogs with the size, finish and feeding quality so desired by the best breeders. His herd-boar, Klever's Perfection 32855, by Happy Perfection by Perfect Perfection, dam, Prize, Ed. Klever's best sow, was the best pig raised by Mr. Klever in the fall of 1900. Another herd-boar is Mischief Maker I Know 33855, a son of Mischief Maker, which holds the 1902 Championship. His dam was by old P. I. K., the great brood-sow sire. The brood sows of the herd are mostly of Mr. Peacock's own breeding, Lady Wilkes, 197937, sired by Seldom Wilkes, by Oxford Wilkes, being the dam of the major portion. They have been selected for their size, quality and great prolificacy. In spring farrow the first ten sows and gilts produced 94 pigs. Mr. Peacock has a nice lot of males of various ages for sale. Write him.

WEEKLY WEATHER CROP BULLE-TIN.

Weekly weather crop bulletin for the Kansas Weather Service, for the week ending September 26, 1904, prepared by T. B. Jennings, Station Director:

GENERAL CONDITIONS.

GENERAL CONDITIONS.

The week began and ended with warm and generally clear weather, the maximum temperature ranging from 90 to 100 over the middle division on the 18th and 19th, while the 20th, 21st, and 22d were cool and cloudy. There were good rains in the southeastern counties extending northwestward through McPherson and Reno Counties and into Barton County. Fairly good rains fell in Clay, Riley, and Pottawatomic Counties, and light showers over the remainder of the eastern part of the State, while the western part continues dry.

RESULTS.

RESULTS. EASTERN DIVISION.

EASTERN DIVISION.

Corn generally has made good progress during the week. Cutting is finished in some of the southern counties and is in progress over the rest of the division. In Elk County corn is nearly ready to crib. Late corn is maturing well, but will need two weeks of good weather in some counties. The ground is generally in good condition for wheat-seeding but the work has been delayed a few days by rain in the southeastern counties, while it is rather dry in the middle eastern counties. Wheat is coming up in Coffey County. Al-falfa-cutting and seeding are in progress in Chautawqua County. Prairie haying is about completed and the crop has been very good. Pastures continue good and stock are doing well. Kafir-corn and cane need a month of good weather to mature well in Coffey County. The potato and apple crops range from fair to very good. In Woodson County, fall apples are plentiful, but winter varieties scarce. Peaches are better than expected in Marshall County.

Anderson County.—Wheat-seeding general; some wheat up; ground dry; late corn ripening slowly.

Bourbon.—Wheat-sowing still in progress; acreage will be unusually large; nearly all corn safe from frost.

Chase.—A good week for fall plowing and sowing wheat.
Chautauqua.—Corn cutting finished; fourth crop of alfalfa very good and ready to cut; much alfalfa seed being sown; ground ready for wheat-sowing.
Coffey.—Ground in fine condition for plowing and sowing wheat; early sown wheat coming up; early corn being cut; late corn maturing slowly; upland corn will be a half crop; none in bottoms; cane and Kafir-corn late, will need a month of favorable weather to make a good crop.

crop.

Douglas.—Thrashing and wheat-sowing about completed; corn is ripening and early corn is being cut; fine weather for

about completed; corn is ripening and early corn is being cut; fine weather for late corn.

Elk.—A good rain this week; pastures good; corn almost ready to crib.

Franklin.—All crops doing well.

Greenwood.—The rains have helped fall plowing and late forage crops; corn-cutting in progress; the seeding of wheat and alfalfa is general.

Jefferson.—A fine week for maturing corn; early planting safe; late corn needs two weeks more to mature; wheat-sowing in progress; soil in fine condition; hay about all in stack.

Johnson.—A good week for maturing corn; corn out of the way of frost.

Linn.—Wheat-sowing progressing with favorable weather; increased acreage; corn maturing and promises well; corncutting in progress.

Marshall.—Wheat mostly sown and some is up; nearly all of the corn out of the way of frost; potatoes being dug; crop large and of fine quality; peaches much better than expected; apples will be a short crop; fine weather for plowing and seeding.

Montgomery.—The heavy rains have stopped the preparation of the ground for fall seeding; pastures good.

Osage.—Fine weather for all farmwork; wheat-sowing in progress; corn-cutting begun.

Pottawatomie.—A favorable week for receiving crops and wheat-seeding, which

wheat-sowing in progress; corn-cutting begun.

Pottawatomie.—A favorable week for growing crops and wheat-seeding, which is progressing nicely.

Shawnee.—Corn ripening finely and will all be out of the way of frost by October 10; wheat- and rye-sowing well under way; haying finished, a fine crop; pastures good; cattle in fine condition; apples very good.

Wilson.—Corn-cutting well advanced; ground in good condition and wheat-sowing progressing well fore part of week, but the rains will delay work a few days.

Woodson.—Haying and corn-cutting about finished; wheat-sowing in progress; fall apples plentiful, winter variety scarce.

Wyandotte.—Pastures good and stock doing well; potatoes rather better than a half crop; wheat-sowing begun with the ground in good condition.

MIDDLE DIVISION.

ground in good condition.

MIDDLE DIVISION.

Corn is matured in the southern counties and cutting about finished. In the northern counties it is ripening rapidly and cutting is in progress. The crop is good, especially in the northern counties. The ground is dry in the western and northern counties of this division but plowing has progressed well and is mostly done, and wheat-sowing is general and well advanced in many counties. The acreage will be large. Alfalfa is being cut for hay and seed in the northern counties. The prairie hay crop has been large and of good quality and is all harvested in most counties. It is being baled in Washington County. Pastures continue good and stock are doing well in most counties, but dry weather has cut the grass short in Phillips County. The rains helped cane and Kafir-corn in Butler County. They are being cut in other counties. Forage-cutting is well advanced and the crop is generally good. There is complaint of apples dropping. The crop ranges from fair to very good.

Rainfall for Week End MIDDLE DIVISION.

ZENOLEUM

Famous OOAL - TAR Carbolic Dip For general use on live stock. Send for "Piggles" Troubles" and "Zenoleum Veterinary Advisor" and learn its uses and what prominent stockmen say about it. Books mailed free. All druggists. of one gal., exp. paid, \$1.50;5 gal., freight paid, \$6.25 ZENNER DISINFECTANT CO., 81 Bates St., Detroit, Mich.

CEDAR KNOLL FARM Pure-Bred Poland-China Hogs

Five yearling boars, strong-boned, lusty fellows, lust fit for hard service; will please anyone or money back. Sired by Correct Perfection 32031, by Corrected; dam by Chief Perfection 2d; very reasonable for quality. Also spring pigs, both sexes by same sire that are all right and guaranteed to please. Write for prices and you will buy.

WALTER O. WILTBERGER,
Winfield, Kans.

FOR SALE

Waranted Pure Honey—Extracted, put
up in 60 pound cans; one gallon, half gallon
and one quart friction-top palls. Comb
Honey in cases, of twenty-four 1-pound sections. Write for prices.

CHEEK & WALLINGER, Los Animas, Bent Co., Col.



The Stray List

For Week Ending September 22.

Lincoln County—N. J. Davison, Clerk.
STEER—Taken up by Robert M. Lyon, in Elkhorn tp., September 15, 1904, one 1-year-old red steer, with white spot in forehead, branded J on right shoulder, weight 700; valued at \$16.

Week Ending September 29.

Jackson County—T. C. McConnell, Clerk. CATTLE: Taken up by G. H. Miller, in Franklin tp., September 10, 1904, one red, white-faced, 2-yes-old steer; one red 2-year-old helier; one red 2-year-old steer; also one red 2-year-old mottle-faced steer.

Shawnee County COW-Taken up by Mrs. Mary Heyl, in Monmouth tp., (P. O. Tecumseh), one red cow with white hind feet, age, 4 or 5 years, valued at \$25.

extent; sowing of wheat continued but not rushed; hardly moisture enough for proper seeding; apples ripening nicely.

Ellsworth.—In need of rain to finish the sowing of wheat.

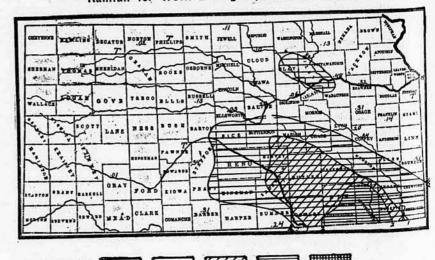
Jewell.—A fine week for curing hay and maturing corn; apples and peaches abundant; potatoes a fair crop; rather dry for fall seeding.

Kingman.—Ground in fine condition; plowing and seeding being rushed; large acreage of wheat being sown; early-sown wheat coming up; corn about all matured and most of it cut; acreage of corn not very large; hay and feed about all put up; some hay damaged by rain.

Pawnee.—Wheat-sowing about half fin-

Pawnee.—Wheat-sowing about hair finished; some up and looking well; the general condition of the ground is dry.
Phillips.—Weather continues very dry;

Rainfall for Week Ending September 24, 1904.



Barber.-Cane nearly all cut; Kafir-corn being cut; wheat is being sown; corn all matured, a very good crop; pastures continue good.

Less than 1/2. 1/2 to 1.

Barton.—A fine week for farmwork; wheat-sowing becoming general; ground

wheat-sowing becoming general; ground all being plowed, no stubble sowing; haying done; cattle in fine condition.

Butler.—A good rain on the 22d which was a great help to pasturage; crops in general are looking well; the late rain helped Kafir-corn.

Clay.—Thrashing will be finished within ten days; wheat-sowing now well under way; ground in good condition; corn will all be safe from frost by October 1; haying finished—quality good.

Cloud.—Plowing about done; some wheat being sown; corn maturing rapidly and is safe from frost.

Cowley.—Timely rains have put the ground in fine condition for wheat-sowing; a large acreage will be sown in the next week; grass maturing and the hay crop is very heavy; apples falling and only fair quality; cattle doing well.

Dickinson.—Good weather for ripening corn which is now being cut to quite an

Over 3.

2 to 3.

fall pastures cut short by drouth; wheat needing rain; corn well matured and of fine quality.

Reno.—Moist weather this week has been fine for seeding.

Republic.—A warm, dry week; plowing for wheat nearly finished; ground getting very dry; third crop of alfalfa being cut a large acreage of wheat being sown thrashing nearly finished; corn maturing rapidly.

thrashing nearly finished; corn maturing rapidly.

Russell.—Rain much needed to help plowing and seeding; corn and other late crops yielding well.

Saline.—A warm week; some wheat drilling in progress.

Sedgwick.—Ground in fine condition for fall plowing.

Stafford.—Plowing finished; seeding in progress; thrashing about finished.

Sumner.—Wheat-sowing in full considerable ground yet to plow; ground hard; first sowing of wheat up.

Washington.—A good rain needed; plowing mostly done; wheat-sowing in progress; thrashing wheat and oats continues; wheat not grading well; alfalfa seed us; wheat not grading well; alfalfa seed the quality; peaches mostly ripe; apples

dropping badly; hay being balled; corn-maturing well and cutting in progress. WESTERN DIVISION.

WESTERN DIVISION.

Corn has made good progress during the week. It is ripening and fairly well matured in the northern counties and is mostly safe from frost. The crop is generally good, the ears being large and well filled. The ground is generally too dry for much progress in plowing and wheatsowing, but the working is advancing nicely in Trego County, while but little wheat will be sown in Morton County. Some early sowing is up and growing nicely in Decatur County. Thrashing is still in progress in some-counties. Alfalfa-cutting for hay about finished; in places, but generally not large. Pastures are curing well and will make good winter feed. Forage crops have generally done well and will furnish plenty of roughness for winter. About half of the peathes have ripened in Norton County.

Decatur.—Very little wheat sown as yet on account of drouth; some early sown up and growing nicely; rain needed badly; forage crops about all cut; plenty of roughness of all kinds for winter.

Ford.—Plenty of feed and grass for winter; fair crop of alfalfa in places but in general crop not large; corn a good crop for this locality, ears large and well filled and of good quality; too dry for much progress in fall work.

Lane.—Most of the corn is out of danger of frost; last crop of alfalfa is about all cut.

Morton.—Another week of dry weather

all cut. Morton.—Another week of dry weather and warm days, ripening the fodder crops and prairie-grass nicely; too dry for plowing; but little wheat will be sown. Norton.—The corn is ripening and also Kailr-corn; about half the peaches are ripe: thrashing is in progress but the wheat is a light yield and of a poor quality.

ity.
Thomas.—Corn is fairly well matured; ground is very dry for fall seeding.
Trego.—Wheat-seeding progressing nicely; getting very dry; no rain this month.

About Amatite-The New Ready-to Lay Roofing.

Lay Roofing.

Our readers will notice in this issue an advertisement of a new Ready-to-Lay Roofing, called Amatite.

The manufacturers are the largest makers of roofing materials in the world. While this roofing has several new features, it is not an untried material, but a decided improvement over the old style of ready roofings.

No experience is required to lay Amatite. Any one can put it down.

It is sightly, durable, safe and an absolute fire retardant. Water, wind and bad weather of all kinds are not feared by the man who has Amatite on his roof. One of the strongest points is the fact that it requires no pointing, no tinkering; in fact, no repairs of any kind for years after it has been put down.

The price, too, is exceptilonally attractive. It is the lowest-priced, complete, surfaced ready roofing made.

Our readers are offered a sample of Amatite and illustrated booklet by writing to any office of the Barrett Manufacturing Company, at New York, Chicago, St. Louis, Philadelphia, Cleveland, Cincinnati. New Orleans, Allegheny, Kansas City, Minneapolis.

City, Minneapolis.

The crowning souvenir of the National campaign will be issued free with the Sunday Post-Dispatch as a special art supplement Sunday, October 9. It will be a group picture of Judge Alton B. Parker and his family. These pictures are made by a new process, and are distinctly different in every way from anything issued heretofore by the Sunday Post-Dispatch. The pictures are on heavy paper, printed in colors, ready to frame. The supply will be limited. In order that all who wish these pictures may be supplied, it will be necessary to order in advance from the local Post-Dispatch agents so he may place his order for this issue in time.

Opportunities.

Good openings for all lines of business and trade in new towns. Large territory thickly settled. Address Edwin B. Ma-gill, Mgr., Townsite Department, Chicago Great Western Railway, Fort Dodge, lowa

The Markets

Kansas City Live-Stock and Grain Markets.

Kansas City, Mo., September 26, 1904. tattle receipts to-day were heavy at 23,-660 against 21,000 last Monday. The day's Supply ran mostly to Western stuff. There cattle receipts to-day were heavy at 23,-69 against 21,000 last Monday. The day's supply ran mostly to Western stuff. There were not many good corn-fed native sheers in the offering though what was on sale went at steady prices with last week's close. Fat Westerners were weak to lower. Stockers and feelers held steady who hast week. Fat she stuff sold at sond steady prices. Stock cows and helf-ers were weak to lower. Top on dressed here stuff was \$5.90 and most of the sales were around \$5.25. There was a fair supply of corn-fed steers, plenty of grassers, a moderate run of she stuff and a very interal run of stockers and feeders on this market last week, the total receipts aggregating a little over 71,000 head. The market on dressed beef steers of the last week was poor, the packers having hammered the prices down 25@40c for the week. The top price for the week was \$5.40, which was had on Monday and Friday the top was \$5.40. Shipments of stockers and feders to the country last week was 924 cows, a very liberal shipment. The best grades of stockers and feders sold steady throughout the week, heinging around \$3.25, the more common kinds declined some and could be bought as low as \$2.20. Medium to common she stuff declined 10@15c for the week. The market in the Texas division closed a little lower for the week. The best she stuff on the native side was fully steady. There was a very light run of hogs today at all the Western markets. This market had only 4,000 and they were not of the best quality. The market was better to-day, having advanced 5@10c over

last week's close. The top to-day was \$6.05 and the bulk of most of the sales was close to \$6. The market closed early with a total clearance. Hog receipts for last week was 29,000, which was a slight gain over the previous week, but is still too light for this season. The hog market closed up Saturday about where it begun on Monday, there being some fluctuation during the week, however. The market was about is cents higher last Saturday than the previous Saturday. The top for the week was \$6.02½, which was had on Tuesday, and \$5.95 was the top Saturday. The bulk of the sale for the week was around \$5.90. The quality of the week's offerings was only medium, however, there were some choice hogs in the offerings.

Sheep receipts at this market to-day were very heavy, being the second largest in the history of the market, aggregating 20,000 against 10,000 last Monday. Despite the heavy run the market maintained the usual good prices. Killing sheep of good quality sold steady and lambs were fully steady with last week. Some good feeding lambs sold at \$4.10, which was a little weaker, but stock sheep were fully steady. A string of good Utah lambs brought \$5.15 and some choice natives sold at \$5.25. Good Western lambs sold at \$4.90. Choice stock ewes sold at \$4.4.0. The market hroughout the week was 34,300 which ran largely to Westerners. The market throughout the week was 34,300 which ran largely to Westerners. The market throughout the week was 34,300 which ran largely to Westerners. The market throughout the week was 34,300 which ran largely to The lamb market was poor on account of the over supply of the good kinds and about 25 cents was taken off from the week's high opening.

There were heavy receipts of horses and mules here to-day, of which about 65 per cent were horses of about the same quality that has prevailed for the past three weeks. There was nothing sensational about the morning's market, but it was fully strong. One good harness horse sold from \$185, and a few good chunks sold around \$150. Southerner

will bring \$160@180. Little cottoners bring around \$85.

Clay, Robinson & Company write:
The market for corn-fed beef steers last week was a very unsatisfactory one, as prices had broken from 25@40c at the close of trading Saturday. Grass steers were slow sale all week and the break on them was 20@30c from figures ruling the preceding Monday. Corn-fed cows and heifers were active and prices for them firm throughout the week, the supply being moderate and the demand brisk, Best grassers also held firm. Common to medium kinds, however, dropped 10@16c. Canners were unchanged. Bulls were weak to a little lower for kiling kinds; feeding grades steady. Veal calves advanced 25@50c. In the stocker and feeder department, the call has been best for heavy, fleshy grades, although good to choice stockers have also moved freely. Both these classes closed the week fully steady; common to medium kinds 10@15c. lower. Stock cows and heifers were unchanged. Receipts of cattle to-day were 22,000 head. Corn-fed steers were scarce but in spite of this and strong reports from Eastern points, packers were bearish and it was slow work making sales. Prices, however, held steady for best offerings; others declined 10c. Cows and heifers were generally steady. Veal calves were scarce and sold strong. Bulls were unchanged. The bulk of the supply of stockers and feeders was common to medium in quality. The inquiry was brisk for desirable stock at steady rates. Others slow.

The hog market on Saturday closed 15c higher than the end of the previous week, although it was 10@15c lower than for the correspondinug period last year. Receipts to-day were 4,500 head. The market was 5@10c higher. Bulk of sales were from \$5.90@6; top \$6.05.

The sheep market on Saturday was steady on killling grades with lambs fully 25c lower than Monday. Receipts to-day were 20,000 head. Trade was slow at steady to slightly lower quotations.

South St. Joseph Live-Stock Market.

South St. Joseph Live-Stock Market.

South St. Joseph, Mo., September 26, 1904. In view of the fact that good native steers have been selling relatively higher on the South St. Joseph market than elsewhere, caused the market here to-day to rule about steady with spots only showing a little strength. The local slaughter demand is augmented by a strong demand on export account, and many more than have been offered of late could be sold to good advantage. The market on Western range steers started the week with prices generally 10@15c lower, with exceptions less, but the demand was keen at the lower range of prices. Good to choice native cows and helfers were steady to a shade lower, while offerings grading under good sell 10@15c lower, and in some instances canners and cutters were 15@25c lower than the close of last week. Bulls and stags were weak to 10c lower and veals varied from steady to 25c lower, the principal decline being on Westerns and quarantines.

The stock cattle trade had fair life at prices mostly 10@15c lower than the close of last week, the exception being for desirable yearlings and calves and good, heavy feeders. Stock bulls and stags and stock cows and helfers were slow and weak, but not quotably lower.

The hog market continues its upward course without much interruption. Receipts continue to fall much under the requirements of the packers and regardless of the fact that prices here are relatively higher than at any other point, it is impossible to get enough to supply the demand. To-day prices were mostly 10c higher, with the range at \$5.95@6.12½ and the bulk selling at \$6@6.05, the popular price being the latter figure. Quality is only fair to good and weights are running light enough to create the impression that there are not many ripe hogs available for immediate marketing, hence a very bullish feeling pervades the trade.

Special Want Column

"Wanted," "For Sale," "For Exchange," and small 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. Ini-tials or a number counted as one word. No order accepted for less than \$1.00.

CATTLE.

CHOICE young Shorthorn bulls very low prices also open or bred gilts, Polands or Durocs. M. C. Hemenway, Hope, Kans.

FOR SALE—Several nice registered Shorthorn buils from 12 to 30 months old. F. H. Foster, Route 6, Lyons, Kans.

FOR SALE—2 choice Hereford bulls, 22 months old; something good. Call on or address A. Johnson, Route 2, Clearwater, Sedgewick Co., Kansas.

RED POLLED—To close out, will sell cow, fine bull calf, and a coming two-year-old helfer, Chang-ing business. Must go. E. L. Hull, Milford, Kans.

FOR SALE—Three choice young Galloway bulls, sired by Staley of Nashua (1997) bred by I. B. and A. M. Thompson. Fine individuals, and bred right, Mulberry herd of Galloways; visitors welcome. Robert Dey, Walton, Kans.

FOR SALE—A 3-year-old Shortborn bull, sired by Royal Bates. Address Dr. N. J. Taylor, Berryton, Kans.

FOR SALE—Guernsey bulls from best registered stock. J. W. Perkins, 423 Altman Building, Kansas City, Mo.

SWINE.

FOR SALE—We are closing out our entire herd of hogs; thoroughbred Duroc-Jersey pigs of June farrow, perfect in color, fine toppy fellows, out of two grand litters, one of 11 and one of 13; in breeding they are of the best herds in the West, pedigrees furnished with each pig. We expect to go to Europe after horses and must sell our hogs, all guaranteed to be perfectly healthy. \$7.50 for the boars and \$6 for sow pigs for quick sale. Address J. W. Ferguson, Route 1, Topeka. Kans. Reference Kansas Farmer.

COMBINATION SALE OF SWINE—Onaga, Pott. Co., Kans., October 14, 1904—Poland-Chinas, Duroo-Jerseys, Large English Berkshire and O. I. C.'s. Send mail bids to Elle Lefebvre, Manager, Onaga, Kans.

THE KANSAS STATE AGRICULTURAL COLLEGE OFFERS FOR SALE at reasonable prices, choice boar and sow pigs of the following breeds: Poland-China, Berkshire, Duroc-Jersey, Tamworth and Yorkshire. Address Animal Husbandry Department, Manhattan, Kans.

200 DUROC-JERSEYS—Choice young boars at \$12.50 to \$16. 75 head July and August pigs at \$5 at weaning time, from prolific old sows, sired by well-developed males; all registered stock. N. B. Saw-yer, Cherryvale, Kans.

FOR SALE OR TRADE—A general implement and vehicle business in one of the best cities in southwest Missouri, will exchange for good unencumbered farm. Address J. H. G., Box 135, Carthage, Mo.

WANTED—Farmers to use the latest patended husking hook. You can husk more corn with it than any other. Sent by mail, price 35 cents. Address A. W. Toole, 809 North Fourth Street, St. Joseph, Mo.

FOR SALE—Choice Berkshire boars at farmer prices. Elie Lefebvre, Havensville, Pott. Co., Kans

TAMWORTH PIGS FOR SALE, J. H. Glenn Wallace, Kans.

FOR SALE—Poland-China boars. A son of Perfect I Know, out of a daughter of Ideal Sunshine. Also grandson of Chief Tecumseh 2d, out of a daughter of Ideal Sunshine. Geo. W. Maffet, Lawrence, Kans.

FOR SALE—Poland-China weanlings; grandsons and daughters of Perfect I Know, out of daughters of Chief Perfection 2d, Ideal Sunshine, Chief Tecumseh 2d, Keep On, Missouri's Black Chief, and other great boars. Geo. W. Maffet, Lawrence, Kans.

O. I. C. Swine. Spring pigs, fall boars and glits at business prices. Good individuals for sale. We bred the American Royal Champion which has been accepted as the typical representative of the breed. Alvey Brothers, Argentine, Kans.

The Home of the Durocs.

With Red Cloud No. 28215 at head of herd raised from Nebraska's best dams. Among them are Miss Eisey No. 68606, Starlight 68604, Sunshine K 63144, Miss Jersey 68608, Red Queen K 63142, and others. One young sow, Goldle B No. 68602, bred to Red Cloud for sale at \$25. Can furnish pedigree with all stock sold. Mr. & Mrs. Henry Shrader, Wauneta, Kans.

HORSES AND MULES.

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WANTED—Man and wife want work on farm. Good references. Have furniture for four rooms. Address H, Route 4, Hillsboro, Kans.

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12000 FEBRETS—Finest in America. Bred from rat-killers and field-workers. Low express rate. Safe arrival guaranteed. Book and wholesale list free. Farnsworth Bros., New London, Ohio.

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PALATKA—For reliable information, booklets and other literature, address Board of Trade, Palat-ka, Florida.

Horticulture

Tests of Forest Trees at Kansas State Agricultural College.

BULLETIN NO. 120, ALBERT DICKENS, M. S., HORTICULTURIST; G. O. GREENE, M. S., ASSISTANT.

One of the first experiments planned and carried out by the Kansas State Agricultural College was the planting of forest-trees. A number of years previous to the establishment of the experiment station, many species of trees were propagated and planted. It is the purpose of this publication to give, up to date, the notes and observations concerning the growth and success of these plantings, as well as a report upon some of the comparatively recent plantings made by the experiment station.

A few quotations from the early college reports will serve to acquaint, the reader with the conditions and

purposes of planting. In the Fifth Biennial Report, 1872, Prof. E. Gale, then in charge of the horticultural department, said in reference to the planting of that year:

"The land selected for this purpose (forest culture) is the least adapted to the cultivation of roots and cereals of any now broken up on the college farm. This selection, all things considered, was thought best, for it is in general this quality of soil-the high, gravelly and broken ridges-which should ultimately be planted to forests. It is, then, a matter of interest to learn what may be expected as the result of forest culture on such exposed situations as the one selected. As was anticipated, the growth of the young trees has not been so vigorous as it would have been on lower and richer land, but still abundantly sufficient to give the most encouraging promise of success. The planting consisted of European larch, white ash. red ash, green ash, Osage orange, catalpa, allanthus, black walnut, white hickory, soft maple, and willow.

"Of the larch, 50 per cent died, most of them after July 1. The white ash, one-year seedlings, have grown from two to three feet; the white- and redash seed failed to germinate. The green ash have grown from twelve to twenty inches from the seed. The Osage orange was planted with special reference to forest culture."

In his report of 1874, Professor Gale

says:

"Among those trees that are making good growth on upland may be mentioned the catalpa, silver maple, Osage orange, ash, ailanthus, black walnut, common cottonwood, and Lombardy poplar. The European larch, after repeated trials, has not proved a success. The same may be said of the birches, beech, sugar maple, and chestnut."

The only species of this planting now growing are green ash, silver maple, Osage orange, ailanthus, black walnut, and catalpa. The growth and success of the catalpa are recorded in Bulletin 108. In the following notes are quotations from the report of 1886, made by Professor Popence, professor of horticulture, from 1879 to 1897, and from 1899 to 1901, now entomologist of the experiment station and professor of entomology and zoology.

It may be fairly said that the land occupied by the plantation of 1872 is now under forest conditions. The undergrowth contains many plants and shrubs found only in forest areas, and natural redling trees of species not originally planted there are growing. Young trees of elm, ash, hackberry, honey locust, box elder, mulberry, cedar, and an occasional oak, are sufficiently numerous to insure succeeding crops of trees.

The gravelly soil is covered with a good cover of leaves, weeds and twigs in various stages of decomposition. There is no washing, such as takes place upon similar soil that is being cultivated.

From Kansas Forestry Report, 1886: "The ash plantation stands in the best part of the poor land occupied by the entire grove, being in a slight depres-

sion heading a small ravine, and facing the south. The trees stood originally in rows about 5 feet apart. Four years since, in response to an apparent demand for thinning, trees were cut out at such intervals as to allow those remaining to stand at about 7 or 8 feet apart. The trees cut out, trimmed and seasoned, furnished poles of great value for many purposes, being straight and tough, while some used as fuel proved equal in this regard to the best wood in our markets. Measurements with a tape-line, at four feet from the ground, give, as an average of twenty-five specimens taken in succession while walking across the plantation, a circumference of 13 and a fraction inches. Seven of the twenty-five exceeded a diameter of 5 inches at the height given. The trees stood 25 feet high, straight and usually without forks. Ninety per cent of them will furnish, now, serviceable poles twenty feet in length."

The ash plantation continues to be first in condition and appearance. As with other species, rate of growth has decreased as the trees age. Many good poles have been cut for various purposes, and the plat, which contains 150 square rods, now contains 136 trees, the highest of which stands 43

The best trees average in diameter 11 inches at one foot from the ground, and 8 inches at five feet.

In all soils and locations on the college campus the ash-trees have made very satisfactory growth, forming good trees. They seem less inclined to branch and form forks near the ground than most other species.

Ash is to be recommended for general planting. The wood makes fair fuel and the timber is strong and tough, though not heavy. One of the best ash-trees on the campus, grown in fair soil, when forty years old measured as follows:

	The same of the Control of the Control	4	35.0	
T. 1	at the b	ase	171/	Inches
Diameter	at 5 feet	w	1294	inches
Diameter	at 10 fee	t	12/2	inches
Diameter	at 15 fe	et	101/2	inches
Diameter	at 25 fe	etet	91/2	inches
		Children and the Land		10100

The tree grew in a clump of mixed species and was straight and closegrained, making good timber. There were twenty cubic feet of cord-wood in the limbs and top.

Both green and white ash are readily propagated from seeds gathered and sown in the fall, covering about one and one-half inches. Seed kept until spring is liable to become too dry unless packed in sand.

BLACK WALNUT (Juglans nigra).

From the report of 1886: "Black walnuts, standing as planted, about 4 by 4 feet, have made a clean, straight growth, averaging over 15 feet high, and, at four feet from the ground, 8 inches in circumference. The plantation never having been thinned, the close stand of trees has resulted in the death and decay of all branches on the lower part of the trunk, promising straight timber when of larger size. A second plantation, apparently about three years younger, shows this process of self-pruning in progress. These trees, standing 4 by 11/2 feet apart, averaging 12 feet in height and 11/2 inches in diameter at four feet, carry no live branches below a height of about 6 feet, though the trunks are set with dead ones nearly ready to fall, through the decay of the branch at the base."

The growth of the black since 1886 has been much slower than the other species. The trees have been thinned, as they seemed to require it. The smaller and less thrifty trees have invariably been removed, so that but little wood and practically no posts have been secured.

At this writing, the walnut plantation of 1872 contains 322 trees, 190 of which are of sufficient size to cut posts or poles. The best trees are 35 feet in height, with a diameter at the base of 8% inches, and, at 5 feet, 6 inches. The trees average slightly more than 20 feet in height and 5 inches in diameter at the base; at 5 feet, 4% inches.

A planting made in 1875 upon the same kind of soil has given results very similar to the 1872 planting. This planting contains 735 trees, 582 of which will cut posts or poles.

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The best trees are 34 feet in height, 7½ inches in diameter at the base, 6½ inches at 5 feet. Where well thinned they are growing well, but where standing but 4 feet each way, are dying or making very poor growth.

On the college campus, in good soil, the black walnut has made very satisfactory growths. It is at best a slowgrowing tree, but is perfectly hardy, of good appearance, and in every way worthy of planting. The trees have usually begun to bear light crops of nuts when from ten to fifteen years old.

Numerous observations have been made in regard to the growth of walnut trees. From an article based on these notes, published in the Industrialist, Vol. 29, page 234, the following is quoted:

"The walnut is not a rapid-growing tree, as is shown, from measurements of trees taken along the Kansas River bottom, in very rich, sandy soil, in which the roots could easily reach water, and where the trees were well protected from the winds on the south and on the west by the trees growing along the river. The following measurements were taken:

	Age.		Diameter at	stump.
50	vears	 	18	inches
45	vears	 	21	inches
30	VAGTE		16	inches
55	years	 	251/2	inches
55	vears	 		inches
50	years	 	20	inches
72	years	 	22	inches

"A considerable number of smaller trees of the same age showed a much less average annual growth, while some of the younger trees showed a greater growth. The trees taken seem to represent the average growth. These trees grew under the best of uncultivated conditions; in fact, the conditions were better than would be under average cultivation, as the soil was very loose and was well protected from the sun, and the water-table was not over 12 feet below the surface of the ground.

"Measurements of walnuts growing under very good cultivation alongside a corn-field and in a ravine, in very black and rich loam, where one might find the best of soils as well as the best of care, show the following growths:

 Age.
 Diametér.

 26 years.
 .13 inches

 33 years.
 11 inches

The walnut has been successfully propagated by planting the nuts in the fall, or stratifying through the winter and planting early in the spring. Oneyear trees may be transplanted readily, but older trees, unless previously transplanted, succeed but poorly.

A grove of black walnut trees stands on a farm adjoining the college farm. The soil is of good quality, for upland, and the tree-growth is equal to any walnut timber in this locality, except that in the rich creek bottoms. The trees stand where the nuts were planted in 1869, and have been thinned occasionally, furnishing some fuel.

At present the trees average about 18 feet apart, have good, straight trunks, and are vigorous, promising trees. The average 44 feet high; 9

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inches in diameter at the ground, 7% inches in diameter at 2 feet, and 6% inches at six feet from the ground.

The largest trees are around the edge and in the lowest part of the grove. A number of the best measure from 48 to 52 feet in height; from 12 to 15 inches in diameter at the ground, from 10 to 13 inches at 2 feet, and from 9 to 121/2 inches at 6 feet.

The poorest trees in the grove measure from 21 to 30 feet in height; from 4 to 6 inches in diameter at the ground, from 3 to 5 inches at 2 feet, and from 3 to 41/2 inches at 6 feet from the ground.

(To be continued.)

Shawnee Horticulturists' October Meeting and Fruit Display.

The October meeting of the Shawnee County Horticultural Society will be held at Oak Grange Hall, October 6. Following is the program:

"Beautifying Schoolhouse and Grounds," Mrs. J. G. Otis.

"Cold Storage," C. H. A. Swarz. "Fall Planting of Shrubs," General Discussion. "Shade-Trees," W. H. Barnes.

There will be a display of fruits. Premiums will be awarded as follows: For best five commercial varieties of apples, \$1.

For the best three varieties of fall apples, 50 cents.

For the best three varieties of pears, 50 cents. Display of grapes, three varieties, 50

cents. Best display of commercial market

apples, \$1. Best collection of garden products,

Best boquet, 50 cents.

Fruit shown will become property of society for future display.

S. M. CROW, President. O. F. WHITNEY, Secretary.

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The Kansas State Bee-keepers' Association.

Officers: Dr. G. Bohrer, Lyons, Kans., president; E. W. Dunham, Topeka, Kans., vice-president; O. A. Keene, Topeka, Kans., secretary; J. J. Measer, Hutchinson, Kans., treasurer. Annual membership fee, \$1.00. Send dues to treasurer. Official organ, Kansas Farmer.

How Queens Are Produced.

EDITOR KANSAS FARMER:-In your article of August 18 you state that we can give a queenless colony brood from other colonies from which to rear a queen. I would like to ask, if you give a queenless colony some brood from another colony, how the bees change any of this brood or eggs into a queen? My understanding is, that the brood given them is ordinary brood intended for the raising of worker bees, or drones; and if this is so, how can they rear a queen from it? At least tell us how it is accomplished. Are drones, queens, and worker-bees hatched from the same kind of eggs? Is it the size of the cell that makes the sex of the bee? When is the best time to introduce Italian queens in hives with common bees?

T. J. CRIPPEN.

Morris County.

The egg-chamber of the queen contains but one kind of eggs, but as she deposits them in the cells there are two kinds, which we call the fertilized egg and the unfertilized egg. This is so from the fact that all eggs as they start from the egg-chamber are alike, unfertilized eggs, but as they pass from the queen the worker eggs, which are the same as those producing queens, come in contact with the fertilizing fluid which is contained in a sac in the queen, in the passage way of the egg, and is thus fertilized before reaching the cell. Eggs intended for drones do not have connection with the fertilization sac as do the others, and I think the queen can lay them at will, while some say the size of the cell has something to do, the cell being large does not compress the queen's body, as do the worker cells. Thus we find the worker egg and the queen egg to be one and the same thing to begin with, and just how the transformation occurs other than what we can observe, is hard to tell. The change occurs after the egg hatches into larva, which is three days after being deposited in the cell. Just after this period we find that the milky food given all the young larva, is very much increased in proportion for the young queen, and also the cell is being constructed quite differently from any other, the base is enlarged in shape of a saucer, and when the cell is completed and sealed over, it is as large as a common peanut hull. Giving a queenless colony brood thus from some other hive from which to rear a queen, is the artificial process ing, and most queens on the market at present are reared in this manner. The natural process, when bees provide for their own queens in the swarming season is some different as of the combs, and the queen deposits bees form cell cups around the edges o ithe combs, and the queen deposits an egg in each cell cup, which may be in number about a dozen to the hive, for the express purpose of rearing queens. It has always been a question whether or not, queens reared in the natural ways are better than those reared on the artificial plan; but I believe it is generally conceded that one is about as good as the other. In thus giving a queenless colony brood or eggs (and it is very essential to give eggs for the purpose of raising a

queen) it is well to remember that it is impossible for the bees to rear a good queen from brood over three days old. Older brood can not be transformed into well-developed queens, hence the importance of furnishing eggs or just-hatching brood for the purpose. Of course it is not necessary that all the brood in the comb given them be of this consistency, for it may be of all stages, but there must be a portion of it as above stated, and this will be selected by the bees for the purpose of rearing the queens.

The best time to Italianize colonies is during autumn, from the first of September until the last of October, or later if the weather is warm. At this time we can produce queens at the lowest prices, and by next spring all the bees will be Italians, or at least by the next honey season.

Municipalities and Good Roads.

Spring with its mud to hubs brings to mind most forcibly the fact that leading all other questions is the question of good roads. Everything depends upon them. A village neglecting its approaches hot only hurts its trade but makes life less worth the living for all adjacent to it. When the weather is bad if the road is good people would flock to town for entertainment, diversion, and trade. Every dollar a town expends in making permanently good approaches will increase the size of every audience, add to the trade of every store, bring new citizens and help to defeat rival towns.

I wish I had the eloquence to convince the town near which I live of these self-evident facts. Though I offered a bonus of \$200 for the betterment of the road to my farm, no move is made or seems likely. Cheap politicians and grafters defeat the legiti-mate use of public funds while the roads suffer under the incubus of saloon government, which curses almost every municipality in the country. The saloonmen figure that the worse and more difficult the road the longer they can keep their victims and the less they will care when they do go home about the discomforts of the horrible highway. The question of license is a difficult one and The Gazette is no place to discuss it, but there can be no question that the breeders of horses and advocates of good roads should sternly suppress all opposition to the crying need of modern civilization-good country roads. -Correspondent in Breeder's Gazette.

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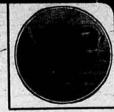
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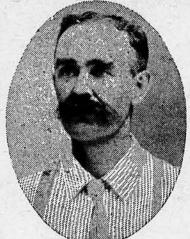
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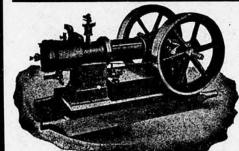
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