



## Agricultural Matters.

### ALFALFA THE KING.

Read by John H. Churchill, of Dodge City, before the Kansas State Board of Agriculture.

I come before you representing what I believe to be true. I come with no fairy tale, or pleasing story, to tickle your fancy, that lacks confirmation; I have cold, naked truths and facts to back up every assertion. I come to tell you again of that sweet, purple-blooming alfalfa, of the new and solid prosperity it is bringing to us through a large section of western Kansas, of thousands of cattle that are driven into our valleys each winter to be fed on this most nutritious plant, of the many hundreds of thousands of dollars left with our farmers for the bright golden seed, this the driest year ever known in our section. You may have thought me too enthusiastic in my paper last year, and I have understood that the growers of corn in eastern and central Kansas view with some considerable suspicion the merits which we claim for alfalfa.

The past season has fully proven that alfalfa is king of crops wherever grown, and every claim I made a year ago I stand firmly by to-day. A member of this board wrote me in May that he had made a trip through western and northwestern Kansas, and the only green thing that was then in sight was alfalfa, and he took off his hat and cried, "Hurrah for alfalfa!" He could have made the same trip in June, July and August, in at least the west half of the State, and taken off his hat for every month and cried hurrah for alfalfa, for it was the only thing green in sight. From June 15 till October 10 the harvest was going on—in this field for hay, in that for seed—and never was there better seed or feed gathered in Ford county, which is without irrigation. Along the valley three or four crops were cut for hay, at an average of thirty-five days between cuttings. Where a field was saved for seed, only one and two crops of hay was cut, according to the location.

Do you wonder we hail alfalfa king, when our fields are paying us \$20, \$25, \$30, and as high as \$40 per acre net? Do you wonder when we run up against a season that burnt dear old Illinois, dried up her streams and pastures and ruined her corn crop in many sections; a season that spread destitution and ruin in that grand State of Wisconsin; when the fire started in her northern forest it swept through the kiln-dried woods, resistless, destroying thousands of acres of the finest timber on the American continent? This was drought, ruin, we know not of in Kansas. Do you wonder that while a large part of Kansas was drought-stricken, the alfalfa harvest was going on, paying its dividends to its policy-holders, an insurance, as I claimed last year, against drought? Bear it in mind, Alfalfa, Forage, Seed & Co., is the only concern that insures against dry weather and pays a yearly dividend. Coming over the Atchison, Topeka & Santa Fe road from Dodge City to Topeka and along the Arkansas valley, I have noticed thousands of acres of the best alfalfa lands that are producing perhaps a ton of wild hay to the acre, worth \$5 or \$6. This land should and will be broken out, cultivated and seeded to this plant when the ground is suitable; when the wilderness and weed and grass roots are all subdued it will be done; it's only a question of a short time; the hand-writing is on the wall, and to the wise man 'tis enough.

I now have a few facts to present for your consideration. McBeth & Kinnison, of Garden City, wholesale and retail dealers in alfalfa seed, have purchased, since August 1, 9,500 bushels of seed, paying \$45,000 for the same. The above seed was sold to Chicago and New York parties for export. They paid A. D. Nettick, of Cimarron, \$3,261.96 for 759 bushels seed raised on second bottom without irrigation. A. J. Edmanson, four miles east of Garden City, had twenty-five acres, which yielded him 214 bushels clean seed, second bottom without irrigation. J. J. Munger, 103 bushels from nine acres. John Stevens, of Garden City, reports 1,300 bushels from 450 acres, now worth \$5 per bushels, amounting to

\$6,500. The highest yield for single acre to date is sixteen bushels, raised by George Sharp, of Garden City. The average for Finney county will not be higher than six bushels. In Ford county, without irrigation, the average will be about the same.

George Richards, Trustee of Dodge township, makes this statement, and it was published, that forty acres of alfalfa ground paid him gross \$55 per acre, and that statement I can vouch for. I know the land and the man personally. I can state, we began cutting June 8, cut some fields four and others three times, and fields for seed, twice. Seed averaged seven bushels per acre without irrigation. I could give you many more statements but time is pressing.

Do not fear an overproduction. If such a thing were possible it would have occurred long ago, for one writer on its origin claims it was brought into Greece during the Persian war, 420 B. C., and there are no accounts in ancient or modern reports of an overproduction of this plant that I have been able to find, and it is my opinion, as long as the human family eat beef and pork, there never will be.

Who are the most prosperous farmers in Kansas or in the Union to-day? Our Southern brother, who cultivates the sugar and cotton plantations? Do you find them among the worn-out stone-bedecked fields of New England? Do you find them in the great wheat and corn belt of the West and North? No; but you do find them away out over the plains of western Kansas, along the fertile valley of the Arkansas and other valleys of creeks and rivers, and out upon the irrigated high land. There you will find, this year of hard times and stringency and financial disaster, this year of unusual drought through the West, the most successful and independent farmer, the cultivator of alfalfa and raiser of cattle and hogs. The future of these combined is certainly flattering and alluring, and will give western Kansas a financial standing she deserves.

These beautiful fields of sweet, purple-blooming alfalfa; they are still beckoning to you and to me; they are full of hope, of promise and of success, and they are the great light that is shedding its halo of assured and continued prosperity over that part of the State you have viewed with mistrust and suspicion.

The tide has ebbed very low, but it is now flooding, and is coming to those who have stayed by it through good and evil report with a glorious fruition. The tide is rising higher, overleaping the sandbars and rocks of suspicion, for the truth is mighty and shall prevail. And now the tide is at its full and the waters are spreading out away from the banks over the meadows, and so this alfalfa tide of success that has been coming to us has been rising and spreading out of its banks and surroundings. The truth is going out to the people, that way out on the sun-kissed prairies of the West, among the true pioneers of the plains, are to be found the autocrats of this great agricultural empire of the West—the masters of the situation.

#### "In the Clover Blossoms."

EDITOR KANSAS FARMER:—For the last week I have been on a new Deering "Ideal" mowing machine, watching it go rumbling through the thick alfalfa and seeing the pretty alfalfa clover blossoms falling, and it has been a week of enjoyment. I wish every farmer in Kansas had a week's cutting of the same kind. We would be richer and happier.

Some time ago some of us requested of those who have raised alfalfa seed to give us their experience in harvesting it. As I wish to let forty acres go to seed the next cutting, boys please tell us how ripe to cut it and what height. I have a header, a binder, a self-rake reaper, a mower and a scythe, but I won't use the last. How shall I cut it and stack it? Can I bind it?

Now, as we farmers are all hungry to see letters from other farmers and read their experience, I will give my mite to our best friend, the old KANSAS FARMER, about how I handle alfalfa for hay. First, I start the mower as soon

as I see a few blossoms over the field, if I have four days cutting; if not so many days, let it blossom out good. Start to cutting in the morning, and if the weather is hot and dry, start the rake at 10 o'clock. Rake it and bunch and cock it up at once. Do not let it get so dry it will lose its leaves. Do not be afraid of rain if cocked up too green, for it will turn water like a duck. Let it stand in the cock two days and stack it. It is a hard hay to spoil if you follow this advice, but if you let it cure in swath or windrow it is easy hay to spoil. Hot sun and rain will do it up. And when I stack it I want it so green the leaves will not fall off. I have never lost any yet by stacking too green, but have taken it out of the stack when too dry—like sticks of wood.

We need rain. Wheat is hurt by the drought—what was left from being winter-killed. Corn and cane are doing nicely. Our "bonanza" farmer's (Miss Best) 1,600 acres of cane is up and being cultivated. We neighboring farmers have planted enough more to make it 2,300 acres. Oats crop is poor, cattle scarce, hogs the same. Our boys who are in the "Strip" are happy—sod corn immense.

ELI BENEDICT.  
Medicine Lodge, Kas.

#### Fashion in Farming.

The fact has frequently been noticed that farming communities change production speedily with little apparent reason. The ordinary fluctuations in particular crops seem enough at times to set a whole State into new efforts for profit by special cropping. It has been a matter of common remark that extremes in the price of hogs or sheep are likely to follow in quick succession from the readiness with which farmers turn from or to either. A famous New York sheep-raiser is said to have given as the secret of his success, the maxim, "Buy when your neighbors sell, and sell when your neighbors buy." The explanation is that farmers are likely to move in crowds under a common feeling that profit lies in the direction sought by others. Often there seems to be no better reason than that our neighbors are doing it. Kansas is still a State where such changes are frequent and striking; but the rest of the country has a similar record.

Mr. John Hyde, expert in agricultural statistics, has recently published, under the title "Geographical Concentration," illustrations of this tendency to do as neighbors do. With reference to the principal grain crops, he presents important facts as follows:

"Indian corn, or maize, is cultivated in this country from the most easterly county in Maine to the most westerly in the State of Washington, and from the valley of the Red River of the North to the confines of the everglades of Florida. Its area of production is, in fact, more generally distributed than that of any other product except grass, and yet at no agricultural census ever taken has there been less than 38.57 per cent. of the total crop of the country produced in what have been for the time being the four leading corn-producing States, while the percentage has been as high as 52.36, and was 50.80 as recently as 1889. The States that stood first, second and third in the scale of production in 1889 stood tenth, eighth and seventeenth in rank, respectively, in 1889, notwithstanding that their own aggregate production had increased 41.72 per cent. On so vast a scale is corn now cultivated in a group of States in the Mississippi and Missouri valleys, that the combined production of Iowa, Illinois and Kansas in 1889 exceeded by over 100,000,000 bushels the total corn crop of the country but twenty years before. It was the year 1879, however, that witnessed, so far as can be determined from official statistics, the high-water mark of the tendency to concentration in the cultivation of this favorite product, the production of the States of Illinois and Iowa in that year aggregating the enormous total of 600,816,728 bushels, or 34.23 per cent. of the entire crop of the country.

"In the case of wheat, the area of principal production has undergone great changes during the last half century. While its center moved steadily westward for forty years, as was the case also with that of the production of corn, oats and barley, the result of that remarkable redistribution of the productive area which occurred during the closing years of the decade ending with 1889 was that the two States of principal production were as widely separated geo-

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graphically as they are in their physical conditions, Minnesota leading with 11.17 per cent. of the total, and California standing second with 8.73 per cent., while the addition of the crops of Illinois and Indiana raised the proportion to 35.85 per cent. In 1889 61.52 per cent. of the total wheat crop was produced in four States, containing only 5.84 per cent. of the entire land surface of the country. In 1889 those same States produced only 15.66 per cent. of the total, while four others, containing 11.01 per cent. of the entire land surface, produced 35.85 per cent. of the total crop.

"The cultivation of oats was centralized to so great an extent in 1889 that 56.20 per cent. of the total oat crop of the country was the production of four States. Succeeding decennial censuses have found various changes in the area of principal production, until the States that formerly stood at the head of the list have come to make relatively small contributions to the total. At no census, however, has less than 45.41 per cent. had to be credited to what were for the time being the four leading oat-producing States. Between 1879 and 1889 the production of oats almost doubled and the enormous increase in the acreage was more generally distributed over the country at large than was the increase in the acreage devoted to any other important product, even the Southern States having a net increase amounting to 705,869 acres. Nevertheless, the percentage of the total crop of the country grown in the four States of the largest production was even greater in 1889 than in 1879."

After a similar showing as to many other crops, Mr. Hyde sums up the importance of mixed husbandry, and notices the trend that way with favor:

"It is only a few years since in the great wheat belt of North Dakota that it was impossible to procure butter, cheese, eggs or fruit that had not been brought hundreds of miles from some leading produce market or some agricultural district that was not so completely given up to a single branch of the industry. Now, however, all this is changed, and mixed farming is in the ascendant. This is equally true of the States west of the Missouri river; indeed, when in 1889 so many parts of the country had a short fruit crop, hundreds of car loads of apples, grown on the but recently treeless plains of Nebraska, were shipped both to New York and San Francisco.

"I appreciate the importance to the farmer of his cultivating at least one product that is readily convertible into money, but I fail to see that, taking one year with another, a well devised system of mixed farming will not yield quite as speedy a return upon capital invested and labor expended as the proportionately more extensive cultivation of one or two products."

When the fashion is fairly set, we may hope to see our Kansas farmers so handling themselves and their farms as to get a larger welfare out of their time and their soil. With many baskets, the risk upon the eggs is lessened; with many products, the comfort of the household is secured, and a fair recompense for labor is almost certain. With stock to consume the rougher produce, a certain cash income is provided, and the fertility of land for special crops is maintained. Let the fashion grow.—President Geo. T. Fairchild, in *Industrialist*.

#### Leasing Oklahoma School Lands.

All persons wanting to lease school land in Oklahoma will be rewarded by sending for a free sample copy of the HOME, FIELD AND FORUM, Guthrie, Okla., the leading agricultural paper of Oklahoma Territory.



## Irrigation.

### Duty of Water and Methods of Service in Southern California.

The statutes of California define a miner's inch as an inch of water under a four-inch pressure; and the Legislature of that State has also declared that this quantity of water shall be deemed equivalent to .02 of a cubic foot per second. In other words, fifty miner's inches, thus defined, are equivalent to one cubic foot, or 7.5 (about) gallons, per second.

The duty of water in most sections of southern California is usually fixed by allowing one inch to a certain number of acres of land, so that when land is sold water at the rate of one inch to a certain number of acres is also sold with the land and made appurtenant to it. But the number of acres of land which one inch of water is made to irrigate varies in different localities, from ten to five acres.

From results and experience it is becoming the conviction of many, that one inch to five acres is nearer right than one inch to ten acres. It has been shown that as trees grow and become larger they require more frequent and copious irrigations, and that one inch of water to five acres of an old orchard is none too much, although while the orchard is young one-half of that amount may suffice.

It has also been shown that while an orchard which is given one inch to ten acres may have trees that are just as large and thrifty as an orchard on which one inch to five acres is used, yet the latter will invariably yield more fruit than the former. It is, therefore, poor economy to use too little water, even if the trees are made to grow and look well by so doing. Now, it may be inferred from what has been said that a man who has five acres of ground to irrigate allows one inch or .02 cubic foot of water to continually flow on the land to keep it moist. But they do nothing of the kind.

All water companies distribute the water by giving each owner a certain time to irrigate, in which time enough water is given to make what is termed an irrigating head, enabling him to flood his place in a short time. Suppose that there are ten neighbors each having ten acres of land and two inches of water. That makes a whole of 100 acres of land and twenty inches of water. Now, these ten neighbors organize and proceed in the same way as if the 100 acres and twenty inches belonged to one person. They come to the conclusion that it is necessary to irrigate a piece of land not oftener than once every ten days and one man takes the whole twenty inches, which gives him a good irrigating head, and floods his ten acres in one day; the next day some one else takes the water and does the same, and so on until at the end of ten days the whole hundred acres have been irrigated and the turn of the man who had irrigated first comes to irrigate again. This is precisely the way water companies apportion the water to the land-owners, and a man called a *sanjero* (a Spanish word meaning ditch-man) is employed to deliver the water at the right point in the correct amount, and at the proper time, to each land-owner. The reason why this method of allowing this flow to accumulate and using a greater amount at stated intervals is practiced, is that a person could not accomplish anything with a stream of water amounting to only one or a few inches, and that it would be a great inconvenience to be compelled to be at work irrigating all the time.

In irrigating, the water is taken into a ditch, flume or pipe, constructed along the side of the land which is the highest in elevation. A ditch is the crude and primitive method and is generally replaced at the present time by a flume or pipe. If a flume is used there are holes in the side facing the land, with plugs for each hole, so that the water can be let out at any point by simply removing a plug, and on a pipe, if that be used, there are hydrants placed at stated intervals, so that the water can be delivered where desired by opening the proper hydrant. There

are three methods commonly used in irrigating an orchard. One is the basin method, which is by digging a basin around the tree and filling it with water, and when the water has soaked away filling the basin with earth to keep the moisture. Another is the row method, which consists in plowing a wide furrow on each side of a row of trees and making numerous small dams across it. The water is then let in at the head of the row and allowed to fill each of the compartments formed by the dams in the furrow, when it will gradually break over and fill the next, until the whole row has been irrigated. The third method consists in plowing small furrows at right angles to the flume close together throughout the whole orchard. The water is then let in the furrows and allowed to flow along slowly, thoroughly soaking the whole surface of the ground.

The objection to the first two methods of irrigating is that they only wet the ground near the tree and the roots will therefore not grow outward and penetrate the space between the rows, thus enabling the tree to draw nourishment from all parts of the soil. The last method overcomes this objection, and although it takes more water to irrigate in this way it is fast taking the place of others, and will in the course of time be the only method recognized.

### Submerged Dam.

EDITOR KANSAS FARMER:—As there is at the present time a great interest being manifested in the subject of how to obtain water for the purpose of irrigation, and as we have in the western portion of Kansas and Nebraska many streams that lose themselves, or disappear beneath their beds, and become what we call subterranean or lost streams, with a large volume of water flowing beneath the sand in the bed of the stream, I thought it might be of interest to your readers to know how to build a subterranean dam to bring the water to the surface so it can be utilized, and as I have had some experience in the way of building such dams, I will give it for what it is worth.

The first thing to do after you select your place for the dam is to take soundings every four feet across the stream on a line of center of the dam. These soundings should extend down to the water-tight bottom, whether it be rock or clay, so you can make a profile of this water-tight bottom. These soundings can be made with a steel rod of sufficient size to stand drawing through the gravel and sand to the hard bottom. After you have the bottom photographed, so you can get the length of your piling, then go to work with your pile-driver and drive two sets of pilings across the stream, about twenty feet apart, crosswise of the stream, and two feet apart up and down stream. Cut these piles off after driving them down so they are solid, two feet from the ground, and cap them with twelve-inch timber, so as to leave the space between the caps of six and one-half inches. These are for guides to hold the sub-piling in place whilst being driven down to bed-rock or clay. Get good, straight, sound pilings, six by twelve inches. Sharpen the lower end with short bevel, and take oak strips two inches square and spike two onto one edge of piling, leaving a two-inch space in center, and spike one onto the edge of the next one for a tongue to go in groove, the same as matched flooring. Bore holes in the oak strips for spikes, so they will not split while driving the spikes. Now dig a shallow trench under your cap pieces and across the bed of the stream, and commence and set your piling. Shove them down between the caps into the trench, keeping the lower ends in a straight line, and put them together, the same as flooring goes together. As the bottom will be uneven, as your profile will show, be sure the piling is long enough to reach the bottom in all cases. Now, take a heavy wooden maul and drive each piling a little at a time, and be sure to keep them straight and tight together. Then, after you have driven them as far as you can conveniently with the hand-

maul, rig a pile-driver on small wheels and lay a track to run it on in front of piling. Have it built with adjustable ways, so they can be pulled up above the tops of piling and run down as your piling goes down. Now, give each piling one clip with the hammer and move to the next and so on across the ties, and then go back and forward over them until each piling is driven down to the water-tight bottom. (Don't set a green hand at this job, but a good experienced man.) This will bring the water to the surface. If you want to raise the water any higher than the bed of stream, saw off the tops of piling one foot above the ground and bolt on to each side of it three by twelve-inch pieces, and use this for the toe piling for superstructure, and spike the covering of the superstructure solid to it.  
J. S. SHERMAN.

### Wheat by Irrigation.

Professor Blount says: "In New Mexico wheat-raising has been limited in extent and yield. As a crop it seems to have been ignored somewhat, from the fact that the methods of its cultivation have been found to be unfavorable to making it remunerative or prolific; nor has it been made a special crop, because the limited area of tillable land can be made more lucrative by raising alfalfa and fruits.

"The cost of raising wheat is small compared with that of the States where irrigation is not used and fertilizers have to be applied.

"The result of the experiments with wheat made on the college farm during the past two seasons, show conclusively that the soil and climate are most admirably adapted to the crop and its cultivation. The sediment in the waters of the Rio Grande has proven to be well adapted to the growth of small grains, and especially conducive to their health and vigor. Judging from its effects on various plants, it puts more fertility on the soil in the operation of two irrigations than a single crop in one season can take out. When the soil is well prepared and good seed sown early in October; when the crop is carefully irrigated at the proper time and in the right manner, it is useless to say that wheat-raising cannot be made profitable.

"One or two experiments do not prove much, but those conducted on the station for the past twenty months with wheat show conclusively that a pound of good seed, with ordinary cultivation, will produce a bushel, field culture; and when cultivated experimentally, an ounce, in a number of cases, has produced nearly a bushel of wheat, and more than a bushel of oats, barley and rye.

"When the soil is properly prepared and the water timely applied, it produces very large yields. The reasons for this are: First, the soil is in every way adapted to the growth of wheat and the climate favors it most wonderfully. In the next place, no noxious insects, such as the fly, midge or weevil, ever attack it, nor do blight or rust in any way affect it or even appear in the crop.

"This season 480 different varieties of wheat have been tested to ascertain their value for growth, yield, quality and other valuable characteristics. The seed of these wheats has been obtained, from time to time, from all our own States, 210 of them from all wheat-growing foreign countries, and 40 are crosses made during the past twelve years in Colorado.

"Of these 480 varieties only 29 yielded less than 20 bushels to the acre; while 189 gave over 40 bushels. Three varieties, viz.: the Cornelian, Onyx and Feldspar, gave respectively 91.9, 93.8 and 93.9 bushels per acre, and ripened on July 6."

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## WASHINGTON WORKERS.

And the Great Dangers that Surround Them.

### SENATORS INTERVIEWED.

Considerable Excitement Has Been Caused by the Sudden Breaking Down of so Many Prominent Men.

WASHINGTON, D. C., June 12.—The excitements of Congress and the interest caused by varying schemes and various measures have been overshadowed of late by a revelation of the alarming death rate among public men, and the additional fact that in nearly every case the cause can be traced to one source. The sad and sudden death of ex-Postmaster General Frank Hatton, who was stricken at his desk and died shortly afterwards, recalls the deaths of Secretaries Folger, Windom, Chandler and Chase, and Senators Sumner, Beck, Cameron and others.

Now, it has dawned upon the minds of the public men that there must be some one great reason for all these untimely deaths, and it has been traced directly to that great modern trouble which seems to be a natural scourge, Bright's disease of the kidneys.

An interview with a number of prominent men on the subject shows the interest they feel. Mr. J. Henderson Wilkinson, the well-known pension attorney, said: "Ten years ago I was seized with an attack of Bright's disease while at work in the Treasury here. How bad I was you can understand when I say that my hands became bloated and actually cracked open. My limbs and body were alternately swollen and collapsed. I could only creep across the floor. Finally my physician said to me, 'You are at death's door with Bright's disease. You may live a few weeks, but there is absolutely no hope of your recovery.' Upon the advice of the Rev. Dr. Rankin, President of Howard University, I began the use of Warner's Safe Cure, which rescued me from the grave after the doctors had abandoned all hope. I am certain that if men and women generally realized the wonderful power of this great remedy there would be less sickness, fewer deaths, longer life and more happiness than at present."

Rev. Dr. J. E. Rankin, D. D., formerly chaplain of the Senate, confirmed all that Mr. Wilkinson had said, and cited many other cases that had come under his notice where Warner's Safe Cure had restored the health of men and women suffering from Bright's disease. Congressman Belden, of New York; Senator Bruce, Mr. Egleston, of the Treasury Department; Senator Blackburn and others, all united in similar statements.

Wherever I went I found the testimony the same. It was generally admitted that the strains of life were wearing, but it is universally conceded that for overcoming this condition, for strengthening the vitality, toning the health and prolonging the life, nothing had ever been known equal to the great remedy I have above described.

### Where Corn is Indigenous.

Dr. John W. Harshberger, in an interesting study on maize, or corn, traces its origin to the highlands of Mexico, between the 21st and 22d degrees of north latitude, from whence it spread through the agency of the tribes of northern Mexico, and possibly by the way of the West India islands also, into the area included by the United States. Following down the Isthmus of Panama it also extended southward along the great Andean system, where we find tribes in no way related borrowing the name as well as the cereal itself. Maize was not introduced directly into the West Indies islands from Mexico, but probably through South America. This is inferred from the fact that South American words designating this grain extended all through the West India islands. These conclusions in regard to the introduction of this cereal north of Mexico are contrary to the generally accepted idea that the Caribs introduced it into Florida.—*Western America.*

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### Semi-Annual Meeting of Missouri State Horticultural Society.

EDITOR KANSAS FARMER:—Possibly the largest and one of the most intensely interesting State horticultural meetings we ever attended has just closed at Harrisonville, Mo. Fully one hundred delegates, of both sexes, were gathered from both Missouri and Kansas.

Harrisonville is in a lovely country and things were looking their best. Everything was done to make this meeting a success. A serenade by the local brass band, discoursing sweet music, was a feature calculated to draw out the people each evening. The largest hall in town was crowded each evening with more than 1,000 people. Local singers and instrumental players enlivened each meeting.

The fruit display was simply splendid. Eighty-seven plates of apples were exhibited. These had been kept in cold storage and were very fine. Ripe strawberries, raspberries, currants, gooseberries, with many varieties of green fruits, showing their condition and prospect. Flowers in profusion of all kinds and sweetness banked the platform. The hall was handsomely decorated.

We were accorded a drive of ten miles into one of the most lovely of rural districts.

The meetings never lacked for interest. Papers of more than usual importance, covering the various horticultural subjects, with discussions covering the same, were interesting and am only sorry that you Kansas readers could not have heard them.

"Poor old Missouri!" will hardly do in the future. Missouri to-day is "Grand new Missouri!" in many things. At the World's Columbian she (it is claimed) took more horticultural premiums than any other State. When we consider what Missouri has accomplished in horticulture in the past dozen years, it is indeed marvelous. Let me give a little of my own observation. Less than a dozen years ago the Missouri State horticultural meeting was held at Columbia, where was located their Agricultural college, where several hundreds of thousands of dollars had been expended to build up the agricultural industry of the State. Five delegates were sent from the Missouri Valley Horticultural Society. I was of the number. On our arrival there was none to tell us where the meeting was to be held. A room was furnished us in the Agricultural building, but we had to sweep and dust it ere we could unpack our fruit and prepare it for use. We opened meeting with eight delegates present from the whole of the great State, with Kansas thrown in. As the Missouri Valley Horticultural Society had a majority of the members present, we concluded to capture the concern, and at the election that grand, good man, now no more, Major Z. S. Ragan, was elected President; L. A. Goodman, the present efficient Secretary, to the office he still holds, while Col. J. C. Evans, the present efficient President, was elected Treasurer. Being modest, we gave the rest of the organization, i. e., Vice President, to the balance of the State.

From this era dates Missouri's prosperity in horticulture. Owing to Secretary Goodman's energy, local societies have sprung up in most of the counties of the State. He is in touch with the horticultural interests throughout the State, and anything they ask for at the hands of the authorities of the State is granted. The development of the fruit industry, while primarily the outgrowth of the Missouri Valley Horticultural Society, has been fostered by the State Society until the whole of south Missouri is teeming with horticultural energy, and yet they are only on the eve of horticultural development. Where is Kansas? Echo answers, "where."

Kansas is the equal of Missouri in horticultural enterprise if but directed and fostered. At the time of the departure mentioned, Kansas stood far in advance of Missouri in horticultural work, so far as societies are concerned. Although having had something to do with the development of horticulture in south Missouri (being one of the Olden

Fruit Company, originally), yet I affirm that I would rather try fruit-raising in eastern Kansas with the chance of success than in south Missouri. I would not do anything to lessen fruit planting in south Missouri, but having been interested in both States, I aver that I have had as much success, comparatively, in Kansas as I have had in south Missouri, with cultivation and market much in favor of Kansas. What of the future of Kansas? Let the horticulturists lend a hand and help build up our horticultural society and place Kansas where she should be, among the foremost in horticultural work.

FRANK HOLSINGER.

Rosedale, Kas., June 8, 1894.

### From Chautauqua County.

EDITOR KANSAS FARMER:—I think I have some time seen advertised in the KANSAS FARMER a book entitled "Fertilizers, and How to Use Them," but I am now unable to find it. Can you tell me where I can get it?

I live on middle Caney in Chautauqua county. Everything is looking fine here at present. Wheat harvest is fairly commenced and is a fair crop. Corn is earlier than usual and is beginning to tassel. The frost of the 19th of May did very little damage in this locality. Millet and prairie hay promise well. First cutting of alfalfa in stack and it is fine. About all the marketable cattle hogs are gone from this section.

Do you know of any book that would give me any information on irrigation, where the water has to be elevated?

I get many valuable hints from the FARMER and am looking for more, al-



THE PEERLESS STEEL WIND MOTOR.

Built by the STEPHENS MANUFACTURING CO., JOLIET, ILL., who will ship it anywhere at wholesale prices. Price lists, etc., on application. Write them.

though I have been a farmer all my life.

Prospects now for a good crop of apples and light crop of peaches.

Rogers, Kas. A. E. CARNES.  
[The book, "Manures, How to Make and How to Use Them," is published by W. Atlee Burpee & Co., Philadelphia, (cloth \$1, paper 50 cents), or may be had of KANSAS FARMER Co., postpaid, at 20 per cent. less than the publishers' prices. There are many books and other publications on irrigation, but no concise text-book such as our correspondent probably has in mind has yet appeared. If he will write to the KANSAS FARMER, stating his situation and inquiring for such specific information as is needed, the editor will find some one to answer.—EDITOR.]

To the Seashore at Slight Cost via Vandalia and Pennsylvania Short Lines.

For the National Educational Association meeting low rate excursion tickets to Asbury Park will be sold via Vandalia and Pennsylvania lines July 7, 8 and 9. Atlantic City, Cape May, Long Branch, Ocean Grove and numerous other summer havens along the New Jersey coast are near Asbury Park, to which these lines lead direct from St. Louis. Solid vestibule trains daily from St. Louis to Philadelphia, with convenient connection in Union station for frequent trains for the seashore. Ample time for an extended sojourn. For details address J. M. Chesbrough, Assistant General Passenger Agent, St. Louis, Mo.

### A Plea for Home-Grown Strawberries.

The strawberry, of all our Northern fruits, ought to be grown nearest to the consumer. No other fruit suffers so much from long transportation or from lapse of time between the moment when it is picked and the moment when it is served up as the most delicious product of modern horticulture. Along with these assertions goes the fact that no other fruit is better adapted to cultivation in small plantations, or in the still more limited beds of the city lots.

The time required for a plantation to come into bearing is scarcely more than that for a crop of wheat. Plants may be set in September and quite a liberal foretaste of what is to come may be gathered the next May, with the maximum yield to follow in another year; or with the plants set in April, the heaviest crop is picked in a year from May or June. With so short a time to wait, even the tenant of two years can afford to plant a berry patch.

To say that strawberries are as easily grown as corn will be to have the statement challenged by most people, but let the seeker after knowledge gather what information he can on the subject of berry culture and then attend a good rousing farmers' institute and listen to a discussion on corn-raising, where the relative merits of listing and check-rowing, early and late planting, deep and shallow cultivation, are discussed, not to mention a score of other points, and he will conclude that strawberry culture is a very simple art in comparison.

Many dollars are sent out of Manhattan each year for berries that might

have been grown at home, and the same holds true of a hundred other Kansas towns. The points in favor of home-grown berries are: First, the superior quality of the fruit may be enjoyed; second, the employment of home labor; and third, the keeping at home of money that goes for transportation and profits on the crop; last, but not least, we may feel sure that the amount of home-grown berries consumed will, on account of their superior quality and freshness, be much greater than of the imported article.

Not only will the firmer varieties, such as are usually shipped, reach customer in much better condition, but varieties not grown for shipment on account of their softer texture, yet possessing the flavor and aroma of the wild berries of the meadows, may be enjoyed upon the table fresh from the vines and ripened to perfection. People enjoy strawberries, even when a lot that has been shipped two or three hundred miles and is three days old, must be picked over and half of them rejected as unfit for the table; and the majority of our people, if they taste strawberries at all, must take them of this quality. They are strawberries, and that is about all that can be said.

Only those can know the real luxury of strawberries who can have fresh from the vines such varieties as the Haveland, Louise, Charles Downing, Ella, Duncan, Cumberland, or a dozen more that might be named, new and old. The more standard Crescents, Captain Jacks, Bubachs, Warfields, Clouds and Wilsons are well worth knowing by name if you can eat them the day they are picked, railroad transportation left out, but get them a day's ride by express and they are best known as simply strawberries.

The number of varieties is legion, and they include those adapted to a variety of soils and climates. The one thing they all insist upon is plenty of moisture. Given a good piece of rich,

mellow land, a trifle sandy, rather than too close, with an abundance of well water at from fifteen to thirty feet as is the usual case with our first and second bottom lands in Kansas, and you have the possibilities of bushels of berries. Any town having such a location adjacent, and the most of them have plenty of room within the town site, can as well be supplied with home-grown berries as not.

If any crop can be made to produce more value to the acre than strawberries, I have yet to learn what it is, and the surprise to me is not that some towns have berries to ship, but that they have so many places to ship them to.—Prof. S. C. Mason, in *Industrialist*.

Among other prominent persons in attendance at the People's party State convention held this week, is the well-known live stock commission man, Mr. M. S. Peters, of Kansas City, Kas. He is the senior member of the firm of M. S. Peters & Co., and generally known throughout the State as the manager that pulled through the successful winding-up of the American Live Stock Commission Company in the interests of the farmer stockholders that were interested, under the auspices of the Kansas State Farmers' Alliance. Among other sales made yesterday by him at the Kansas City stock yards, was a lot of Colorado steers that brought \$4.80, the top of the market for Western stuff since the beginning of the year 1894. The cattle referred to were fed by Mr. A. L. Waterman, of Marion county, Kas. The old friends of Mr. Peters will be glad to learn that the Peters firm have carried all their old customers and added many new ones since going out of the Campbell Company several months ago.

### Horse Markets Reviewed.

W. S. Tough & Son, managers of the Kansas City stock yards horse and mule department, report the market as being about up to the standard for good horses. Anything in the shape of a 1,100 to 1,200-pound chunk, nice driver, matched team, good actor or streeter sold well up to quotations, but the cheaper grades of horses with blemishes or much age sold from \$2.50 to \$5 off. Don't think it very profitable work for shippers to bring in the thin, poor, cheap horses this season, as the prospects are that the market will be dull for that class, but for all good drivers and smooth horses in good flesh of the better grades the market is still good and strong.

The mule market has been looking up a little; fifteen to sixteen hands, 950 to 1,250 pounds, sold quite readily.

### Whitman's Baling Presses.

In this issue will be found the advertisement of the celebrated Whitman Baling Presses, manufactured by the Whitman Agricultural Co., of St. Louis, Mo. These balers have a world-wide reputation and are manufactured in various styles and sizes, to suit the requirements of all sections and classes. They are now in use throughout the civilized world, and the manufacturers claim the remarkable record of never having been beaten in an exhibition or contest in this or any other country. At the late World's Fair, Chicago, after field trials, they received the very highest award on the three classes of balers—steam, horse and hand power. It will be remembered that these balers received the highest honors at the Paris exposition and field trials. This well-known and reliable firm fully warrants either of their presses to be more rapid, powerful and durable than anything of their class in market.

A baling press must necessarily be very heavy, strong and thoroughly well made, otherwise the breakage and expense will be great. The Whitman Company does not claim to have the lightest and cheapest press in market, but will guarantee in all respects the best.

They also manufacture a large line of farm machinery, including corn-shellers, grain drills, seed-sowers, cider and wine mills, feed mills, horse-powers, etc. Dealers and farmers desiring first-class machinery will do well to ask for circulars and prices of the machine wanted, by addressing the company, as stated above.

### MOUNTAIN LAKE PARK.

On the Main Line of the Baltimore & Ohio Railroad.

On the crest of the Alleghenies, 3,000 feet above tide water, is one of the most charming and healthful resorts and contains 800 acres of forest and glade. The temperature is delightful and hay fever and malaria are unknown. The park is lighted by electricity. The hotels and boarding houses are first-class; board from \$7 to \$15 per week. Furnished cottages or rooms at reasonable rates. All Baltimore & Ohio trains stop at the park. Write to L. A. Rudisill, Superintendent, Mountain Lake Park, Md., in regard to hotels, etc., and for information as to time of trains, rates of fare, etc., call on any agent of the Baltimore & Ohio Southwestern railway, or address O. P. McCarty, General Passenger Agent, St. Louis, Mo.





# KANSAS FARMER.

ESTABLISHED IN 1863.

Published Every Wednesday by the  
**KANSAS FARMER COMPANY.**

OFFICE:

No. 116 West Sixth Street.

**SUBSCRIPTION PRICE: ONE DOLLAR A YEAR.**

An extra copy free fifty-two weeks for a club of six, at \$1.00 each.

Address **KANSAS FARMER CO., Topeka, Kansas.**

## ADVERTISING RATES.

Display advertising 15 cents per line, agate, (fourteen lines to the inch).

Special reading notices, 25 cents per line. Business cards or miscellaneous advertisements will be received from reliable advertisers at the rate of \$5.00 per line for one year.

Annual cards in the Breeders' Directory, consisting of four lines or less, for \$15.00 per year, including a copy of the KANSAS FARMER free.

Electros must have metal base. Objectionable advertisements or orders from unreliable advertisers, when such is known to be the case, will not be accepted at any price.

To insure prompt publication of an advertisement, send the cash with the order, however monthly or quarterly payments may be arranged by parties who are well known to the publishers or when acceptable references are given.

All advertising intended for the current week should reach this office not later than Monday. Every advertiser will receive a copy of the paper free during the publication of the advertisement.

Address all orders  
**KANSAS FARMER CO., Topeka, Kas.**

Readers should remember that the special offer to send the KANSAS FARMER to new trial subscribers for 50 cents from now to January 1, 1895, is still open, and that the person who sends in the subscription is authorized to keep 25 cents of the money. See the neighbors and get us a big list of trial subscribers.

The United States Treasury estimate of the population of the country on June 1, 1894, is 68,275,000, and of money in circulation \$24.54 per capita. Money in circulation, as used by the Treasury, includes "general stock coined or issued," \$2,266,713,944, less amount in the Treasury, \$591,044,593, or \$1,675,669,401 in circulation.

The great labor war at Cripple Creek, Col., has at last been settled without the copious blood-letting which was at one time feared. The settlement appears to be a compromise which was brought about on account of the wisdom of the Governor in placing the State militia between the contending parties and forcing them to remain inactive until the agreement could be reached.

In order to secure the additional circulation to which the KANSAS FARMER is entitled by virtue of its intrinsic excellence, the publishers have this week made a sensational introductory offer for the remainder of the year. Every boy in every subscriber's family ought to make from his commissions on this offer enough money to pay all of his Fourth of July expenses and buy his mother a new dress besides.

The great coal miners' strike, which has caused widespread misery and has been the occasion for almost open war in Pennsylvania and other of the older coal mining States, was settled by arbitration last Monday. The scale of prices agreed upon is said to be a compromise between the demands of the strikers and the scale desired by the mining companies. The agreement is to take effect June 10, 1894, and continue until May 1, 1895.

A subscriber writes a very complimentary letter as to the excellence of the "old reliable" KANSAS FARMER, and after expressing especial satisfaction with the editorials on economic questions, ventures a guess as to our politics. Strangely enough, this letter, guess and all, leaves us still in doubt as to the politics of the guesser. It is a remarkable fact, and one in which we take no little satisfaction, that our discussions of questions of political economy, as well as our observations on the anomalous situation, receive many endorsements from members of all political parties. Republicans, Populists and Democrats alike appreciate the efforts of the KANSAS FARMER to make honest presentations of the truth without distortion in the interest of any political organization. This is our politics.

## THE CONVENTIONS.

The Kansas Republican State convention met in this city last week and placed in nomination the following candidates:

For Associate Justice, W. A. Johnston.  
For Governor, E. N. Morrill.  
For Lieutenant Governor, J. A. Troutman.

For Secretary of State, W. C. Edwards.  
For Auditor of State, Geo. E. Cole.  
For Treasurer of State, Otis L. Atherton.  
For Attorney General, F. B. Dawes.  
For Superintendent of Public Instruction, E. Stanley.

Congressman-at-Large, R. W. Blue.

There was no prolonged contest for any of the nominations. The greatest interest was centered on the platform, and specifically as to whether it should repeat the prohibition plank, which has for many years been prominent in the declarations of the party. Indeed, it has been said that heretofore the prohibition element in the Republican party has been so intent on securing the plank that they have allowed the opposition to take the nominations. This year the case is reversed; the prohibition plank is entirely omitted and the President of the State Temperance Union is the nominee for Lieutenant Governor. Indeed, it is said that a stronger prohibition ticket could scarcely have been nominated. The woman suffrage question was also a matter of concern. It is generally known that an amendment to the constitution of the State, providing equal political rights for all, regardless of sex, is to be passed upon by the voters at the November election. The advocates of the measure were very anxious to have the party declare in its favor. The platform contains no reference to the subject, however. The silver question was also a cause of some anxiety. It cannot be doubted that a majority of the voters of Kansas are in favor of restoring silver to its ancient position as to coinage and as a money of "ultimate redemption." The declarations of the platform on this question are not quite satisfactory to those who style themselves "conservatives on financial matters," but the nomination of Major Morrill for Governor is taken as an antidote in this matter, very much as that of Mr. Troutman is considered in the matter of prohibition.

The People's party State convention is now in session and probably will have completed its labors by the time this paper reaches most of its readers. The basis of apportionment for this convention was such that it does not contain quite as many delegates as did that of last week, but every deficiency in this line is more than compensated by the attendance of others than delegates. The city is swarming with farmers. It might be easy to guess who will receive the nominations and what will be the chief features of the platform; but our observations in the past have made us rather shy of the prophecy business, and we will not attempt to predict the action of this great body.

## TO KEEP WEEVIL OUT OF WHEAT.

EDITOR KANSAS FARMER:—Can you tell me of anything that will keep weevil out of wheat when stored in granaries, without injuring the grain, and can they be driven out of the grain after they get in? Please answer through your paper.

Anthony, Kas. J. S. CAMPBELL.  
This question has been frequently put and answered in the KANSAS FARMER, but for the benefit of new subscribers and of others who may not remember the directions, it shall be answered again here and now. Bisulphide of carbon is the substance used for this purpose. It is a liquid which evaporates rapidly, giving off a bad-smelling vapor which is heavier than air. It is exceedingly inflammable and must therefore be kept away from the vicinity of fire and lights. Do not smoke or light a match near it. Formerly the directions provided that the liquid be placed below the surface of the grain by saturating cotton or other absorbing substance with it and with a stick pushing small wads of this into different parts of the bin. Later directions say pour a small quantity of the bisulphide on the wheat and immediately cover with ducking to prevent the escape of the vapor. If the ducking has been made water-proof by a coat of linseed oil, so much the better. The vapor sinks into the wheat, kills

the weevil and does no harm to the grain. The bad smell passes away rapidly and by the time the grain can be taken out of the bin and either sacked or loaded into a wagon or car the remedy will have escaped completely.

## OKLAHOMA THROUGH AGRICULTURAL GLASSES.

The writer made a two days' trip to Oklahoma last week, and not unlikely his observations were taken through more distinctively agricultural spectacles than those of most writers who have described the long-time forbidden land.

An hour before the shades of evening spread over the landscape, the Santa Fe train which leaves Topeka at 11:50 a. m. passes from the highly cultivated and richly fruitful fields of Cowley county, Kansas, by a sudden transition, into the apparently almost untrodden prairies of the "Cherokee Strip," a country long the theme of sensational writers, and the scene of cowboy contentions, but now soon to resound with the clatter of the reaper and the song of the plowman. The small and primitive beginning so far made by the settlers on the "Strip" scarcely lessen the contrast between the land of enlightenment on the Kansas side and the land so lately given up to savagery, barbarism, or, at most, to half civilization on the other. Fine farms, comfortable residences, good barns, neat fences, thrifty hedges and fields of waving corn, alternating with other fields of wheat in the shock, characterize the Kansas side of an imaginary line. Indeed, this highly developed condition prevails right up to the line and marks it so plainly that the stranger needs not to inquire where the boundary is. On the other side is the same beautifully rolling prairie, the same rich soil, but grass, grass, grass, with only the small and recent "improvements" of the new settlers who will doubtless make the fair land, in which they have cast their fortunes, to blossom like the Kansas adjoining.

The writer proceeded as far as Guthrie, the capital of the young Territory soon to become a great State among the great States of the Southwest. This much-heralded city, the city which sprung up in a day, is a surprise to even those who are prepared to see a young metropolis. The little shanties which were at first erected to hold the lots have nearly all disappeared, and in their places are business blocks of varying pretensions, from the substantial three-story brick to the hasty board structure which the demand for trade facilities made necessary. The capital square is pointed out with commendable pride.

By the courtesy of J. S. Soule, editor of Oklahoma's excellent agricultural paper, the HOME, FIELD AND FORUM, the writer had a fine drive about the city and some of the adjacent country. The formation is the red sandstone and "red bed" character found farther west in Kansas. Some parties were boring a well in the city and the washings from this were suggestive of the blood from a hundred bees. In the highest parts of the city an abundant supply of water is usually obtained at about fifty feet. Some wells which have been drilled deeper have given salt water. The "lay of the land" about Guthrie is quite rolling and abounds, in some quarters, in canyons. These are generally hidden in the timber and are wild and picturesque. They abound in springs, which issue from the red rocks of their sides, and at the upper end there is usually a spring and an abrupt termination of the gorge. The timber is more abundant than in the same longitude in Kansas and spreads more to the highlands, so that the county presents a most pleasing prospect. The stone is rather harder and of more uniform texture than most of the red sandstones of Kansas and is used extensively in building.

The writer talked with a farmer who had formerly lived in Marshall county, Kansas. He was a renter, and, therefore, unaffected with the land boom fever which usually affects the views of the land-owner in a new country. He

said that the land is not equal to that of northeastern Kansas for corn, but is better for wheat and is good for cotton and colored people.

It must be remembered in this connection, that Oklahoma is about four years "older" than the "Strip." The settlers' shanties have developed into good houses, barns and fences; shocks of wheat, growing corn and cotton, young orchards and vineyards take the place of the stretches of green prairies in the "Strip." The fact that Oklahoma produces an excellent quality and a good yield of cotton is an important one in considering her advantages, and will, by those who have produced this staple, be held to fully compensate for any deficiencies, either real or imagined.

The writer had a more extended view, both of the vicinity of Guthrie and of the "Strip," during the daylight return trip. The smart towns of the "Strip" are the result of conditions which can never be repeated in the United States, and are evidences of the tremendous energy which impels the American people. Well will it be if this energy can always be directed to useful development and production. But should the controlling impulse ever become one of destruction instead of conservation and development—the mind falters rather than form the picture.

A few short years will obliterate the difference between this fair new land and the older settled communities around it, and another generation will have almost forgotten the difference in the dates of settlement.

Should a Kansas farmer now contemplate removal to Oklahoma he will probably find on investigation that the advantages and disadvantages balance very evenly with those here. Indeed, so far as the means of prosperity are concerned, the man in Kansas and the man in the Territory would each lose about the expense of removal by making a change from the one to the other.

Mr. George Sanderson, of Junction City, has just closed a contract with Fairbanks, Morse & Co., of Kansas City, for machinery with which to pump water from the river and irrigate twenty acres of his farm. It will be remembered that Fairbanks, Morse & Co. guarantee the capacity of their irrigation plants, and the conservatism of this firm is such that it will be no matter of surprise if their twenty-acre plant shall be found capable of raising water for thirty or even forty acres. Mr. Sanderson expects eventually to so enlarge this plant as to irrigate his entire farm.

This week is "commencement week" at nearly all Kansas colleges, but the one in which Kansas farmers are most interested is that at Manhattan. The course at this, the State Agricultural college, is arranged with especial reference to the wants of the sons and daughters of farmers, and is such as gives them the most valuable knowledge and training possible to be acquired in a four-year's course. It is also arranged so that great advantage may be derived by those who are unable to complete the entire course. It is, however, most desirable for those who can accomplish it that they complete the entire course and receive the diploma authorized to be conferred upon its graduates.

The third biennial report of the Kansas State Horticultural Society is an exceedingly valuable and interesting one. Besides the records of proceedings, the reports and the priceless papers presented at the annual meetings, the book contains a fruit manual, which is a summary of the knowledge derived from the experience of the fruit-growers of the State in all the years since its earliest settlements. It is invaluable to every one who is or expects to be interested in fruit culture. Another department of the book is devoted to fungi and another to entomology. These were compiled by Secretary Brackett, of Lawrence, and are up to date and are reliable. The book should be in the hands of every fruit-grower in Kansas.

Get up a club for the KANSAS FARMER.



THE WORLD'S WHEAT PRODUCTION.

The importance, to producers, of approximately correct information of the supplies of and the demand for what they have for sale is only beginning to be appreciated.

The importance of gathering this kind of information, and the wide discrepancies between the estimates published and the subsequently ascertained facts, are discouraging features, as to which the Cincinnati Price Current remarks that "in recent years there have been some striking instances of inability to approximate the year's production of wheat, in various countries, at a time soon after harvesting, the estimates then offered being subject to important modification by the subsequent evidences furnished by the recorded movement.

"We copy the following totals from the detailed exhibit of yearly production, the figures representing millions of bushels:

Table showing wheat production in millions of bushels from 1893 to 1888 for Europe, N. America, S. America, Asia, Africa, and Australia.

"This statement is for wheat harvested prior to September 1 of the years indicated, excepting in the instances of Argentina, Uruguay and Chili, which are crops 'harvested in December and February following,' the month of January being generally recognized as the harvest period for these countries.

"It is interesting to note that the average yearly production indicated for the first three years of the period shown in the statement was 2,247,000,000 bushels, while for the last three years the average rose to 2,438,000,000, or 191,000,000 increase, which is suggestive of the cause of the world's plentifulness of wheat during the past two or three years."

Referring to the subject of improvement by seed selection, in the case of sorghum, by Mr. Denton, at Sterling, and by Profs. Fallyer and Willard, at the Kansas Experiment Station, the

Louisiana Planter and Sugar Manufacturer, says: "The wonderful results brought about in Kansas by sorghum improvement certainly suggests a great future for that crop in sugar production. It may baffle the efforts of our scientists for a time, but, as in other things science has conquered, so we shall hope that this refractory sugar plant, sorghum, will in the end, and that not far removed, be compelled to yield up its sucrose content, which by chemical test now exceeds that of our Louisiana tropical cane."

CROPS OF THE WORLD.

The Miller's Gazette and Corn Trade Journal, of London, England, makes a review of the crop conditions of the world, beginning with England, as follows:

"The weather, in the early part of this week, became suddenly quite cold and ungenial, with severe night frosts, 10 degrees of frost being quite common. Serious damage was done to the fruit crop and to the young potatoes by this frost, and if it had continued, the wheat plant, hardy as it is, might have been prejudiced. Happily, however, the temperature has now become relatively mild again, after some heavy rain. Sharp frosts in May are by no means uncommon; in 1892, for instance, there were severe frosts as late as June 15, and in 1891 the period from May 16 to 21 was quite as cold as in the present year, with snow in many parts of the country. In 1885 and 1887 also similar frosts were experienced in May. In none of these years was any serious injury to the wheat crop sustained, but in the present year the risk generally has been greater because of the very forward condition of vegetation. In France the sudden change to cold weather, with violent hail storms in the districts south and west of Paris, caused considerable anxiety, especially where the wheat plant was already in ear, but there, too, the weather has changed for the better, and the crop prospects generally are excellent. In Germany, the official report up to May 15 gives the following as the average condition of the crops, taking 1 to represent very good; 2, good; 3, medium; 4, poor, and 5, very poor: Wheat, rye and barley 2:2; oats, 2:4; potatoes, 2:1; clover, 3:1; grass, 2:2. Since May 15, however, the weather has not been very favorable, the sharp frosts early this week creating havoc in the potato crop, and there are also numerous complaints from various parts of the country concerning the spring crops and clover. In Holland the severe frosts have injuriously affected the blooming of rye, and also seriously damaged potatoes in many districts. In Hungary the crops are described as very forward, and the harvest, with continued favorable weather, may commence two weeks earlier than usual. There is, however, some anxiety concerning the ravages of what is called the "Hebron" fly, a remedy for the ravages of which has yet to be found. The Italian and Spanish crop prospects are now very promising. From Roumania too the reports are now very rose-colored, rapeseed alone having suffered rather seriously. With regard to the Russian crops the official reports are now very good; while our Odessa correspondent speaks in very glowing terms of the prospective abundance of the crops. Concerning the American crop, the report of the Cincinnati Price Current, cabled this morning, speaks of some damage from snow and from excessive rains in many localities, but adds that the general average condition of the winter wheat has not been lowered materially; whilst in the northwest the spring wheat outlook is generally favorable. Our own cable concerning the California wheat crop, says that the damage has been over-rated, and that the recent rains have improved the backward crops."

If our subscribers who are about to renew their subscriptions will notice our advertisement of "Picturesque America" in this issue, they no doubt will desire to take advantage of our offer. Send for our supplement containing our various clubbing propositions.

MANUFACTURING AND FARMING.

It has come to be conceded that the determination of economic questions has so great an effect on the prosperity of every producer that a formerly unheard of importance is attached to every honest discussion of these questions. The Cincinnati Price Current copies from the New York Evening Post the following careful consideration of some showings from the census:

"While the census figures on manufacturing for 1880 and 1890 cannot be taken as entirely accurate statements of the subject treated, and cannot be compared in every particular the one year with the other, still they are near enough to correctness to admit of broad deductions. The items show variations in the increases from 1880 to 1890; thus the total number of employes increased 66 per cent., while to total wages paid increased 131 per cent. It will not do to infer from these figures that the factory hands received twice the annual wages of 1880, for officers, members of firms and clerks are included in the total. Still, according to the returns, the class put down as 'all other employes,' and covering about 90 per cent. of the total number reported, received average wages of \$444 in 1890, no doubt a substantial advance during the decade. The increase in number of establishments was but 27 per cent., while the capital invested in 1890 was 121 per cent. greater than in 1880. The total value of products was 69 per cent. greater. When we recollect that the fall in prices has extended over a number of years, it will be apparent that this increase in the value of manufactures covers a still greater percentage of increase for the decade in the volume of production; but on this latter point we have no statistical information.

"The tendency during the decade is more clearly shown by the statistics given for certain lines of manufacturing, particularly those which were quickest to respond to trade changes. Paper manufacturing is a good illustration of this tendency. The number of establishments decreased during the decade slightly; the capital nearly doubled; the number of employes increased about 20 per cent.; the pay roll was 60 per cent. larger; while the value of product was increased not quite 40 per cent. The application of capital to the manufacture of paper has resulted in improved machinery, with larger plants, where approximately the same number of employes became more skilled and received better wages. Meantime there was a much larger output of paper, whose cost per unit was reduced.

"A striking illustration of the changes which sometimes overtake certain forms of manufacture may be seen in the statistics of the business of tanning leather. The number of tanneries was but one-third that of 1880, though the invested capital increased. The number of employes was almost exactly the same, and their wages were 27 per cent. larger in 1890, yet the cost of the materials used, because of well-known changes in methods of tanning, was 30 per cent. less, and the value of the product 25 per cent. less, than a decade ago.

"The growth of a new industry is illustrated by the figures given for architectural and ornamental iron work, the annual product of which increased in value during the ten years from \$3,400,000 to \$37,700,000. So the returns for the manufactures of carpets show a decrease in the number of factories and an increase in the capital invested; the same number of employes receiving double the amount of money, with an increase of 40 per cent. in the value of the product. The business of manufacturing men's clothing shows an enormous expansion; and so does iron and steel, in which industry a little over half the number of establishments in 1890 produced nearly twice the product.

"So one might go through the list. In varying proportions the whole sixty-four industries reported show the same tendency toward a reduction in the number of establishments, a great increase in the capital employed and wages paid, with a smaller percentage of increase in the value of the product. The significance of these changes will be seen the more readily when compared with the percentage of increase in population during the ten years, which was a little less than 25 per cent.

"It would not be correct to generalize from these figures to the effect that the increase in population, in capital invested and in value of product should bear some specific relation to each other. If it is true, as seems probable from the census bulletins, that the average annual wages paid to employes in manufacturing establishments were larger in 1890 than in 1880, that increase would enable these employes to buy more shoes or more clothing, and in this way a portion of the increase in product would be accounted for. This, in turn, would induce the investment of more capital in better plants and machinery, with the result of cheapening cost. Yet the increases in the amount and value of the output, in wages paid and the capital employed are shown to be so much greater than the increase of population as to suggest exces-

sive stimulation. Making all allowances for the desire of the Census Bureau to show great manufacturing prosperity, and also for the comparatively small increase in our exports of manufactured goods during the decade, it is hard to understand how invested capital could have shown an increase five times greater than population, number of employes and value of product; an increase more than twice greater, with a volume of production probably three or more times larger, than the increase in the number of consumers—how such great disparity could have been occasioned except by abnormal causes. And the reasoning still holds good after admitting the energy and intelligence of the American people. The point becomes clearer when we compare the growth of manufacturing with that of agriculture. The matter is important enough to quote the averages of output by decades as given by the Department of Agriculture:

Table titled 'ANNUAL AVERAGE CROP FOR DECADE.' showing Bushels and Value for Corn, Wheat, and Oats from 1870-1879 to 1880-1889.

"Census statistics show an increase in other farm products. For example, the number of chickens at the farms in June, 1890, was more than twice that of 1880. The output of butter increased 32 per cent. and that of eggs 79 per cent. While the capital invested in manufacturing increased 121 per cent., improved farm land advanced in value but 26 per cent., and the value of all farm products but 11 per cent. in 1890 as compared with 1880. Upon the whole the advance in agriculture has hardly kept pace with the increase in population, showing a marked contrast in manufacturing.

"The great cause of this excessive and unnatural stimulation of manufacturing was tariff protection, which forced an output out of all proportion to the home market. If the census figures are to be believed at all, their statistics show a state of things which can find a permanent cure only in industrial freedom. With this conclusion as a business proposition the Journal of Commerce agrees, while the same idea underlies Mr. Carnegie's letter to the Tribune advocating lower duties. Our people have been trying to lift themselves into a fictitious manufacturing prosperity by the straps of their own high-tariff boots."

A vote taken last week in the national House of Representatives on the question of repealing the 10 per cent. tax on bank note circulation other than the notes of national banks, resulted in a defeat for the repealers. Whether this will be final for the present session is an open question. Not unlikely some modification in the way of regulating such circulation will be proposed. It has been understood that the President and the majority in Congress are in favor of State bank circulation, and it is scarcely to be expected that a measure offering such possibilities of private gain will be allowed to sleep the sleep of death. It was once reported of a noted Pennsylvania politician that he introduced a lobbyist to an official at Harrisburg, remarking in his letter of introduction: "He understands addition, division and silence." Possibly this party has not yet seen the requisite number of Congressmen to assure the passage of the act repealing the 10 per cent. tax.

A feature—several features—of the distress caused in eastern cities by the depression may be gleaned from the report just published, of the operations of the citizens' permanent relief committee, of Philadelphia, in relieving distress in the city during the winter of 1893-94. The report constitutes a pamphlet of fifty-six pages and appears to be an unvarnished account of what the committee did and some of the things it saw and learned. Among the latter it mentions the discovery that some of the money lenders of the 'city of brotherly love' have charged their victims interest at the enormous rate of 60 per cent. a month, 720 per cent. a year on loans. The committee was justly indignant and it entered vigorously upon the work of protecting the victims of this greed against the collection of any more than the legal rate of interest. It has not yet been claimed that the committee aided repudiation or that the credit of Philadelphia was being ruined by this organized resistance to the enforcement of the extortionate contracts. The extent of the direct relief afforded in the city is represented by the sum of \$115,578.15, which was given out by the committee by direct appropriations, besides various indirect assistance afforded.

**Horticulture.**

**Forestry Stations.**

EDITOR KANSAS FARMER:—An intention, several years old, I was able to carry out this spring. I have visited both the State Forestry Stations. I have had a vague notion that these places were established for the encouragement of tree culture in western Kansas. How it was accomplished I did not know. I have heard many criticisms about the stations, and I know that the appropriations for them have been reduced by recent Legislatures. Now I have been there, I seem to know something of what is and have some thoughts of what might be.

In the first place, I think the criticism that would curtail their usefulness by curtailing the appropriation, should be taken with allowance. I wish dwellers in eastern Kansas, taxpayers, and their legislative representatives, would leave their local prejudices and rise to the understanding of this broad proposition, that what is good for western Kansas is good for the whole State; that development of taxable property in the west will lighten the burden of taxation in the eastern counties; that the good of the whole State should be seen to consist in the prosperity of its parts. That done, future legislation would apply the principle to the encouragement of tree culture on the plains, and the forestry stations would be placed on a permanent footing.

The first thing in this direction should be the decision of a line of policy which, when determined, should be carried out for not less than ten years, and the chief officer, Commissioner, or whatever he may be called, should be an expert in tree-growing, and not removable for political reasons.

The method of working the stations so far, seems to have been the devotion of a certain part of the area to permanent tree-growing—the creation of an artificial forest, and another part to the work of a nursery, distributing free young trees to applicants, wherever situate, on their undertaking to cultivate the plants properly.

It would appear that the second part of this has had more attention than the first. I think this ought to be reversed. There should be a definite number of acres put to permanent forest every year, and the distribution of free trees cease in a few years.

It is only eight years since the stations were established, and there has been four Commissioners. All may have been good men, but it is not in human nature that a succession in this way will get the best results. It appeared to me that the grounds, at present, are in good condition, free from weeds, in good till, and the present Commissioner understands his business. Whatever political changes may be in store, the present Commissioner should keep his place, and the law should make the place strictly non-political.

Some people don't know where these stations are. The first, which has some trees well advanced, as they were on the place when it was purchased, is a quarter section a mile west of Ogallah, in Trego county, just north of the Union Pacific railway track. It is on the high prairie, being at the crest of the water-shed between the Saline and Big creek, which runs to the Smoky. Its elevation above sea level 2,380 feet, and it is only a few miles east of the 100th meridian. The growth of a forest here would be a great example. The water in the well comes from a depth of eighty-five feet. It can also be an example of the cost of raising water that height by a windmill. This is a depth to water that is very common on the plains.

The other station is farther south. It is three miles east of Dodge City. It is in sight from the main line of the Santa Fe railroad. It is also on the high prairie, the summit of the divide between the Arkansas and the Sawlog. Its well is deeper to water by 100 feet than the one at Ogallah, yet the wind pump used brings a constant supply. This station is also near the 100th meridian, and its elevation is about 2,600 feet. Climate may, therefore, be taken

as essentially the same as at Ogallah, the 200 feet increase of elevation being compensated for by the decrease in latitude. Both stations get the prairie winds; both have about the same rainfall.

The two stations show that, with care in their early years, trees will grow. This ought to be known and the most suitable trees should be named, from time to time, in bulletins freely distributed in the west.

I have said above that there is about the same rainfall. The word "about" suggests that this ought to be known exactly. The two stations should have been supplied with rain-gauges, and the record kept from the first day they were stations. There should be also records kept at both places of the force of the wind and the temperature. The national forestry bureau was worthless till an expert was put in charge. Our forestry experiment should continue under one control till good results should accrue. A visitatorial power might be lodged in the Governor and Council, or the State Board of Agriculture, but I think it cannot be too much emphasized that the Commissioner should be a permanent officer, competent for the work, and as the present Commissioner seems to have the necessary qualifications, and has the work in his hands, he should be continued long enough to develop the results of a definite policy. To politicians of every party, members of the next Legislature, I would say, that the development of the country west of the ninety-ninth meridian, means the development of Kansas, and the proper expansion of the forestry stations is part of that development, and that no narrow or niggardly reasons should have place in providing for that expansion. ROBERT HAY.  
Junction City, June 4, 1894.

**Austrian Pines.**

EDITOR KANSAS FARMER:—Austrian pine, leaves long, slender, rigid and sharply pointed. A well-known and common tree, but not a native of the United States. Was introduced into Great Britain about 1835, and shortly afterwards into the United States. The Austrian pine grows to a very large tree. Under favorable conditions it will grow more than one hundred feet in height. Wood rather coarse-grained, strong and moderately durable. The general habit of the tree is broad and massive, of very sturdy growth; the leaves quite dark green, remaining the same both winter and summer. Is a very fast grower after it has been planted two or three years. In Kansas, a fair specimen will add twelve to sixteen inches in height each year, and for every foot in height an equal in breadth is made. It is not very particular about the soil. Will make a good growth on upland, but should never be planted near deciduous trees. Give an Austrian pine plenty of room and it is one of the best trees for Kansas farmers to plant. Two rows planted on the north and west of the feed-lot would, in a few years, be a solid wall of green, protecting both man and beast from the cold northwest winds. For such purposes the trees should be planted ten to twelve feet apart in the row, the rows to be twelve to fifteen feet apart. Let them grow until they begin to crowd each other, when they should be thinned out so as to give the remaining trees room enough to develop. The trees can be bought quite cheaply in sizes from one to two feet. The largest evergreen nurseries are located at Elgin, Dundee and Waukegan, Ill., but the above trees can be bought from any general nursery. My advice would be for every man in this State, that likes to see things around home look nice, to buy a few Austrian pines, and plant them; but first, after receiving the trees from the nursery, unpack, then heel them in in the shade; leave them there for one week or even more, select a cloudy day or plant in the evening, firming the dirt up well around the trees; water when you have the hole half full of dirt, finish filling in but put no water on top. Should it remain dry, water again after digging some of the dirt away, then replace the top dirt again. After the tree has become established

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it will stand all kinds of weather, and will thrive when many others fail. Do not, at any time, take Scotch pine in place of Austrian, for it is not so good for this State. They grow very fast while young, but in a few years the wind blows them out of shape and they will be leaning to the north, while an Austrian pine quite near would be erect and firm. I have grown both sorts, therefore I speak from personal experience, and have found the best and surest way to make a tree grow is to cultivate. GEO. W. TINCHER.  
Topeka, Kas.

**Entomology.**

**Do Ants Destroy Chinch Bugs?**

EDITOR KANSAS FARMER:—Referring again to the matter of chinch bugs, would say, that the day after I last wrote I found young bugs were making their appearance, and more have since hatched daily, but only in spots and in such small numbers as compared with a year ago as to make it impossible that the wheat shall suffer as much injury from this cause as in 1893, whatever may be the case later with corn. Oats are so small, thin and unpromising that it would be difficult to injure them seriously, although good rains coming at once might help them somewhat.

I am satisfied, so far as our wheat is concerned, that there is not one chinch bug where there were thousands a year since. As the old bugs were, early this spring, much more numerous than last spring, I attribute this change for the better to the very wet condition of the soil from April 13 to May 8, and to the work of the ants in destroying the eggs. The ants are much more numerous than I ever knew them before, and where most numerous there are no bugs hatching. There are of these benign insects more than a dozen varieties, ranging from about one-sixteenth to five-sixteenths of an inch in length, and colored black, red and brown. Observation forces the conclusion that they are not only disposing of vast numbers of chinch eggs, but that some of the larger varieties are feasting on the breeding bugs, which naturally disappear about this time, after having performed their mission of increasing and multiplying after their kind. But I believe that the ants have hastened this disappearance in many cases, as on the tops of the mounds at the entrance of ant burrows, clearly those of the larger varieties, I find the wing-covers and other debris of insects, among which I believe a good glass would show the remains of chinch.

Enclosed is a little parcel of sand from one of these mounds in which you will find the remains of insects, part of which I believe are those of chinch, and it would be well for you to put this stuff under a good glass and report through the FARMER the result of your examination.

We have had no rain since early

in May, yet such wheat as came fully into head while the soil still retained any moisture, is filling fairly well and will probably show a moderately good sample of grain, as wheat really requires but little moisture after the blooming stage, but a great deal just before that stage is reached. Much of the belated wheat has fired badly; some has never headed and never can, more especially that which was grazed close. Reaching the flowering stage earlier than the hard wheat, the soft wheat, as a rule, presents the best appearance, but some frost damage was sustained by the soft varieties that were caught in the blossom. I am informed that much wheat was injured in this way in the southeast part of this and in Butler county.

From here, south to the boundary of the State, there is some very good wheat. From here north, there seems to be very little, so far as I am able to learn, and west of this county it may be called a dismal and complete failure. Peotone, Kas. C. WOOD DAVIS.

[This interesting and important letter was referred to Prof. Popenoe, Entomologist of our Agricultural college, who, after a microscopic examination, reports as follows.—EDITOR.]

In the quantity of material sent, the amount about equaling in bulk a grain of rice or popcorn, I found the remains of several chinch bugs, the fragments including the head, the prothorax, the antennae, the beak, the legs, the upper wings, and various parts of the abdomen of this insect. Of the head and prothorax still united there were five specimens, and of separate heads at least two more, showing that the remains of at least seven of the insects must be comprised in this quantity of dirt. The presence of the wings and the character of the other remains show conclusively that the ants have not mistaken the cast pupae skins for bugs, as observers higher in the scale have sometimes done.

The presence of the fragments of the chinch bug in the sand about the mouth of the ant-hill is not conclusive of the predacious habit of the ants, however. These insects are well-known collectors of the recently dead bodies of insects, and of course the origin of the fragments seen may be explained by this habit. Yet we know, also, that they will attack other living insects, even those many times their size, and why not chinch bugs?

Your correspondent will furnish information of much interest and value if he can report definitely from personal observation upon this point.

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## The Poultry Yard.

### Experience in Raising Turkeys.

EDITOR KANSAS FARMER:—As I have been raising turkeys, hatched by hens, for a few years, I will give my experience.

While the hens are setting, once or twice I dust them well with insect powder or sulphur, and when I take them off, I dust well, then I am not troubled with lice. Tobacco sprinkled in the nest and through the "biddies" feathers is just as good. I put the coop under a tree where there is not much grass, tie the hen and allow the turkeys to run. Feed every two or three hours at first, hard-boiled eggs and bread crumbs, only just what they will eat up clean. Do not feed meal, dough or anything of the kind. Boiled rice is good, or milk curds—if it is dry. The bread must not be soaked, just fed dry. After two or three weeks they may be fed grain and allowed to wander in search of insects. I seldom lose any by this method. MRS. E. F. Lone Elm, Kas., June 5, 1894.

### Chickens Cholera.

EDITOR KANSAS FARMER:—Cholera among the fowls has to go the rounds every year, and if we only knew the per cent. that die from this dreaded disease, just in Kansas, we would be surprised. This year is not an exception, for complaint comes from nearly every neighborhood, more or less. We do not have to wait to hear from the good farmers' wives themselves to find out that cholera is on hand, for in passing through the country all we have to do is to look over in some back, out of the way place, and the feathers and bones tell the story. As I said, the loss is great; for the poultry trade is increasing faster than we realize. I am speaking now of Kansas alone.

I believe Cowley county claims first place on eggs in the State, but I would like to see a report from each merchant of the number of eggs he handles in a year, so we could get the report correct and not have to depend on the assessors' reports, for their reports are not correct. I believe that by a correct report Neosho county would be up among the first.

To show how the poultry industry is on the increase, let me say that at our small town of Stark, one of our merchants (Harper Bros.) last year shipped out 450 cases of eggs. This year, up to date, they have shipped over 450 cases, and with seven months to come yet. I just call up this to show that we should put forth an extra effort to keep cholera from among our fowls.

I have not had cholera among my fowls since I came to Kansas (thirteen years ago), though I have seen symptoms of it, and if it had been let alone they would have had it.

The causes of cholera are too many for me to name in this article, for it is the cure or prevention we all want to know. In the first place, it would be useless for me to tell you many readers about keeping our fowls free from lice, etc., for that has been written about many times through the columns of this journal. But lice and filth are breeders of cholera. The remedy I give is what a farmer in Kentucky calls a "tested cure." I copy it from "Lloyd's Modern Poultry Book," though I have used this remedy with some other additions for years, and I know by experience that it is a preventive. But the writer claims that when he first tried this remedy there were two of his best hens to all appearances dead. He did not expect to save them. They were given the remedy in the evening and in the morning they were on their feet and in two or three days they were about as well as ever. The remedy: Equal parts of saltpetre, black antimony and sulphur. Mix the powdered sulphur and black antimony thoroughly, then mix this with the meal or bran, whichever is intended for the feed, then dissolve the saltpetre in warm water, enough to make the mass the usual consistency for feeding. A teaspoonful of each of the saltpetre, black antimony and sulphur is about the right proportion, for a feed for ten hens, once a day,

until they quit dying. And give a feed of it every week or so to keep cholera away.

I would like for some of the readers of this journal whose fowls are dying with cholera to give this remedy a thorough trial and report results, for I have only used it as a preventive or when I saw symptoms of cholera.

Stark, Kas. J. R. COTTON.

### Fancy Pigeons in the West.

EDITOR KANSAS FARMER:—The Western Pigeon Club was organized at Topeka, Kas., April 4, 1892, with the following officers: John Haman, President; C. C. Henshaw, Vice President; M. F. Hankla, Secretary; P. Plamondon, Treasurer; with John Ramsberger and the above officers as the Executive committee, as will be seen, a membership of five. The club's membership is now sixteen, representing Colorado, Missouri, Illinois and Kansas, the latter furnishing the largest number of members.

The object of the club is to promote and improve the culture of the different varieties of fancy pigeons, and to encourage that intercourse among fanciers which would lead to the mutual advantage of its members by giving annual exhibitions of its own, or in connection with poultry shows. The improvement in fancy pigeon keeping, and the high quality of birds that have been imported the past two years, is surprising. The old-time fancier, with his scrubby stock, is no more "in it," but the enterprising fancier of to-day will show you birds second to none, in many varieties. And with the advancement made in the last two years, the Western fancier will make hot competition with his Eastern friends. I think the fanciers of the West will have an opportunity to compete against some fine Eastern birds at the coming mid-continental show at Kansas City this winter. So, better be on the alert, boys, as many fine birds will be at the exhibition. The pigeon fanciers of Kansas alone can put up a show of 300 pairs fancy pigeons on very short notice, and every one of them exhibition birds, fit for any competition.

It may seem strange to many people that a man who has reached the age of 50 to 60 years, can be found spending his leisure hours caring for his pets and watching their every movement. "Why?" some may ask. Because he has found in them pleasure, and his big heart throbs with enthusiasm and kindness in the direction of fancy pigeondom. Day by day, he notes the progress made in breeding, never growing tired of attending their wants. We also find the energetic young fancier as devoted to his hobby as the older ones. Each day he visits his loft a new lesson is taught, embracing thought, patience, kindness and love for the bird creation. And while his mind and soul are occupied by the interests of his birds, he will not be so likely to let it stray out into dangerous channels. So I would say, give the boy a chance. Do not scold if he desires to keep a few pairs of birds, and you have a convenient place to accommodate him. If he shows a sign of a true fancier, he will be found among his birds, instead of in more undesirable places, or loafing on the street. He will spend many more hours at home, if attached to his birds and loves them.

I may mention that the fanciers in Kansas breed most all the varieties of fancy pigeons, which I will not try to name now, as it would consume quite a space. One variety in particular, that is very little bred in the West, an important variety, too, that I think should have some attention, namely, the Homer, the swiftest-flying pigeon known. The Homing pigeon is noted for its speedy return home, after being carried hundreds of miles and liberated. Much pleasure is had by their racing contests. There are also many used in the European navies, and there are now a few cotes on board United States war vessels, and experiments with them have proved favorable for their continued use. So I hope, before long, to see a fancier of the Homing pigeon, then the Western fanciers will have all the varieties. M. F. HANKLA, Secretary Western Pigeon Club. Topeka, Kas.

## In the Dairy.

Conducted by A. E. JONES, of Oakland Dairy Farm. Address all communications Topeka, Kas.

### Fraudulent Butter Legislation.

EDITOR KANSAS FARMER:—It seems to me that now is the time for dairymen and those of our State interested in the manufacture of butter and cheese to commence and lay plans for some legislation the coming winter against that greatest of all frauds, butterine or oleomargarine. The sales of oleomargarine here in the city of Topeka alone is something enormous, and but few of the dealers sell it for oleomargarine, but when asked for butter pass it out to the customer as choice creamery or dairy butter.

Did the public at large but know of the sickness and death caused by the use of this unwholesome article they would rise up as one man and denounce it and be very careful that none of it came into their homes.

In the State of New York the State Board of Health found that most of the sickness and deaths at the orphan asylums was caused by the children eating oleomargarine, and that State has since passed a law forbidding its use in any of the State institutions.

For the benefit of those who are not acquainted with the way oleomargarine is made, I will briefly describe its manufacture. In addition to some sixty different acids which are given in the formula in the patent office, among which is *nitric acid*, the best or highest grade of oleomargarine contains 15 per cent. of creamery butter, 25 per cent. of leaf lard (cold pressed), 25 per cent. of suet or tallow, and about 35 per cent. of cottonseed oil. This, in the hands of experts, and with the help of chemists, makes a composition which, after being deodorized, salted and colored, strongly resembles butter in appearance, but in taste falls far from its mark, as there is not much taste to it other than salt and grease.

Now, if 25 per cent.—or even 40 per cent., as one manufacturer claims—contains lard which has not been rendered by extreme heat, it will be readily seen that it is unwholesome as a diet.

Bright's disease and tape-worms have frequently been traced to this cause, as well as measles.

Dr. Sihler, of Kansas City, the Veterinary Inspector, has frequently found that hogs have measles, and when so affected that the body is almost a mass of minute tape-worms, and in one case which he was describing, the heart of the hog was twice its natural size, it being so full of the small tape-worms.

If the above formula is true of the best grade of butterine, what, then, must compose the poorer grades, which are sold at wholesale, including the revenue tax, at about the price of common rendered lard?

The digestive and microscopical investigations made for the New York Dairy Commissioner by Prof. Clark, of Albany, and detailed in his report, show that he made a specialty of physiological features of his subject, making experiments in digestion and microscopical investigations and in other ways, showing the importance to public health of a thorough knowledge of what enters into any food product. As a result of his researches he arrives at the conclusion that oleomargarine or butterine is unwholesome and dangerous to health, for four reasons: First, because it is indigestible; second, because it is insoluble when made from animal fats; third, that it is liable to carry the germs of disease into the human system; and fourth, that in the eagerness of manufacturers to produce their spurious compounds cheaply, they are tempted to use ingredients which are detrimental to the health of the consumer.

I have read the testimony where one Chas. Moses, a laborer, whose duty it was to pack and finish the tubs of butterine for the market, that the nitric acid had eaten off his finger-nails and that the stuff ate through his clothing and into his boots. In the same testimony, one Dr. Pooler, when asked, "Would it be wholesome or unwholesome to treat any dairy product with

nitric acid," replied, "It would be unwholesome and injurious, especially so if applied by a person not familiar with the acid," and further stated that no matter how minute the quantity is, contained for any length of time it produces an irritation of the mucous membrane of the stomach. He also said that he did not think that this man Moses will ever entirely recover from the effects of it.

Kansas is being recognized as one of the leading dairy States of the Union, but how much of her product is consumed at home? But a very small per cent. The bulk of the product goes to the States of Minnesota, Connecticut, New York, Pennsylvania and other Eastern States, which have just such a law as we need at home.

I believe that oleomargarine should be colored pink or blue. Butter is entitled to the yellow color because that is its natural grass color, and butterine could be as easily colored pink as any other color. I have read the advertisements of the manufacturers of butterine, where they claim it is better and more wholesome than butter. Now, if they are honest in their claims, we would but be protecting their interests and prevent any dealer from palming off butter as oleomargarine. The dairymen must recognize the fact that they will have a big fight on their hands and the opposition will use money freely, so they must commence early and organize, elect Senators and Representatives who are pledged to their interests, hold meetings in school houses and send some good workers to the Legislature to look after their interests, and success is bound to come. This is just what Nebraska and Missouri are going to do.

Our present Governor is a dairyman and thoroughly acquainted with the wishes and needs of the dairyman, and will, I think, mention it in his outgoing message. F. H. GLICK. Topeka, Kas., June 7, 1894.

### No Valid Reasons for It.

The *American Agriculturist* places the cost of producing oleo at 7½ cents per pound, and the cost of producing butter at 15 cents per pound. The annual cost of the oleo products of the United States is stated at \$5,000,000. As the product of butter in the United States is over 1,000,000,000 pounds annually, it follows that if the competition of oleo causes an average reduction of one-half of a cent per pound in the price of butter, the loss of the farmers will equal the cost of all the butterine produced. As a matter of fact, it is probable that the competition of oleomargarine reduces the price of butter not less than 2½ cents per pound. The loss from this cause alone must be over \$25,000,000 per year, in addition to the loss of the sale of a large amount of butter. It is a very poor sort of political economy which can justify a loss of from \$30,000,000 to \$40,000,000 to the farmers of this country annually, in order that half a dozen millionaires may add a million or two of dollars each to their already excessive wealth.

See Chicago Sewing Machine Co.'s advertisement in next week's issue.



Davis' Cream Separator Churn, power hot water and feed cooker combined. Agents wanted. Send for circular. All sizes Hand Cream Separators. Davis & Rankin B. & M. Co. Chicago

**WORLD'S FAIR AWARDS TWO MEDALS**  
and one Diploma for Beauty, Strength and Cheapness. Over 50,000 of these vehicles have been sold direct to the people. Send at once for our complete catalogue (D) of every kind of vehicle & harness, also book of testimonials, they are free.

"A" Grade, \$120.  
"B" Grade, \$85.  
"C" Grade, \$65.  
"D" Grade, \$45.

**ALLIANCE CARRIAGE CO., CINCINNATI, O.**

## The Family Doctor.

Conducted by HENRY W. ROBY, M. D., consulting and operating surgeon, Topeka, Kas., to whom all correspondence relating to this department should be addressed. Correspondents wishing answers and prescriptions by mail will please enclose one dollar when they write.

### The Family Doctor Remembered.

A few days ago the dull routine of a surgeon's life was most agreeably broken by the receipt of the following letter, which was as surely a complete surprise as if the house had fallen on the Family Doctor:

ENGLEWOOD, ILL., May 25, 1894.

DR. H. W. ROBY—Dear Sir:—You will probably be surprised to hear from one whom you have long since forgotten. Perhaps you will recall a little patient you had about fifteen years ago in Chicago (corner of Walnut and Paulina streets). The child had swelling of the glands. You lanced her neck several times and informed her mother that "the poor little child couldn't live, but you would do the best you could for her." She did live, thanks to your treatment, and is a strong, hearty girl now. She was delicate always, and passed through enough sickness to kill a dozen ordinary children. Was at Johnstown alone during the food of 1889. For days we did not hear from her, but she came through safely, and for three years has been very well. I have often wanted to write you, thinking perhaps you would be interested to hear from one you took so much interest in years ago. I accidentally saw your name in a pamphlet and decided to write.

We are living in Englewood. Have bought a place. Lived here fourteen years. We have four nice girls, the eldest seventeen and the youngest seven.

If you should ever come to Chicago and think it worth your while to call and see Birdie we would be glad to have you do so. Let this show our gratitude.

Yours respectfully,  
Mrs. F. T. REED,  
558 Maple street.

Nobody but the weary doctor can know what cheer, what delight, what satisfaction comes in with such a letter. At best the doctor's life is a weary round of toil and tremendous responsibility, from the first day of the year to the last day thereof. He is conscientious in the discharge of his duty, with a full sense of his awful responsibility, he carries a load that no other man knows aught of. The lawyer only has charge for the most part of men's property interests, with occasionally a murderer or a thief to defend or prosecute. The merchant has so much goods, wares and chattels to manage, to buy or sell, and the markets to watch. The farmer has crops and weather and markets and stock to study and manage. The politician has the voter to smile at and conciliate. The preacher has the task of urging men always and everywhere to live better lives and do better deeds.

#### But the doctor

Stands face to face all day with death,  
Knee-deep in disolution's tide,  
And with the sword and shield of skill  
He turns some deadly shafts aside.  
And morning shows he labored on  
While many weary mortals slept,  
And hearts are full of hope at dawn  
Because his midnight trust he kept.

He knows it is Sunday by hearing the bells ring and seeing people go to church, while he goes to the couch of suffering. He knows it is the 4th of July because the cannons roar and the drums beat and the procession goes by and he follows on with lint and litter, to bring home the victims of those who are always careless.

He knows it is Memorial day because he hears the muffled drum and sees the procession, laden with flowers, following some silent leader to the city of the dead, and he straight makes ready to revive the fainting and exhausted scar-decked and weather-beaten veterans, who with over-enthusiasm out-tax their scant energies and fall by the wayside.

He knows there was a hunting expedition, because a panting steed and pale messenger dash up to his door and no man shall be swift enough to overtake his fleeing shadow in the direction of the red current of life that is pouring out in the forest or by the stream where some one forgot that the gun was loaded.

He knows that one day is so exactly like another, 365 times each year, that one stands with him for all, because humanity which he serves and battles for is the same, yesterday, to-day and forever, and its demands on him are like the golden band of betrothal, without beginning or end or break in continuity.

He sees the tide of humanity pouring through the gateway of birth, struggling and surging through the narrow, rocky channels of life and then surging through the gateway of eternity, and he lovingly ministers all along the way, until the outgoing tide sweeps him also out to sea.

Yes, I recall it all. Little Birdie was most frail and delicate. Her poor, thin, pinched little neck could not support her sorry little head and so it hung over the mother's knee, and her thin, feeble hands clutched at the finger that sought her almost imperceptible pulse, and I recall the quick, quivering cry of pain when the knife went down into her little neck, time

after time, in search of the deep abscesses that seemed to cluster about the frail bony framework of the little neck in sickening numbers. How well do I remember the sigh of relief and the inaudible "Thank God" every time the steel messenger came back untainted by the vermilion of a spouting carotid, occipital or facial artery, or the purple of jugular, auricular or temporal veins, and how welcome was the feeble cry of pain as denoting that the steel had missed the hypo-glossal and glosso-pharyngeal nerves on its errand of mercy. Yes, I remember how the little neck shrunk to a mere network of tissue and gashes when the pus was all liberated from its hiding in the deep recesses of that frail form, and how it seemed that dissolution must surely come to the little wanderer, and I remember how hard it was to say to the mother, "I do not think she can recover," and how, "Still we must try hard. Where there is life there is possibility." I remember how, through the stormy days and the blustering nights, mother and doctor watched the little life creep back to its station and rekindle its tiny lamp, that had so nearly gone out in the rough gusts of adversity. How many times through the sixteen or seventeen intervening years I have recalled the case and wondered what had become of Birdie, and if I had been as completely forgotten as the man who came daily to bring the pitcher of cream for the little sufferer. Many times other thoughts crowded in, thoughts of other more or less similar incidents of a busy surgeon's life, other battles and triumphs, other battles and defeats, and sad scenes, so that I did sometimes forget for a space the little face and voice. And they were out of my mind on that fifteenth anniversary day of my arrival in Topeka, when the above letter brought me back to Chicago and the little sufferer. But that letter is the most pleasing incident of that anniversary—a total and glad surprise. So that one day will be different from all days. It holds more than any of the mere passing days. It holds a human life saved from the ravages of disease. It holds a grateful remembrance on the part of those benefited by the grave responsibilities unflinchingly borne for the sake of a life.

Now and then somebody thinks to tell the doctor they are grateful for his services, while twice and again others forget it. The product of his labor is not like a coat, or a book, or a piece of furniture, which people can show their friends and say, "He did this—he made it," or "he repaired it and made it good as new." All feel that life is theirs and they owe it only to the Creator. While many times they owe an incalculable debt to its preserver and forget their indebtedness, and like Peter they even sometimes curse and swear and say, "I know you not."

A very few, again, think so much of their preservation from disease that when Christmas comes and they make a list of good friends to whom they will make presents, they actually put down his name and he knows he is not forgotten. But that is always done by those who have paid his charges for the service. Those who stand so closely related to him that he feels loath to charge them are generally they who forget to put his name on the list. It is so easy to say, "He's the doctor and don't need it." And yet there is all the more need of it if he has served them with his time and his talent and lost sleep and rest that they might be saved or made comfortable, without preferring a money charge to them for it. His name should stand at the head of many such a list.

In wide contrast with this case it too often happens that instead of gratitude, grumbling, instead of recompense, revilement, instead of praise, persecution, instead of honest acknowledgement, dishonest accusation, instead of ducaats, defamation. Those who travel the Jericho road of medicine often fall among thieves, while priest and Levite pass them by on the other side. Trying to be good Samaritans themselves, they too seldom experience "measure for measure." But there is always an oasis in the desert, an island in the sea, an antithesis to selfishness, and when the burden of others' burdens begins to seem greater than we can bear, along comes some kindly letter from a forgotten beneficiary or a message of kindness *ore tenus* where it was not expected, and lo, that burden "lies buried in the sea,"

"And only the sorrow of others  
Casts its shadow over me."

Powerful saline and other drastic purgatives should be strictly avoided, except in extreme cases. When an aperient is called for, take Ayer's Pills. They restore natural action by imparting strength and tone to the bowels, and their use is always attended with good results.

#### Where Will You Spend the Summer?

The Baltimore & Ohio Southwestern railway has an attractive list of summer resorts reached via its lines. Before you decide where to go, ask some agent of the B. & O. S. W. Railway for a copy, or write O. P. McCarty, General Passenger Agent, St. Louis, Mo.

#### Milking Short-horns.

In "Stock Notes," in your issue of February 3, occurs the following: "Mr. James B. Filkins, of Oak Grove, Livingston county, inquires where he can get a Short-horn bull, fit for service, of good milking families, the dams producing fifty pounds of milk per day for a long period of time. That is a good kind of Short-horn to have, but where to get one that will fill the description is the conundrum? We don't believe such an animal exists in this State. Fifty pounds of milk per day for a long period is like the two-minute trotter. It may come in time, but is not yet on earth."

I presume Mr. Filkins, in his expression, "for a long period of time," merely means under the most favorable circumstances during season of full flow of milk, which should continue for some days and weeks, and perhaps months. He does not desire information as to cows that, under some particular or special conditions, gave fifty pounds for a single day. In finding a fifty-pound Short-horn cow, Mr. Filkins simply wants to find a stayer; one that remains in the line of this absolute performance as long as any breed or kind of dairy cow holds to a maximum performance. While with yourself I am not yet advised of the presence of the two-minute trotter, I am able to inform your correspondent that both the Short-horn cow giving fifty pounds of milk per day, and the cow of same breed making two pounds of butter per day, are already here, and that they are by no means so scarce as to be a curiosity. I entertain no doubt that several Michigan herds can furnish such specimens. Mr. Filkins, however, has made no intimation that in his search for a suitable bull to put in a dairy herd, he would stop within the boundaries of this State. I will, therefore call his attention to some cattle without the State, that have established their ability to fill the standard he has set up under circumstances that put their performances beyond the possibility of impeachment. The records made by all cows in the Columbian dairy tests are made to stay. It is well understood that the conditions for large records were unfavorable. The coarse forage was of a quality that no Michigan dairyman would expect to be compelled to use. The cows were on dry feed and tied by the head in hot barns, beset with flies and amid surroundings that precluded quiet, undisturbed work. The fifty-pound cow, however, was there, and she came from widely separated homes. Waterloo Daisy, a four-year-old, coming from the herd of Mr. F. Martindale, York, Ontario, Canada, gave an average of fifty pounds of milk per day, for half the period of the cheese test, this test continuing for fifteen days. She gave the largest flow of milk of any of the seventy-five cows in this test. The cow nearest approaching her in flow was also a Short-horn, being Genevieve, owned by W. W. Waltmire, Carbondale, Kansas. This last cow produced on April 4, and from May 25 to June 8, inclusive, fifteen days, she gave 755 pounds, or a daily average of 50½ pounds. Kitty Clay 4th, the property of J. K. Innes, Granville Center, Pennsylvania, produced on August 5. She came to my barn about August 20. From August 22 to September 28, both inclusive, thirty-eight days, she gave 2,023 pounds of milk, a daily average of over 53½ pounds. On the latter date she left my barn for her Pennsylvania home, where she is still paying her way in the barn of her owner, who keeps an extensive dairy and knows a good cow when he sees one. It is hardly necessary to add that Kitty Clay 4th gave the largest flow of milk of any cow in the thirty-day test. She gave during these thirty days (known as test No. 3), 1,593 pounds of milk, showing 52 pounds fat, equivalent to 65 pounds, 80 per cent. butter, and 141 pounds other solids, and added to her weight 28 pounds during the same thirty days. Some other Short-horn cows in the Columbian tests reached the fifty-pound milk limit in a day, and also the two-pound butter mark. There is nothing the matter with Mr. Filkins, of Oak Grove. He's all right. He is looking for first-class dairy cattle

## Leather

gets hard and old fast enough; to keep it new and soft, use

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It saves half the money spent for leather. It's food and life to leather.

25c. worth is a fair trial—and your money back if you want it—a swob with each can.

For pamphlet, free, "HOW TO TAKE CARE OF LEATHER," send to  
VACUUM OIL CO., Rochester, N. Y.

among Short-horns. He will have no trouble in finding plenty of them.—  
H. H. Hinds, in Michigan Farmer.

#### Weekly Weather-Crop Bulletin.

Issued by the United States Department of Agriculture, in co-operation with the Kansas State Board of Agriculture, for the week ending June 11, 1894, T. B. Jennings, observer:

The warm weather of the first of the week was offset by the cool wave of the 6th, 7th and 8th, and the week ends with a normal amount of temperature; the sunshine, however, has been more than abundant. The rain has been unequally distributed, the western half of the western division receiving one and a half inches, the northern half of the middle division from one to three inches, and from Pratt to Wyandotte two inches and over, while commencing in Harvey and ending in Lyon is a belt in which from four to five inches fell. From Garfield and Gray to Washington and Marshall, and from Clark to Linn and Miami, the rainfall was light.

The rain has greatly improved all crops except in the districts where it was light. Corn has a good stand, is clean and of good color, and is growing rapidly. Wheat is being harvested in the south, while its harvest will begin in the central counties the ensuing week. It is grading higher than last year.

The rye and oats are good, barley and flax fair. Pastures and meadows generally good; clover and alfalfa good, except in the bottoms along the Arkansas overflowing has not benefited the alfalfa. Timothy is short. Cherries and early potatoes abundant. Apples promising, gardens improving.

#### Publishers' Paragraphs.

A new and valuable book has just been issued by the Orange Judd Co., entitled "Fungi and Fungicides," a practical manual concerning the fungous diseases of cultivated plants and the means of preventing their ravages. The writer has availed himself of the latest developments on these important subjects and has had the good sense to append to the consideration of each subject a list of the publications on the subject. Price in cloth, \$1; paper, 50 cents. May be had from Kansas Farmer Co., Topeka.

The Forum for June publishes a very readable article by Hon. J. Sterling Morton, Secretary of Agriculture, entitled "Farmers' Fallacies and Furrows." Mr. Morton claims that the agricultural unrest is caused less by agricultural distress than by political and economical fallacies, by which he thinks a certain noisy proportion of farmers have been led away from their furrows. Mr. Morton claims that as a class, however, the tillers of the soil are yet the most independent and the most thrifty of all men. The Forum may be had of all prominent newsdealers, or from its publishers in New York, at 25 cents.

VEHICLES AT WHOLESALE PRICES.—Our readers have evidently noticed the advertisement of buggies and vehicles cheap, as offered by Thos. D. Hubbard, Kimball, Kas. In order to supply a want of our own, one of the officers of this company purchased of this advertiser one of his top buggies and found that it was exactly as represented and marvelously cheap as compared with prices asked by local dealers, therefore the FARMER has no hesitation in advising our readers, who desire to save money in the purchase of buggies, to patronize Thos. D. Hubbard.

The people who are working for the introduction among us of the Swiss initiative and referendum will read with much satisfaction Dr. Lewis G. Jane's article in the June number of the New England Magazine, on "What New England Owes to the United States." It is a panegyric upon the town meeting, and a vigorous plea for pure democracy in city government as well as town government. It calls to attention many important facts which we have been in danger of overlooking, and shows how the provisions for direct legislation which are now being urged by many are in accord with the best New England practice and tradition. Warren F. Kellogg, 5 Park Square, Boston.



# Money, Money!

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Five Dollars will secure a \$175 lot in Chicago.  
 For full information address at once  
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Try Dr. Orr's Veterinary Remedies.  
 Tonic Cough Powder, for cough, distemper, loss of appetite, etc. Pounded, by mail, 50 cents.  
 Tonic Worm Powder, for expelling worms and toning up the system. Pounded, by mail, 50 cents.  
 Ready Blister, for curbs, splints, swellings and all parts where a blister is indicated. By mail, 50 cents.  
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 Remit by postal note to S. C. ORR, V. S., Manhattan, Kan.

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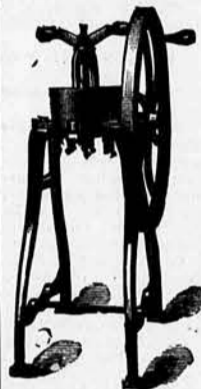
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 Spring Wagons, \$31 to \$50. Guaranteed same as sell for \$60 to \$85. Road Wagons, Surreys, Double fenders, \$85, same as sell for \$130. Top Buggies as low as \$37.50. Phaetons, \$66. Farm Wagons, \$43.  
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 99 styles Single, Double and Farm. Riding Saddles, Bridles and Fly Nets. Send 4 cents in stamps to pay postage, 112 page catalogue.

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On Tuesday, Wednesday, and Thursday of each week. Private sales every day. At the **KANSAS CITY STOCK YARDS, HORSE & MULE DEPT.**  
**THE LARGEST & FINEST INSTITUTION OF THE KIND IN THE UNITED STATES.** 35107 head handled during 1893. All stock sold direct from the farmer, free from disease, and must be as represented or no sale. Write for market report, mailed free. Address, **W. S. TOUGH & SON, Mgrs., Kansas City, Mo.**

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	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts, 1893.....	1,746,828	1,948,373	569,517	35,097	99,755
Slaughtered in Kansas City.....	956,792	1,427,763	372,385		
Sold to feeders.....	249,017	10,125	71,284		
Sold to shippers.....	300,237	510,489	15,200		
Total sold in Kansas City.....	1,566,046	1,948,357	458,869	22,522	

**C. F. MORSE,** General Manager. **E. E. RICHARDSON,** Secretary and Treasurer. **H. P. CHILD,** Assistant Gen. Manager. **E. RUST,** Superintendent.

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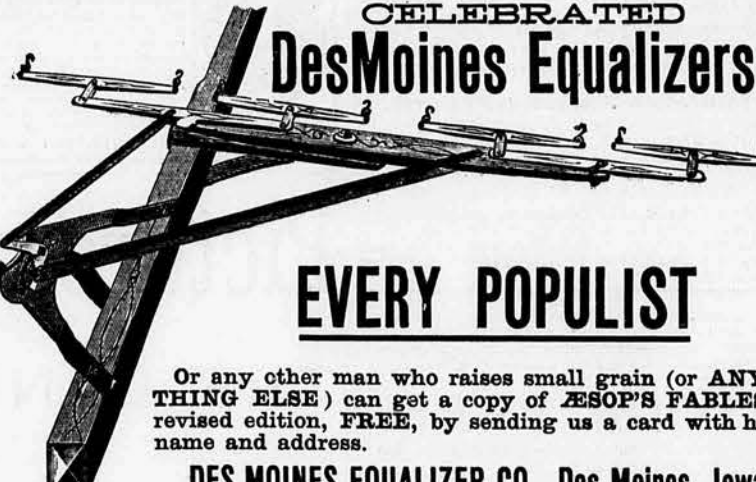
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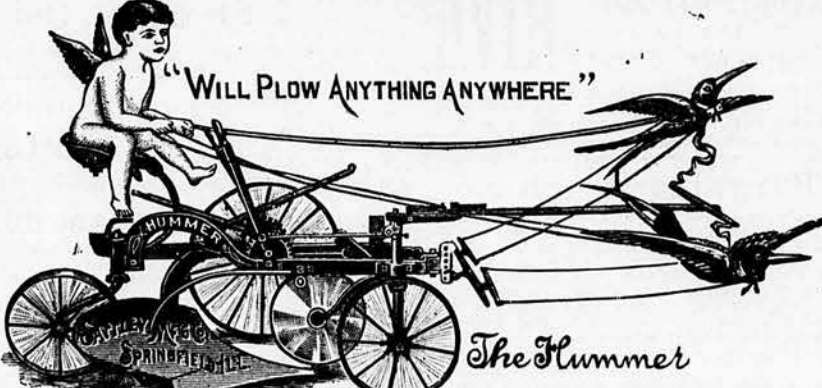
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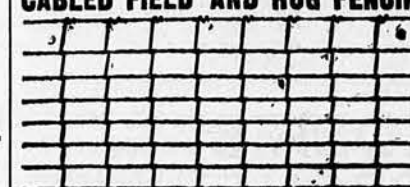


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